BRITAIN

AN OFFICIAL HANDBOOK

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BRITAIN

AN OFFICIAL HANDBOOK

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Introduction

BRITAIN: AN OFFICIAL HANDBOOK, 1966, is the seventeenth in the series prepared and extensively revised each year by the Reference Division of the Central Office of Information with the co-operation of other government departments and of many national organisations.

The handbook, which is the mainstay of the reference facilities provided by the British Information Services in many countries, was at first only available overseas in a limited free edition. In 1954 it was placed on sale throughout the world and it has since become widely known as an established work of reference.

This 1966 edition, which covers events up to September 1965, gives, like its predecessors, a factual account of the administration and the national economy of the United Kingdom. It describes the activities of many of the national institutions, both official and unofficial, and shows the part played by the Government in the life of the community.

The handbook does not claim to be comprehensive, nor does it attempt to cover Britain's participation in Commonwealth or world affairs. The factual and statistical information it contains is compiled from official and other authoritative sources, and, while most sections of the book relate to the United Kingdom as a whole, facts and figures for England, Wales, Scotland, and Northern Ireland are also given separately when relevant.

Readers who require more detailed information should consult the *Annual Abstract of Statistics* and the *Monthly Digest of Statistics*, issued by the Central Statistical Office, and also other government publications and standard works of reference, some of which are listed in the bibliography at the end of the handbook. Readers are asked to note that the Central Office of Information reference documents listed in the bibliography as free and marked with an asterisk are available free of charge only at British Information Offices overseas; they can, however, be obtained in the United Kingdom from the Reference Division, Central Office of Information, on payment of a small charge.

REFERENCE DIVISION

CENTRAL OFFICE OF INFORMATION, LONDON

September 1965

1
THE LAND AND THE PEOPLE

THE PHYSICAL BACKGROUND

The British Isles form a group lying off the north-west coast of Europe with a total area of about 121,600 square miles. The largest islands are Great Britain proper (comprising the mainlands of England, Wales and Scotland) and Ireland (comprising Northern Ireland and the Irish Republic). Off the southern coast of England is the Isle of Wight and off the extreme south-west are the Isles of Scilly; off North Wales is Anglesey. Western Scotland is fringed by numerous islands and to the far north are the important groups of the Orkneys and Shetlands. All these form administrative counties or parts of counties of the mainland, but the Isle of Man in the Irish Sea and the Channel Islands between Great Britain and France have a large measure of administrative autonomy and are not part of England, Wales, Scotland or Northern Ireland.

England (excluding the county of Monmouth on the Welsh border) has a total area (including inland water) of 50,327 square miles and is divided into 39 geographical or 46 administrative counties; Wales (including Monmouthshire), with a total area of 8,017 square miles, has 13 counties; Scotland, including its 186 inhabited islands, has a total area of 30,411 square miles and is divided into 33 counties; and Northern Ireland, consisting of six counties, has a total area of 5,459 square miles. Together, these countries constitute the United Kingdom of Great Britain and Northern Ireland, with a total area of 94,214 square miles. The total land area of the United Kingdom (excluding inland water) is 93,018 square miles: England, 50,051; Wales and Monmouthshire, 7,966; Scotland, 29,795; and Northern Ireland, 5,206 square miles.

Care must be taken when studying British statistics to note whether they refer to England as defined above, to England and Wales (considered together for many administrative and other purposes), to Great Britain, which comprises England, Wales and Scotland, or to the United Kingdom as a whole. The position is further complicated by the fact that the county of Monmouth is sometimes included with England. United Kingdom statistics and other data sometimes include the Isle of Man, 227 square miles, and the Channel Islands, 75 square miles, which strictly are not part of the United Kingdom but are dependencies of the Crown. Since southern Ireland became independent, official statistics do not normally refer to the British Isles as a whole.

The latitude of 50° North cuts across the southernmost part of the British mainland (the Lizard Peninsula) and latitude 60° North passes through the Shetland Islands. The northernmost point of the Scottish mainland, Dunnet Head, near John o' Groats, is in latitude 58° 40′. The prime meridian of 0° passes through the old Observatory of Greenwich (London), while the easternmost point of England is nearly 1° 45′ East and the westernmost point of Ireland is approximately 10° 30′ West. It is just under 600 miles in a straight line from the south coast of Britain to the extreme north and

rather over 300 miles across in the widest part. Owing to the numerous bays and inlets no point in the British Isles is as much as 75 miles from tidal water.

The seas surrounding the British Isles are everywhere shallow—usually less than 50 fathoms (300 feet)—because the islands lie on the continental shelf. To the north-west along the edge of the shelf the sea floor plunges abruptly from 600 feet to 3,000 feet. These shallow waters are important because they provide excellent fishing grounds as well as breeding grounds for the fish. The North Atlantic Current, the drift of warm water which reaches the islands from across the Atlantic, spreads out over the shelf and its ameliorating effect on the air is thus magnified. The effect of tidal movement is also increased by the shallowness of the water.

Geology and Topography

Despite their small area, the British Isles contain rocks of all the main geological periods. In Great Britain the newer rocks, which are less resistant to weather and have thus been worn down to form low land, lie to the south and east, and the island can therefore be divided roughly into two main regions, Lowland Britain and Highland Britain.

In Lowland Britain the newer and softer rocks of southern and eastern England have been eroded into a rich plain, more often rolling than flat and rising to chalk and limestone hills, but hardly ever reaching a thousand feet above sea level. The boundaries of this region run roughly from the mouth

south-west.

Highland Britain comprises the whole of Scotland (including the hills and moors of southern Scotland as well as the mountains of the Scottish Highlands, which extend from the Forth-Clyde valley to the extreme north-west), the Lake District in north-west England, the broad central upland known as the Pennines, almost the whole of Wales, and the south-western peninsula of England coinciding approximately with the counties of Devon and Cornwall. Highland Britain contains all the mountainous parts[1] of Great Britain and extensive uplands lying above one thousand feet. This high ground, however, is not continuous but is interspersed with valleys and plains. Geologically the mountains and hills consist mainly of outcrops of very old rocks (archaean and palaeozoic), while the top strata in the valleys and plains are mainly more recent (carboniferous age) and similar to those in the northern and western parts of Lowland Britain.

These carboniferous strata are rich in minerals and include the coal measures which have been the foundation of Britain's industrial expansion. The outcrops and shallow seams of coal which have now largely been exhausted were found on the edge of the plains and up the valleys leading to the high land. Most of the present deep coal workings underlie the fertile lowlands.

Towards the end of Britain's long geological history, when the ancestors of present-day man had already settled in the country, came the great Ice Age, and at one period or another during this time the whole of Britain north of a line joining the river Thames and the Bristol Channel was covered by ice caps and ice sheets. The ice naturally accumulated on the higher ground and swept from the mountains of Scotland, northern England and Wales any loose rock or soil which had previously been formed, so that, when the ice eventually disappeared, the hills stood out as barren rocky areas, while a thick mantle of glacial debris—boulders, boulder-clay, sands and gravels—

[1] The highest peaks are: in Scotland, Ben Nevis, 4,406 feet; in Wales, Snowdon, 3,560 feet; and in England, Scafell Pike (in the Lake District, Cumberland), 3,210 feet. The highest peak in Northern Ireland is Slieve Donard, 2,796 feet.

lay distributed widely over the lower ground. The ice had blocked up previous drainage channels and left large lakes, which have since gradually dried up, leaving deposits of sand, silt and mud, often affording soils of great fertility.

In Ireland, where the solid rocks are covered deeply by the debris left by the ice sheets, the great central plain has large boggy areas, due to interruption of the previous natural drainage. The mountains and hill masses of Ireland are irregularly placed around central lowlands; in the higher parts the moorland vegetation resembles that of the higher parts of Highland Britain.

Britain's complex geology is one of the main reasons for its rich variety of scenery and the stimulating contrasts found within short distances, particularly on the coasts. The ancient rocks of Highland Britain often reach the coast in towering cliffs; elsewhere the sea may penetrate in deep lochs, as along much of the west coast of Scotland. Bold outstanding headlands are notable features in other parts of the varied coastline: the granite cliffs of Land's End; the limestone masses and slates of the Pembrokeshire coast in South Wales; the red sandstone of St. Bees Head on the Cumberland coast; and the vertically jointed lavas of Skye and the island of Staffa in the Inner Hebrides. Even around Lowland Britain there are striking contrasts. In some parts the soft, white limestone—the chalk—forms the world-famous white cliffs of Dover or the Needles off the Isle of Wight; while other parts of the south and south-east coastline have beaches of sand or shingle. The eastern coast of England between the Humber and the Thames estuary is for the most part low-lying, and for hundreds of years some stretches of it have been protected against the sea by embankments. These have occasionally been breached, as in the flood disaster of January 1953, which was caused by the abnormal concurrence of violent gales and exceptionally high tides.

The marked tidal movement around the British Isles sweeps away much of the sand and mud brought down by the rivers and makes the estuaries of the short British rivers[1] valuable as natural harbours.

Climate

Britain has a generally mild and temperate climate. It lies in middle latitudes to the north-west of the great continental land mass of Eurasia, but the prevailing winds are south-westerly and the weather from day to day is controlled mainly by a succession of depressions from the Atlantic which, moving in a generally easterly or north-easterly direction, pass over or near the British Isles. The climate is subject to frequent changes but to few extremes of temperature. Although it is largely determined by that of the eastern Atlantic, occasionally during the winter months easterly winds may bring a cold, dry, continental type of weather which, once established, may persist for many days or even weeks. During the summer months the Azores high pressure system usually extends its influence north-eastwards towards north-west Europe, and the depressions take a more northerly course, often passing entirely to the north of the British Isles.

Winds

In Britain, south-westerly winds are the most frequent, and those from an easterly quarter the least; such winds occur about one-third as often as south-westerly ones although easterly winds are appreciably more frequent in the spring that at any other time of the year. In hilly country, wind direction may differ markedly from the general direction owing to local topography. Winds are generally stronger in the north than in the south of the British Isles, stronger on the coasts than inland, and stronger in the west than in the

[1] The longest rivers in England—the Severn and the Thames—are only 210 and 200 miles long respectively.

east. The strongest winds usually occur in the winter; the average speed at Lerwick, Shetland Islands, varies from about 22 m.p.h. in January to about 14 m.p.h. in August, while at Kew Observatory, on the western outskirts of London, the average speed varies from about 10 m.p.h. in January to about 7 m.p.h. in August. The stormiest region of the British Isles is along the north-west coast, with over 30 gales a year; south-east England and the east Midlands are the least stormy, with gales occurring on about 2 days a year inland and on some 15 to 20 days on the Channel coast.

Temperature

Near sea level the mean annual temperature ranges from 47° F. (8° C.) in the Hebrides to 52° F. (11° C.) in the extreme south-west of England; it is slightly lower in the eastern part of the country in the same latitude. The mean monthly temperature in the extreme north, at Lerwick (Shetlands), ranges from 39° F. (4° C.) during the winter (December, January and February) to 53° F. (12° C.) during the summer (June, July and August): the corresponding figures for Jersey (Channel Islands), in the extreme south, are 43° F. (6° C.) and 63° F. (17° C.). The average range of temperature between winter and summer varies from 15° F. to 23° F. (7°–12° C.), being greatest inland in the eastern part of the country. During a normal summer, the temperature occasionally rises above 80° F. (27° C.) in the south, but temperatures of 90° F. (32° C.) and above are infrequent. Extreme minimum temperatures depend to a large extent on local conditions, but 20° F. (−7° C.) may occur on a still, clear winter's night, 10° F. (−12° C.) is rare, and 0° F. (−18° C.) or below has been recorded only during exceptionally severe winter periods.

Rainfall

The British Isles as a whole have an annual rainfall of over 40 inches, while England alone has about 34 inches. The geographical distribution of annual rainfall is largely governed by topography and exposure to the Atlantic, the mountainous areas of the west and north having far more rain than the plains of the south and east. Between 150 and 200 inches of rain fall on the summits of Snowdon and Ben Nevis during the average year, whereas some places in the south-east of England record less than 20 inches. Rain is fairly well distributed throughout the year, but, on the average, March to June are the driest months and October to January the wettest, the former period of four months having about 60 per cent of the rainfall of the latter. A period of as long as three weeks without rain is exceptional, and is usually confined to limited areas. In successive years, however, remarkably contrasting weather conditions are sometimes experienced.

Sunshine

The distribution of sunshine over the British Isles shows a general decrease from south to north, a decrease from the coast inland, and a decrease with altitude. During May, June and July—the months of longest daylight—the mean daily duration of sunshine varies from five and a half hours in western Scotland to seven and a half hours in the extreme south-east of England; during the months of shortest daylight—November, December and January—sunshine is at a minimum, with an average of half an hour a day in some parts of the Highlands of Scotland and in the Peak District (Derbyshire) and two hours a day on the south coast of England.

Visibility

In fine, still weather there is occasionally haze in summer and mist and fog in winter[1]. Until about 1956 dense fogs containing smoke and other pollution from the burning of coal used to occur from time to time in London and

[1] The number of mornings with less than 1,100 yards visibility ranges from less than 5 a year in areas of lowest incidence to about 55 in areas of the highest.

other centres of population. Since then, as a result of changes in fuel usage and the operation of clean air legislation, these fogs have become much less severe.

Soil and Vegetation

Many parts of the surface of Highland Britain have only thin, poor soils, with the result that large stretches of moorland are found over the Highlands of Scotland, the Pennines, the Lake District, the mountains of Wales and in parts of north-east and south-west England. In most areas the farmer has cultivated only the valley lands and the plains where soils are deeper and richer; villages and towns are often separated by uplands with few if any habitations.

With the exception of a few patches of poor soil or rocky land, almost the whole of Lowland Britain has been cultivated, and farmland covers the area except where there are urban and industrial settlements. Elaborate land drainage systems have been developed through the centuries to bring under cultivation the fertile soil of the low-lying fenland of Lincolnshire and similar areas in East Anglia.

With its mild climate and varied soils, Britain has a diverse pattern of natural vegetation. When the islands were first settled, oak forest probably covered the greater part of the lowland, giving place to extensive marshlands, forests of Scots pine on higher or sandy ground and perhaps some open moorland. In the course of the centuries the forest area was progressively diminished and, in spite of planting by estate owners in the eighteenth and nineteenth centuries and the establishment of large forests by the Forestry Commission in the past forty years, woodlands now occupy only about 7 per cent of the surface of the country. The greatest density of woodland occurs in the north and east of Scotland, in some parts of south-east England and in Monmouthshire on the Welsh border. Midland Britain appears to be well wooded because of the numerous hedgerows and isolated trees. The most common trees are oak, beech, ash and elm and, in Scotland, pine and birch.

There are various types of wild vegetation, including the natural flora of woods, fens and marshes, foreshores and cliffs, chalk downs and the higher slopes of mountains; the most widespread is that of the hilly moorland country, which consists mainly of heather, grasses, gorse and bracken, with cotton grass in the wetter parts. Most of Britain, however, is agricultural land, of which about a third is arable and the rest pasture and meadow, a varied semi-natural vegetation composed of indigenous grasses and flowering plants.

Farming land is divided into fields by hedges, stone walls or wire fences and, specially in the mixed farms which cover most of the country, presents a pattern of contrasting colour. The cool temperate climate of Britain and the even distribution of rainfall ensure a long growing season; streams rarely dry up, grassland is green throughout the year and full of wild flowers from spring to autumn; in most years there is scarcely a month in which some flowers may not be found in hedgerows and sheltered woodland glades.

Fauna

The fauna of the British Isles is, in general, similar to that of north-western Europe, though there are fewer species. Some of the larger mammals, including the wolf, the bear, the boar and the reindeer, have become extinct; but red deer, protected for sporting reasons, flourish in the Scottish Highlands and on Exmoor in the counties of Devon and Somerset, roe deer are found in Scotland and in the wooded areas of southern England, and fallow deer (which are probably not indigenous) have been introduced into parks and are wild in some districts. The badger, a nocturnal animal, is rarely seen;

there are foxes in most rural areas, and otters are found along many rivers and streams. Both common and grey seals may be seen on various parts of the coast, though not usually in the same localities. Smaller mammals include mice, rats, voles, shrews, hedgehogs, moles, squirrels (the imported grey more numerous than the native red), hares, rabbits, coypu, weasels and stoats.

There are about 430 species of birds, including many song-birds. About 230 species are resident and the rest are regular visitors to Britain. The chaffinch and the blackbird are probably the most numerous and are widely and evenly distributed, but sparrows usually predominate near houses, and huge flocks of starlings, which gather at certain seasons, sometimes congregate in London and other large towns. These and some other species of small birds have been on the increase for several decades owing to their success in adapting themselves to a man-made environment, while small birds in general have benefited by more considerate treatment from the public. The number of large birds, on the other hand, has tended to decline, except for game birds which are specially preserved, such as pheasants and partridges, and the red grouse which is found in moorland areas.

Many species of gulls and other sea-birds nest round the coast and gulls often fly far inland in search of food or shelter in rough weather. The drainage and reclamation of marsh lands have diminished the natural habitat of duck, geese and other aquatic birds. Such birds, however, now frequent reservoirs, gravel pits and sewage farms in addition to the nature reserves and bird sanctuaries which have recently been established on an increasing scale. Nearly all British wild birds are protected; the principal exceptions are those considered injurious to agriculture and birds shot for sport in the open season.

Reptiles and amphibians are few. The former are represented by three species of snakes, of which only the adder is venomous, and three species of lizards, including the snake-like slow-worm. The amphibians are represented by three species of newts and five species of frogs and toads. Of these, only one species of newt and the common viviparous lizard are indigenous; the other species of reptiles and amphibians that are now firmly established came to Britain from Europe. There are no snakes in Ireland.

River and lake fish include salmon, trout, sea-trout, perch, roach, dace, grayling and pike.

There are more than 21,000 different kinds of insects, most of them small, in the British Isles. Among the largest are the rare swallowtail butterfly (3 to 4 inches) and the stag beetle (2½ inches). The insect fauna in Britain is less varied than that of continental Europe and lacks a number of common European species. With modern methods of pest control, extensive insect damage to crops or timber and serious outbreaks of diseases commonly spread by insect vectors are exceptional in Britain but there is some anxiety among naturalists that chemical protection against insects may be reducing the creatures which feed on them, and their predators in turn.

THE DEMOGRAPHIC BACKGROUND

The people who now inhabit the British Isles are descended mainly from the people who inhabited them nearly nine centuries ago. The last of a long succession of invaders and colonisers from Scandinavia and the continent of Europe were the Normans, a branch of the Norsemen or Scandinavian Vikings who, after settling in northern France, intermarrying with the French, and assimilating the French language and customs, crossed to England and conquered it in 1066.

It is neither possible nor suitable to attempt in this chapter to estimate the relative importance of various early peoples—pre-Celts, Celts, Romans, Anglo-Saxons and the Norsemen, including the Danes—in the ancestry of the present English, Scots, Welsh and Irish. It is significant, however, that over most of England and the Lowlands of Scotland the language which soon came to predominate was English, mainly a marriage of Anglo-Saxon and Norman-French, while the use of Celtic languages persisted in Wales, Cornwall, the Isle of Man, the Highlands of Scotland and in Ireland (see p. 18).

The available records do not permit of any precise estimates of the size of population or of the extent or direction of population movement until the beginning of the nineteenth century. It is believed, however, that at the end of the eleventh century the population of Great Britain was about two million, while at the end of the seventeenth century a reasonable contemporary estimate put the population of England and Wales at $5\frac{1}{2}$ million and that of Scotland at about one million. The main factor in this gradual growth of population was a slow natural increase, the rate of which was retarded in Britain, as in all countries before the development of medical science, by high death rates and, in particular, by very high infant and maternal mortality. Immigration from the continent of Europe has been an influence at certain times and immigration from other Commonwealth countries more recently.

Vital Statistics and Population Censuses.

From the beginning of the nineteenth century, information about the British people—their number, sex, age, geographical distribution, births, deaths, marriages, occupations, language and family structure is relatively plentiful and reliable. Most of it is derived from two main sources: the regular flow of vital statistics, i.e. statistical information based on statutory registration of births, marriages and deaths, and the periodic census of population which gives a national snapshot at a particular moment of time.

The compilation of complete records of births, marriages and deaths is carried out by registrars of births and deaths, some of whom also act as registrars of marriages. In England and Wales there are about five hundred superintendent registrars in charge of registration districts and about twelve hundred registrars in charge of sub-districts. Registrars and superintendent registrars are appointed by the county, county borough and metropolitan borough councils but they act under the instruction of the Registrar General for England and Wales, who is in charge of a central government department, the General Register Office, concerned with regulating the registration of births, deaths and marriages, with planning and carrying out population censuses, and with the compilation and analysis of population and vital statistics. There are corresponding authorities[1] and similar arrangements (differing only in detail) in Scotland, Northern Ireland, the Channel Islands and the Isle of Man.

Censuses of the people of Great Britain have been taken regularly every ten years since 1801, except that there was no census in 1941 because of the war. The latest census covering the whole of the British Isles was taken in 1961 by the appropriate authorities in England and Wales, Scotland, Northern Ireland, the islands of the British seas and the Irish Republic. As well as total population figures and local reports, tables have been published on

[1] The various authorities are: the General Register Office, Somerset House, London; the General Registry Office, Edinburgh; the General Register Division of the Ministry of Finance of the Government of Northern Ireland; the Governments of Jersey, of Guernsey and its associated islands, and of the Isle of Man.

birthplace and nationality, age and marital condition, housing tenure and household arrangements and also reports on incidence of Welsh speaking in Wales and Monmouthshire and on scientific and technological qualifications. Further tables are expected on migration, dwellings and households, occupation and industry, workplace, education and fertility.

Because the traditional ten-year interval is now too long to wait for the firm figures needed by Government and business for decision making, which only a census can give, censuses are to be taken throughout Great Britain (on a sample basis) and Northern Ireland in 1966.

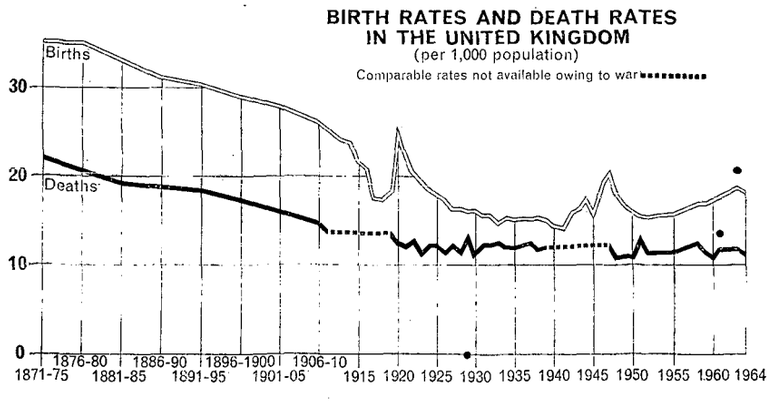
The short demographic account of the United Kingdom given in this chapter is based mainly on census reports and on the regular returns of births, marriages and deaths, though some use has been made of other special investigations, including the Reports of the Royal Commission on Population.[1]

Total Population

The enumerated population of the United Kingdom at the censuses taken on 23rd April, 1961, was 52,709,000, excluding persons in the Isle of Man and the Channel Islands, which are not strictly parts of the United Kingdom.

The population had increased by nearly 2½ million since 1951, by about 6½ million since 1931, by about 8½ million since 1921 and by about 45½ million —or about sevenfold—since 1700. The main causes of this increase were a progressive reduction in death rates and a continuance of high birth rates into the beginning of the twentieth century. Between June 1961 and June 1962 the population increased by 1 per cent, faster than at any time in the past 40 years, owing to natural increase and exceptionally high net gain from migration. If a census had been taken in mid-1964 it is estimated that some 54,066,000 people would have been enumerated in the United Kingdom (adjusted for members of the armed forces and others, 54,213,000). On the basis of present trends it is now expected to go on growing, though probably by slightly under the 1961–62 rate of increase.

The population density of the United Kingdom as a whole is one of the highest in the world: it was approximately 554 persons per square mile at the time of the 1961 censuses; but in England there were approximately 863 persons per square mile.



[1] This commission was appointed in 1944; its main report was published in 1949.

Birth and Death Rates

For most of the nineteenth century the annual birth rate was about 35 per thousand of the population, and the annual death rate was just over 20 per thousand. Both birth and death rates fell over the last 30 years of the century, but the natural increase of the population changed but little. It rose from 12 per thousand in 1851 to 15 per thousand in 1881, and fell to 11 per thousand in 1901.

These fertile years, with their comparatively high death rates in all age groups, produced a population of low average age. At each successive census the population of any age group exceeded the corresponding figure at the preceding census, while the short expectation of life further reduced the ratio of older to younger persons. When, therefore, death rates in all age groups fell by an average of about a third, as they did between 1880 and 1910, the results were a very low general death rate, which helped to maintain the population increase in spite of a fall in the birth rate, and a gradual increase in the average age of the population.

After the first world war the birth rate fell to less than half the nineteenth century rate. Even so, the population continued to increase slowly, though its average age rose more rapidly.

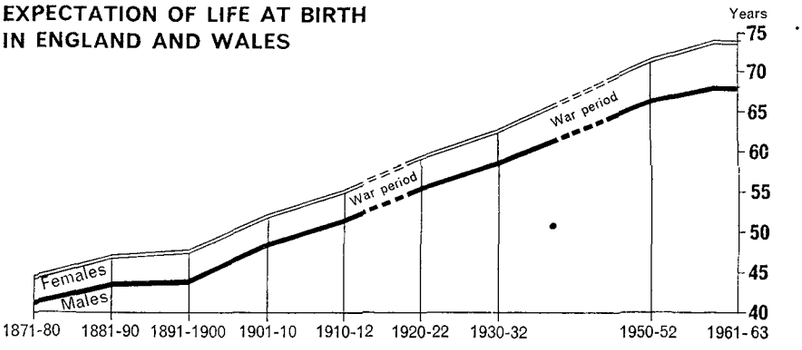
Owing to the changing age composition, the general death rate has remained nearly stationary since 1920 at around 12 per thousand of the population though death rates have continued to fall heavily in every age group, particularly among pre-school children, school children, and adults in their thirties and forties, with a consequent lengthening of the expectation of life from about 50 years at birth in 1900 to 1910 to over 70 years at birth in 1958 to 1960. Since 1933 the steady fall in the number of births has ceased. During the second world war the birth rate began to rise and reached a temporary post-war peak of 20·7 per thousand population in 1947. It then receded again to slightly above the pre-war level in the early 1950s, but since 1955 it has risen slowly and was 18·7 per thousand in 1964. The proportion of illegitimate births, which reached a peak of 9·1 per cent of all live births in 1945, the last year of the second world war, fell between 1945 and 1955, when it reached 4·5 per cent; since then it has been rising again gradually and was nearly 7 per cent in 1964.

Mortality, Causes

The causes of the decline in mortality include better nutrition, rising standards of living, the advance of medical science, the growth of medical facilities, improved health measures, better working conditions, education in personal hygiene, public and private schemes to make the health services generally available, and the smaller size of the family, which has reduced the strain on mothers and enabled them to take greater care of their children.

Mortality from acute infectious diseases and from tuberculosis, and infant and maternal mortality have declined very sharply. Mortality from the main acute infectious diseases of childhood is less than a two-hundredth and mortality from tuberculosis is about one-fifty-fifth of the rate prevailing in the mid-nineteenth century. Infant mortality (i.e. deaths of infants under one year old per thousand live births) has fallen by about 80 per cent since 1900. Maternal mortality is now only about one-thirteenth of the 1934 rate. The reported mortality from many of the chronic diseases of middle and old age, such as cancer of the lung and coronary thrombosis, has risen during the twentieth century, and this rise, though exaggerated by the improvement in diagnosis, is at least partly real. Medicine has not yet discovered effective measures to combat some of these diseases, and improvement in positive health does not always bring increased immunity or resistance to them.

EXPECTATION OF LIFE AT BIRTH
IN ENGLAND AND WALES



Marriage

Over the past thirty years the proportion of the whole population who are married has risen from 43 to 51 per cent, while the proportion of single persons in the population over 15 years of age has fallen from nearly a third to under a quarter. This change has been due mainly to an increase in marriage rates among men and women in their late teens and early twenties. In 1962 some sixty per cent of the young women aged 20 to 24 were married; in 1931 only twenty-five per cent were married. Earlier marriage has led to a large increase in the number of children born to women under 30 years of age and in recent years has contributed to a substantial acceleration of the total flow of births into the population.

Fertility Trends

The fall in birth rates in the latter part of the nineteenth and the early part of the twentieth centuries was due mainly to a decline in the size of the family (i.e. the number of children born per married couple) caused by the spread of deliberate family limitation. Couples married a hundred years ago produced on the average rather more than six liveborn children. The decline seems to have set in with those married in the 1860s, and continued steady until, with the couples married in the late 1920s, the average family size had been reduced to between 2·2 and 2·1. The decline then stopped, and the figure remained stable in spite of the disturbance of the war years; the latest data suggest a definite increase.

The generation of girls born about 1840, and married mostly between 20 and 30 years later, had about 40 per cent more children than were needed to replace the original generation, while those born at the beginning of the present century had only about 70 per cent of the number of children needed for replacement. Since then the figure has been rising again and seems likely to exceed full replacement with the generation born during the second world war. The rise has been due mainly to the increased proportion of children surviving to adult life and of women getting married; but there has also been some increase in family size and fertility statistics suggest that this increase is continuing.

Age Distribution

The first effect of the fall in the birth rate was to reduce the number of children, and therefore the ratio of dependent population to working population. This ratio was at a minimum in the 1930s. After 1936 the number of children leaving school for work fell sharply owing to the drop in the birth rate after 1921, while the population aged over 40 continued to increase and the population aged over 64, born during an era of high fertility and repre-

senting successive generations of steeply rising numbers, increased very rapidly. The higher birth rates after 1942 arrested the compensating fall in the number of dependent children and have further reduced the ratio of working to dependent population.

At mid-1964 the age distribution of the British population was estimated as follows:

Under 15	23·2 per cent
15 to 64	65·0 per cent
65 and over	11·9 per cent

An unusually small proportion of the population of the United Kingdom (about 25 per cent) is now aged 20 to 39 years. Assuming a continued fall in death rates and an aggregate net gain from migration of some 20,000 people a year from the usual age groups, it is estimated that between 1964 and 1980

(1) the number of people aged 20 to 39 will increase by about 16 per cent to about 16 million;

(2) the population aged 40 to 64 will decrease by about 4·5 per cent;

(3) the number of old people (over 65) will increase by nearly 28 per cent to about 8 million.

Sex Ratio

Total births of boys naturally exceed those of girls by about 6 per cent, but stillbirth rates and mortality rates at almost all ages are higher for males, so that in nearly all countries—and in Britain since records began—women preponderate among the elderly and outnumber men in the total population. Formerly indeed women outnumbered men in the United Kingdom in every age group from adolescence onwards. Recently, however, the fall in stillbirths and infant mortality has reduced the influence of these factors on sex ratio so that the age at which women begin to outnumber men has been advanced and is now about 35. On the other hand, the lengthening of the expectation of life, which has been rather more marked for women than for men, has increased the preponderance of women among the elderly—there are now some seven women over seventy years old to every four men—and made it a weightier factor in the sex ratio of the whole population. This increase in the number of elderly women, however, does not quite counterbalance the increase in the number of boys and young men so that the ratio of females to males has fallen from 108 : 100 in 1951 to 105: 100 in 1964.

Migration

From the beginning of the nineteenth century until the 1930s the balance of migration was markedly outward. Between 1815 and 1930 well over 20 million people left Britain for destinations outside Europe, mainly in the Commonwealth and the United States. Many emigrants later returned and large numbers of Europeans, mainly Russians, Poles, Germans and Hungarians, entered the British Isles. Nevertheless, the net loss by migration from the present area of the United Kingdom amounted to some four million between 1871 and 1931. Since then the balance of migration of Britain as a whole has been inward, though Scotland and Northern Ireland have throughout continued to have a net outward movement of population to countries overseas as well as to England and Wales. The main net inflow to Britain since 1931 occurred in two periods. The first was in the years 1931 to 1940 when emigration was very low, many former emigrants returned, there was considerable net immigration from the Irish Republic, and extensive immigration from Europe, including about a quarter of a million refugees

seeking sanctuary in Britain. The second, in the years from 1958 onwards, resulted from a large increase in net immigration from Commonwealth countries, particularly West Indian countries and Pakistan. In the three years 1960–62 total net immigration amounted to some 388,000 people, about three-quarters of them from the Commonwealth and nearly half from the West Indies. It was in these circumstances that the Government introduced the Commonwealth Immigrants Act 1962, which gave it power to restrict the number of people from the Commonwealth and, in principle, the Irish Republic who may immigrate into the United Kingdom without assured prospects of employment or adequate means of self-support, and to deport unsuitable immigrants (that is, those convicted of offences and recommended for deportation by a court of law). The Act came into force on 1st July, 1962, and net Commonwealth immigration in the rest of 1962 amounted to some 2,500; in the year 1963 it was 66,000, and in 1964, 75,500.

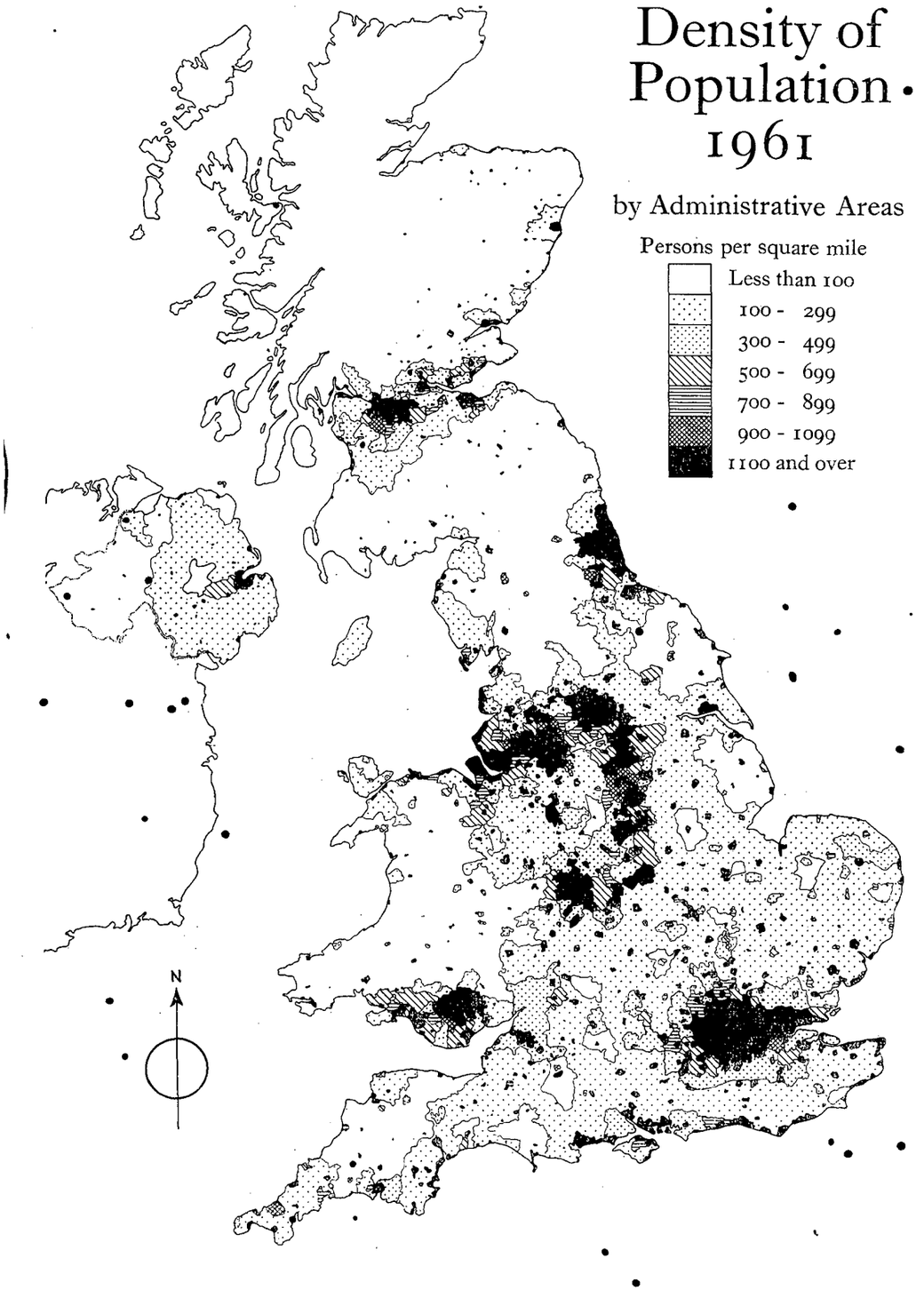
At the 1961 census some 2·1 million residents in England and Wales were reported definitely to have been born outside the United Kingdom—rather under one-third of them in other Commonwealth countries, about the same number in the 26 counties now forming the Irish Republic, and the rest in foreign countries, notably Germany, Poland, the United States and Russia. The total number born outside the United Kingdom had increased by about 40 per cent since 1951, largely because of the inflow from Commonwealth countries in the West Indies, Asia and Africa. Residents in England or Wales born in these countries had increased from over 170,000 to about 530,000. In Scotland and Northern Ireland the number of residents born outside the British Isles is relatively small.

It has been estimated that there are currently up to a million Commonwealth immigrants in Britain, many of them living in the congested parts of industrial cities such as London, Birmingham and Bradford. They are making an important contribution to the economy and public services by relieving shortages of labour that would otherwise be critical but the arrival of large numbers during a relatively short period, and their concentration in certain areas of full employment, has led to a suddenly increased demand for housing where it is already scarce and caused additional pressure on the social services. The central Government, local authorities and a variety of social agencies are seeking in different ways to help immigrants and other citizens through this period of adjustment and to deal with special social problems as they become evident.

Emigrants from Britain to Commonwealth countries in 1963 numbered about 130,000, an increase of more than 30 per cent over the previous year but still well below the 200,000 in each of the two post-war peak years, 1952 and 1957.

Nationality

Under the British Nationality Act 1948, with insignificant exceptions, persons who are born, or whose fathers were born, in the United Kingdom or in a territory which was a colony of the United Kingdom on 1st January, 1949, or at the date of birth if later, or in a United Kingdom registered ship or aircraft, are citizens of the United Kingdom and Colonies. Citizenship may also be acquired: by descent (subject to certain requirements) from a paternal grandfather born in the United Kingdom or Colonies or from a more remote paternal ancestor in the male line; by registration, for citizens of Commonwealth member countries or of the Irish Republic, for minor children and for women married to citizens of the United Kingdom and Colonies; in consequence of an adoption order; and by naturalisation. The


Density of Population • 1961
by Administrative Areas
Persons per square mile
Less than 100
100 - 299
300 - 499
500 - 699
700 - 899
900 - 1099
1100 and over
N

requirements for the grant of a certificate of naturalisation include five years' residence in the United Kingdom or Colonies or five years' Crown service, good character, a sufficient knowledge of English and the intention to reside in the United Kingdom or a colony or to remain in Crown service.

A citizen of the United Kingdom and Colonies does not forfeit his citizenship by acquiring or possessing the nationality or citizenship of another country; nor does a woman who is a citizen of the United Kingdom and Colonies lose her citizenship by marriage to an alien. Indeed, a citizen cannot be deprived of his citizenship against his will except in very exceptional circumstances (for example, if he has obtained naturalisation or registration as a citizen by fraud). Any man or woman who is a citizen is, however, at liberty to renounce citizenship if he or she possesses or acquires the nationality or citizenship of another country.

Citizens of the other independent Commonwealth countries are, in United Kingdom law, British subjects or Commonwealth citizens. Until the passing of the Commonwealth Immigrants Act 1962, they were free to enter and remain in the United Kingdom without restrictions of any kind. Similar treatment has been extended to citizens of the Irish Republic who, in the United Kingdom, are not aliens.

Distribution of Population

The population of England is, and has been for centuries, greater than that of all other parts of the British Isles combined. The distribution of the population of the British Isles by country, as estimated at mid-1964 and as enumerated at population censuses back to 1901, is shown in Table 1. The populations of England, Wales, Scotland and Northern Ireland were in every case greater in 1961 than in 1951 and in 1951 than in 1931, whereas in the ten years preceding 1931 the population of Wales, Scotland and Northern Ireland had declined. The rate of increase in England, however, continues to be higher than in the other three countries, largely because of migration from these countries to England.

Geography, history and increasing urbanisation have given rise to the differences between these countries and to an uneven distribution of the population within them. Table 2 shows the distribution of the population by urban and rural districts and the populations of the standard administrative regions, of the seven major conurbations and 17 larger cities, some of which are the principal cities included in a conurbation. About 30 million people live within the central area, about 60 to 65 miles wide and 200 miles long, which runs approximately from the mouth of the Thames to the mouth of the Mersey and contains five of the main conurbations, a number of other sizeable towns and much rich agricultural land. Other areas with large populations (see map on p. 13) are the central lowlands of Scotland; 1,000 square miles in the north-east of England from north of the river Tyne down to the river Tees; south-east Wales; the Bristol area; and the English Channel coast from Poole, in Dorset, eastwards. On the other hand, most of the mountainous parts of Britain, including much of Scotland, Wales and Northern Ireland and the central Pennine Chain in northern England, are very sparsely populated.

These differences in average density between different regions have been increasing. Though few places in the United Kingdom have had any decrease of population in the past decade, there have been local differences in the rate of increase. Many places in the midlands and south-east England, some south-coast areas and some of the most prosperous parts of northern England, Wales and Scotland have had increases well above the average

TABLE 1
POPULATIONS
1901–1964[a]

		1901	1931	1951	1961	1964
ENGLAND (excluding Monmouthshire)	Persons	30,509,234	37,359,045	41,159,213	43,460,525	44,725,000
	Males	14,714,157	17,839,205	19,745,530	21,012,069	21,733,800
	Females	15,795,077	19,519,840	21,413,683	22,448,456	22,991,200
WALES AND MONMOUTHSHIRE	Persons	2,018,609	2,593,332	2,598,675	2,644,023	2,676,300
	Males	1,014,456	1,293,805	1,270,103	1,291,764	1,309,900
	Females	1,004,153	1,299,527	1,328,572	1,352,259	1,366,400
SCOTLAND	Persons	4,472,103	4,842,980	5,096,415	5,179,344	5,206,400
	Males	2,173,755	2,325,523	2,434,358	2,482,734	2,499,700
	Females	2,298,348	2,517,457	2,662,057	2,696,610	2,706,700
GREAT BRITAIN	Persons	36,999,946	44,795,357	48,854,303	51,283,892	52,607,700
	Males	17,902,368	21,458,533	23,449,991	24,786,567	25,543,400
	Females	19,097,578	23,336,824	25,404,312	26,497,325	27,064,300
NORTHERN IRELAND	Persons	1,236,952	1,243,000[b]	1,370,921	1,425,062	1,458,000
	Males	589,955	601,000[b]	667,819	694,224	711,000
	Females	646,997	642,000[b]	703,102	730,818	747,000
TOTALS GREAT BRITAIN AND NORTHERN IRELAND	Persons	38,236,898	46,038,357	50,225,224	52,708,934	54,065,700
	Males	18,492,323	22,059,533	24,110,791	25,481,335	26,254,400
	Females	19,744,575	23,978,824	26,107,143	27,228,019	27,811,300
ISLE OF MAN	Persons	54,752	49,308	55,253	48,135	47,818
	Males	25,496	22,443	25,774	22,034	21,905
	Females	29,256	26,865	29,479	26,099	25,913
JERSEY	Persons	52,576	50,462	57,310	63,539	62,000
	Males	23,940	23,424	27,291	30,709	29,850
	Females	28,636	27,038	30,019	32,830	32,150
GUERNSEY AND ASSOCIATED ISLANDS	Persons	43,042	42,743	45,496	47,053	47,372
	Males	21,140	20,675	22,091	22,688	n.a.
	Females	21,902	22,068	23,405	24,363	n.a.
IRISH REPUBLIC	Persons	3,221,823	2,933,000[c]	2,960,593	2,818,341	2,849,000[d]
	Males	1,610,085	1,497,000[c]	1,506,597	1,416,349	1,431,000
	Females	1,611,738	1,436,000[c]	1,453,996	1,401,792	1,418,000
TOTALS BRITISH ISLES	Persons	41,609,091	49,113,870	53,343,876	55,686,000	57,071,890
	Males	20,172,984	23,623,075	25,699,563	26,972,771	n.a.
	Females	21,436,107	25,490,795	27,644,313	28,713,229	n.a.

Source: *Census Reports and Estimates by Population Authorities.*

[a] The 1964 figures are mid-year estimates; the rest are census figures. Exceptions are noted in [b], [c] and [d] below.

[b] Estimate (censuses were taken in 1926 and 1937, but not in 1931).

[c] Estimate (censuses were taken in 1926 and 1936, but not in 1931).

[d] Estimate for April 1964.

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national rate, while many of the older industrial towns and remote country areas in northern England, Wales and Scotland and some coastal resorts have had relatively small increases. The differences result from the combined effect of natural increase in almost all areas and net migration towards the expanding employment opportunities of the midlands and south and towards certain retirement areas, mainly on the south coast.

Throughout Britain the population is predominantly urban and suburban, although there may be access to large parks, commons and other expanses of open country within the urban area.

During the nineteenth century the labour demands of newly developing industry drew great numbers from the countryside; by the end of the century three-quarters of the British population was living in towns and the large conurbation was already the dominant type of British community. During the twentieth century the suburbs of the towns in these population centres have continued to spread and merge. Since 1921 nearly 40 per cent of the population has lived in the seven great conurbations whose centres are the cities of London, Manchester (South-East Lancashire), Birmingham and Wolverhampton (West Midlands), Glasgow (Central Clydeside), Leeds and Bradford (West Yorkshire), Liverpool (Merseyside), and Newcastle upon Tyne. Even the 20 per cent of the population who live in areas classed administratively as rural include many who regularly work, shop or go to school in towns.[1]

Urban Dispersal

A development which has been accelerating in recent years is the long-established tendency for the number of people who actually have their homes in the inner parts of an area (especially the town or city centre itself) to decrease, and be balanced or surpassed by the increase of population in and beyond the outer suburban fringes, where development commonly extends without a break beyond the administrative boundaries and includes areas which are administratively rural. For this reason the statistics of conurbations, comprising continuously built-up, economically and socially interdependent areas, are in many ways more illuminating than those for urban administrative areas.

In some cases even the conurbation, as defined for statistical purposes, does not cover the whole of developments on the outskirts. This applies most strikingly to London. The population of Greater London, after falling between 1951 and 1961, showed a very slight increase by 1964; but there is a broad belt of almost continuous population increase which now completely encircles it, includes and passes beyond all existing London new towns and extends along every major rail and road route from London. This belt contains both commuters, who have moved their homes but continue to travel to work in inner London, and people who have changed both home and work place from inner London to new or expanded towns. Other areas in which outward movement and fringe development have been noticeably large are the outer areas of the West Midlands and Merseyside conurbations and areas on the edges of Bristol, Derby, Leicester, Norwich, Oxford, Portsmouth and Sheffield. Thus it is that Table 2, as well as showing decreases since 1951 for the urban administrative areas of Glasgow and nine other cities, shows such small increases since 1951 (because of this further spreading out of population) even in the officially defined conurbations of South-East Lancashire, West Midlands, the West Riding of Yorkshire, and Merseyside, and in the London and south-eastern region.

[1] About 3½ per cent of the total working population are engaged in agriculture.

Factors in the further dispersal of the last 15 years have been the spread of car ownership, expansion in public transport serving journeys to work, private property developments to meet the demand for housing, and planned transfers of population to the new towns around London, Glasgow, the West Midlands and Merseyside and to selected expanding towns near to the great cities.

TABLE 2
DISTRIBUTION OF THE POPULATION[a]

	Area in square miles[b]	*Thousands*			
		1931	1951	1961	1964
Urban and rural districts					
England and Wales:					
Urban districts	8,318·2	31,952	35,336	36,872	37,588
Rural districts	50,029·2	8,000	8,422	9,233	9,814
Scotland:					
Cities and burghs	441·6	3,362	3,592	3,646	3,712
Landward areas	29,353·3	1,481	1,504	1,533	1,495
Northern Ireland:					
Urban districts	92·8	678[c]	728	770	785
Rural districts	5,359·0	602[c]	643	655	673
Standard regions of England and Wales:					
Northern	7,470·7	3,038	3,141	3,252	3,301
East and West Ridings	3,962·7	3,929	4,097	4,172	4,241
North-Western	3,083·0	6,197	6,447	6,567	6,666
North Midland	6,303·9	2,939	3,378	3,634	3,760
Midland	5,024·8	3,743	4,423	4,757	4,926
Eastern	7,264·3	2,433	3,098	3,736	3,969
London and South-Eastern	4,190·6	10,330	10,906	11,104	11,273
Southern	3,897·7	2,135	2,649	2,826	3,043
South-Western	9,133·9	2,615	3,021	3,411	3,547
Wales	8,015·8	2,593	2,599	2,644	2,676
Conurbations:					
Greater London	721·7	8,216	8,350	8,183	8,187
South-East Lancashire	379·6	2,427	2,423	2,428	2,449
West Midlands	268·8	1,933	2,237	2,347	2,384
Central Clydeside	324·4	1,690	1,758	1,802	1,796
West Yorkshire	484·5	1,655	1,693	1,704	1,721
Merseyside	150·0	1,347	1,382	1,384	1,385
Tyneside	90·2	827	836	855	853
Cities:					
Belfast	24·0	438[c]	444	416	410
Birmingham	79·9	1,003	1,113	1,107	1,106
Bradford	39·9	298	292	296	298
Bristol	41·2	397	443	437	432
Cardiff	23·6	227	244	257	260
Coventry	29·9	167	258	306	316
Edinburgh	52·0	439	467	468	473
Glasgow	60·4	1,088	1,090	1,055	1,019
Kingston upon Hull	22·5	314	299	303	300
Leeds	63·5	483	505	511	509
Leicester	26·5	239	285	273	267
Liverpool	43·5	856	789	746	729

Continued overleaf

	Area in square miles[b]	*Thousands*			
		1931	1951	1961	1964
Manchester	42·6	766	703	662	645
Newcastle upon Tyne ..	17·3	283	292	270	261
Nottingham	28·7	269	306	312	312
Sheffield	61·9	512	513	494	491
Stoke on Trent	33·1	277	275	265	264

Source: *Census Reports and Estimates by Population Authorities.*

[a] The boundaries of some of the administrative areas have been altered from time to time. The population figures given relate in general to the areas as these were defined in the year noted at the head of each column. The figures for conurbations, however, relate in general as nearly as possible to areas as constituted in 1961.

[b] Area at the date of the 1961 census of population.

[c] 1937 census figures.

Language

In England, Wales, Scotland and Northern Ireland, English is the language predominantly spoken. In Wales, however, Welsh, a form of British Celtic, is the first language of the majority of the population in most of the western counties and was spoken by 26 per cent of the population at the time of the 1961 census. In Scotland, in 1961 some 77,000 persons, mainly in Ross and Cromarty, Inverness, Argyll, and Lanark, spoke the Scottish form of Gaelic,[1] while a few families in Northern Ireland spoke the Irish form of Gaelic. The Manx and Cornish varieties of Celtic are no longer effectively living languages, although, in the Isle of Man, Manx is spoken by a few people, and is used in addition to English for certain official pronouncements.

English is spoken throughout the Channel Islands, but a Norman-French *patois* is still also spoken there by some people. French is still the official language of Jersey, used for ceremonial and official procedure; both French and English are used in the courts. In Guernsey, however, English is now used for almost all official proceedings.

SOCIAL LIFE

A general summary of trends in social organisation, similar in scope to the foregoing summary of population trends, is not practicable. It may be useful, however, to review some of the evidence relating to the structure of British households and social habits in Britain in order to provide a background to the information given in later chapters on such matters as town and country planning, housing, and transport.

Number and Composition of Households

The great majority of people enumerated in the 1961 census in England and Wales (nearly 97 per cent) were living in private households[2] (usually in families or on their own). About 0·75 per cent of the population were in hotels or boarding houses, about 1·5 per cent in hospitals or homes for the elderly or disabled, and the remainder not in private households included people in the Armed Services, in educational institutions and in various places of detention.

[1] Most of the islands off the west coast of Scotland where Gaelic is spoken are included in the counties of Ross and Cromarty, Inverness and Argyll.

[2] Counting people living alone as one-person households.

Of the 16¼ million private households in Great Britain in 1961, 13,475,000 were estimated on the basis of the 1961 census to be of the simplest type, comprising married couples, lone parents or single people with their children, if any, and resident domestic servants, if any. More specifically, the 13,475,000 households comprised 7,863,000 married couples, or lone parents with children, of whatever age, 3,655,000 married couples without children, and 1,957,000 people living alone. This represents an increase of 1,942,000 households since 1951, when there were 11,533,000 households of the simplest type, comprising 6,877,000 married couples or lone parents with children of whatever age and 4,656,000 married couples without children or people living alone. Altogether some 9,362,000 households were estimated in the 1961 census to be without children under 15 or in full-time education and another 3,154,000 contained only one child. An exact comparison of these figures with those for 1951 is not available. However, in 1951 there were 8,228,000 households without children under 16 (instead of 15), but possibly including older children in full-time education. Also in 1951 there were 3,080,000 households with only one child.

The number of households (which has increased by 84 per cent since 1911) and their small average size reflect a number of factors, including lower birth rates, increased survival into old age, the higher proportion of married people in the population and the general assumption that married couples and old people in good health prefer and are entitled to have their own separate homes. They are not to be taken as meaning there has been a general weakening of family feeling, though family ties may link fewer people than in former times. The volume of travel at Christmas time, the bulk of which consists of people going to spend Christmas with their relatives, achieves news value every year; only those involved know the hidden devotion in thousands of homes where infirm old relatives or handicapped children are cared for by their families. None the less, the small size of families, coupled with a considerable degree of movement about the country for the sake of study, work or housing, do make the role of neighbours and friends with kindred interests of great importance.

Household Arrangements

The 14½ million households enumerated in the 1961 census in England and Wales were accommodated in 14 million dwellings, about 6 million of which were owner occupied, 3½ million rented from a local authority or New Town Corporation and 3½ million privately rented. Over 98 per cent of all households had exclusive use of a piped supply of cold water, 79 per cent one of hot water, 78 per cent a fixed bath and about 90 per cent a water-closet. The proportions were higher in urban areas.

Most women, and many men living alone, do their own catering and housework. Probably less than five per cent of households employ any regular paid help and almost certainly less than one per cent have a resident servant. Relatively few households (estimated to be less than one in 600), and those mainly ones with small children, have a foreign girl living with them *au pair* to give some help in the home while improving her English. Approximately one household in 40 gets help through the local authority home help service at some time in the course of a year because of the presence of an invalid, an old person or a maternity case. Nowadays wives can normally expect some help with household tasks from their husbands.

Much of the drudgery has been reduced by changes in habits and equipment, for example the relative popularity of easily cleaned plastic surfaces in place of wood, tiles and metal in need of polishing; the availability of 'convenience

foods'[1], non-iron fabrics and disposable babies' napkins; and the spread of labour-saving devices. More than three households in four now have a vacuum cleaner, two in five a refrigerator, about half a washing machine, nearly all an electric iron, one in four an electric hair drier, one in five an electric blanket and one in eight an electric toast-maker. About one in five have completely eliminated the traditional coal fire in their principal living-room. Women who go out to work (about half the women of working age are in employment) benefit particularly from the flexible opening hours of many launderettes and from the spread of automatic machines selling milk, groceries, stockings and other supplies at any time of the day or night.

Incomes, Leisure and Opportunities

Compared with previous generations most people have considerably more time at their own disposal, higher real incomes, and more chance of developing their potentialities.

Agreed hours of full-time work are usually from 40 to 42 hours a week. Actual hours worked by men average somewhat longer because of voluntary overtime working; actual hours worked by women and girls average a little less. Most employees are entitled to at least two weeks' paid holiday a year in addition to public holidays. Probably more than half enjoy a five-day week, which is widespread in manufacturing industry. Plans are being made for a further extension of five-day week working in distributive trades offering six days a week service. Housewives are probably, despite current aids in the home, the section of the community with least leisure and fewest extended periods of free time—even compared with those older schoolchildren entered for examinations who spend hours nightly on homework.

At the other end of the scale, people who have ceased work or are approaching retirement are showing considerable interest in courses offering guidance on the constructive use of their increased leisure time.

Average earnings have risen more than prices in the last decade. Women's earnings have risen somewhat faster than men's. The average earnings of women in industry are now just over half the average earnings of men. In many occupations the principle of equal pay for equal work is applied. The real incomes of manual workers, especially unskilled workers and young people under eighteen years, have risen both in absolute terms and in relation to the incomes of non-manual workers. The groups who are weakest economically are retired people wholly or mainly dependent upon pensions, households in which the father is absent or dead, and the families of low-wage earners with a number of dependent children.

Opportunities for education and training have widened; these are increasingly the keys to advancement. Four-fifths of all university undergraduates in Great Britain in 1961–62 were 'first generation' students, neither of whose parents had had a university education (one-fifth of the total had fathers who were manual workers); though children from culturally articulate homes in which they benefit from parental experience have relatively more success than others in achieving qualifications at every stage of the educational system. Social distinctions based on occupation have become much less clear-cut. Differences between the way of life of manual and other workers are less pronounced, while many manual workers' families have acquired habits which were formerly regarded as 'middle-class'. There is less disparity than there used to be in the range of possessions to be found in the home.

[1] Those processed foods for which the degree of preparation has been carried to an advanced stage by the manufacturer and which may be used as labour-saving alternatives to less highly processed products.

Modern production and marketing methods, coupled with the declining proportion of 'dirty' jobs, have contributed to far greater homogeneity of dress and appearance; style in clothes, for example, being more divided by age-group than by income-group or occupation.

The general level of nutrition is high, and still rising. In Great Britain in 1962 the average diet of households of all classes was nutritionally more than adequate[1]. Average weekly food consumption per head included $5\frac{1}{4}$ pints of milk and cream, over 3 ounces of cheese, nearly 38 ounces of meat, poultry and bacon, nearly 22 ounces of sugar and preserves, over 115 ounces of fruit and vegetables, 44 ounces of bread and over 6 ounces of butter. Tea remained the principal beverage but the consumption of coffee, one-seventh that of tea, was nearly four times what it was 30 years ago. There are other pointers to a modification in the traditional conservatism of British diet in the increased consumption of wine, the spread of foreign restaurants in all parts of the country, and successful sales of the more exotic fruits and vegetables outside traditionally cosmopolitan areas.

There is quite a variation in diet between different parts of Britain. Scotland maintains its traditional penchant for cakes, and the consumption of materials for making pies and puddings is above the national average in the Midlands and the north of England. More coffee is drunk in the south of England, which also consumes proportionately more fresh fruit and vegetables. The consumption of mutton and pork decreases proportionately from south to north and the consumption of beef increases.

Food consumption accounts for rather more than a quarter of all consumers' expenditure on goods and services in Britain. Clothing accounts for about a twelfth. Features of recent years have been the growing range of 'leisure' clothes and a greater adventurousness in men's wear; fur hats for men have become widely acceptable in the last few winters.

Something of a counterweight to the greatly increased strength of the production and distribution sides of a modern economy is the growth of activity to help the consumer; this has received government support. *Which*, the magazine of the Consumers' Association, which publishes appraisals of selected consumer goods, has over 300,000 subscribers and an estimated readership of three million. Over three-quarters of a million people a year make a personal visit to the Design Centre in London to see its display of well-designed British consumer goods in current production. State services do not escape the scrutiny of voluntary groups such as the Association for the Improvement of Maternity Services and the Association for the Advancement of State Education.

Home Interests

A considerable proportion of people's free time and money is spent in and on their own homes. On a weekday evening roughly seven in eight of the adult population are at home. More demanding standards of home comfort are evidenced by the sharp increase in the installation of central heating apparatus and by the popularity of wall-to-wall carpeting. About four out of five families do most of their own decorating, which may often constitute the hardest physical effort undertaken by sedentary workers. The sales of hand-tools and of small power-tools and powered garden implements testify to the extent and range of home carpentry and joinery and to the interest and initiative that maintain Britain's homes and gardens. In spite of the high

[1] When compared with allowances based on recommendations by the British Medical Association, for example, 2,640 calories per head a day on average compared with a recommended average of 2,400 a day, allowing for different levels of activity in adults.

proportion of the population living in urban areas, at least half the families in Britain have some garden, and the standard of both town and country gardens is high. Some 4,000 local horticultural societies are affiliated to the National Allotment and Gardens Society and there are a large number of unaffiliated societies; altogether there are probably some 20 million spare-time gardeners. The numerous flower and vegetable shows held in town and country are very popular and there is a large attendance at the most important of them, including the annual Chelsea Flower Show.

Other home pursuits include reading, listening to the radio, record player or tape recorder, watching television, entertaining friends[1], looking after pets[2], and pursuing hobbies. An estimated 1½ million people regularly express their competitive instincts by entering promotional competitions of the type in which purchasers of a particular product may attempt a puzzle and compose a slogan in the hope of winning a car, a house, or a 'dream' holiday.

Television and Reading Matter

Over 80 per cent of families (and a somewhat higher proportion of the large families in Britain) have a television set. The growing impact of television was probably most noticeable in the second half of the 1950s; the number of viewing licences was doubled and by 1961 totalled over 11½ million. Since then the increase has been slower, and by June 1965 the number was over 13⅓ million.

Although it is generally acknowledged that the popularity of television has resulted in far-reaching social changes, clear-cut indications of the nature of such changes are lacking. Mass entertainments have suffered, especially where the quality and amenities provided are not considered adequate. The lives of those housebound by disability or the care of small children have been much enriched. Viewers in general have been stimulated to an awareness of events and happenings which was once confined to fairly narrow groups. Television has become an important influence in the way in which the various political parties make their appeal to the electorate. There is no evidence that television has brought any decline in those hobbies, recreations and spare-time interests which people in Britain pursue so enthusiastically; in fact for many of them it may well have provided a stimulus.

The enormous diversity of special interests, from angling to yachting, is illustrated by the variety of magazines and periodicals, ranging from papers dealing with sports to journals of opinion on social, political, scientific and economic affairs (all of which command circulations in the tens of thousands), and including 'fan' magazines about current 'pop' music favourites, do-it-yourself and gardening weeklies (each commanding circulations of over a hundred thousand); and illustrated instructional periodicals which build up into encyclopaedias of art, science or general knowledge. The traditional women's weeklies, with their special blend of light fiction and meticulous advice about family health and modern baby care as well as fashion and beauty, still hold the loyalty of millions. Over a quarter of the total population are registered members of public libraries; and an increasingly wide range of titles, including works of scholarship, are bought in the comparatively

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[1] Indications of the rise in the scale and standard of home entertaining are provided by the increasing sales of table wines (double those of the 1930s) and of expensive foods, and by the frequent newspaper and periodical features and broadcast programmes devoted to cooking recipes.

[2] A sample survey in 1959 suggested that about a quarter of all homes had a caged bird, slightly over a fifth a cat, and slightly under a fifth a dog; there are probably some 4 million dogs in Britain, over 6 million cats and 8 or 9 million pet birds (mainly budgerigars).

cheap paper-backed form which constitutes about a third of total book production.

Outside the Home

Increasing prosperity and leisure and the influence of television have affected interest in playing or watching outdoor and indoor sports. The tendency is for spectators to be attracted in large numbers only to the more important events. This trend has been especially in evidence in association football, which is by far the most popular spectator sport, cricket and horse racing. Higher standards of comfort and amenity are being sought by the public and failure to provide these may be reflected in falling attendances. But almost any sporting body reports a growing desire to take part in outdoor recreations —golf, tennis, riding, angling, bowling, rugby and association football are some examples—and steadily rising sales of sports goods and membership of sports clubs indicate the keenness with which open air leisure activities are pursued.

A feature is the enthusiasm with which new forms of sport and recreation, some made more familiar through television or foreign travel, are adopted. Among spectator sports, the rise of motor racing to wide popularity is notable (the European Grand Prix in 1964 brought 100,000 spectators to the Brands Hatch circuit). Ski-ing and sailing are examples of activities which, once confined to a small number, now number their enthusiasts in hundreds of thousands. A surge of interest in ten-pin bowling since 1960 seems to have stabilised; the number of rinks now stands at about 150.

Betting

Much of the gambling with small stakes, which is practised at least occasionally by three adults out of four, is on the results of sporting events. The total money staked by the public on organised betting and gambling (private wagers and games of chance cannot be counted) is estimated at between £750 million and £1,000 million a year and seems to have increased by about 50 per cent since 1957; at least in part the increase was apparent because the legalisation of betting shops under the Betting and Gaming Act 1960 brought into the open betting which had been illicit. About half the money staked is on horse racing. Betting on football matches, both at fixed odds and through the football pools, is widespread, but usually for smaller stakes. A more recent gambling craze is for Bingo, which is widely played in converted cinemas and in club rooms and village halls, although total expenditure is not large.

Entertainments

Cinema attendances (7 million a week) are at less than a third of the rate of ten years ago, but the cinema remains the most popular form of indoor entertainment outside the home, particularly for young men and women and older children.

Attendances at theatres are much smaller. There are probably only some 200 theatres offering professional performances compared with some 2,000 cinemas. Nevertheless, there is an enthusiastic and growing public not only for plays but for ballet, opera and concerts. Special art exhibitions attract many people; the attendance at the Arts Council Picasso Exhibition in 1960 remains a record (close on half a million).

Dancing is popular, especially with those under twenty-five years of age; it is thought that about six million people go dancing every week. There are estimated to be some 3,000 to 4,000 regular dance halls, including public dance halls and halls operated by the major dance schools, which are open at least three times a week, and about 4,000 other schools of ballroom dancing. Public dances are also often held in other halls, while many of the clubs and societies which abound in Britain hold dances from time to time in their own

or hired premises. In addition, Scottish and English traditional dances have their own following.

Nearly 73 million 'singles' and 'extended play' (45 revolutions per minute) gramophone records were pressed in Britain in 1964. It is on the weekly sales of these records (almost entirely to young people) that the 'pop music' popularity placings, known as the 'Top Ten' and 'Top Twenty', are calculated. Personal appearances by leading 'pop' performers draw huge attendances both inside and outside the theatre or studio.

Clubs and Groups

A number of people from all age-groups and occupations find their main free-time interest in some form of sustained group activity connected, for example, with the churches, trade unions, politics, social welfare and reform, with study or other self-improvement or with cultural pursuits.

Clubs and societies, which may be primarily social or devoted to some particular purpose, range from small informal groups to great national and international organisations with branches throughout the country. Organisations of national importance in social life and in the promotion of social gatherings include, in addition to those connected with religious denominations, the Working Men's Clubs and Institutes, the Townswomen's Guilds and the Women's Institutes. There are some 3,600 clubs, with over 2 million members (mainly but not entirely men), affiliated to the Working Men's Club and Institute Union. These clubs are primarily social and recreational, though they also arrange lectures and classes. In recent years they have given much attention to improving their premises and to arranging events of sufficient attraction to compete with the comforts of members' homes and the standard of entertainment obtainable on television. Over 2,400 Townswomen's Guilds, with a total membership of about 200,000, are affiliated to the National Union of Townswomen's Guilds. The guilds are educational as well as social in purpose and they co-operate in many public welfare activities. The declared objective of the National Federation of Women's Institutes is to improve rural life and amenities; the institutes make an important contribution to rural life by providing meeting places for countrywomen and by organising social gatherings. In villages throughout England and Wales there are some 8,700 institutes with nearly half a million members; in Scotland and Northern Ireland there are Women's Rural Institutes with similar aims and interests.

Holidays

About 31 million people in Britain take an annual holiday. Although the seaside is still by far the most popular for holidays, the trend appears to be towards visiting several resorts for short periods rather than staying in one. Camping and caravanning have also increased greatly. Both tendencies are closely allied to the growth of personal transport (see below). More and more people—the total is now 5 million—take more than one holiday during the year. The number going abroad has also risen sharply and in 1964 totalled over 4½ million—more than half as many again as a few years earlier. The popularity of holidays abroad may be attributable to several factors besides rising incomes; the attraction of a warmer climate, which make Spain and Italy the most sought-after destinations for British tourists, the many charter and other airline services available, and the readiness of the travel trade to provide relatively inexpensive inclusive holidays. In this connection, the learning of foreign languages is popular among adults[1], aided by radio and television

[1] Instruction in two languages is available to children in 15 per cent of state-maintained grammar schools, three in 35 per cent, four in 27 per cent and five or more in 23 per cent. The most widely taught modern languages are French, German, Russian and Spanish, in that order.

programmes as well as by attendance at adult classes. Wider experience of foreign travel probably contributes to the increased adventurousness in diet and dress already noticed and to the acceptability of examples of the best in international design in furnishings and décor now available in many British shops.

Private Transport

Ownership of motor vehicles is now widespread. At the end of 1964 there were about $8\frac{1}{4}$ million cars (an increase of 5 million in ten years) and about $1\frac{3}{4}$ million motor cycles (including motor scooters) licensed on the roads in Great Britain. The trend to touring holidays (it is estimated that three-fifths of the people taking an annual holiday do so by car) is only one of the results.

The spread of car ownership, making many people more independent of public transport, is not only affecting the whole pattern of leisure activities but also leading to a new and more scattered distribution of houses, changing the siting requirements of factories, shops and offices, and making large-scale urban reconstruction and road development urgent. At the same time, by reducing the economic returns on public transport, resulting in reduced services, it is in danger of impoverishing the amenity of those who for reasons of age, health, income or personal preference do not possess their own transport. A grim by-product of the increasing volume of road traffic is the toll of road accidents which, though increasing far less rapidly, exceeded 7,800 people killed and 385,000 injured in 1964.

The Changing Face of Britain

Increasing population and social developments are affecting the physical appearance of Britain. Towns and cities are being altered to accommodate more traffic and house more people; experiments are being tried in remodelling town centres with pedestrian precincts; new blocks of flats and office blocks pierce familiar skylines. Town and country interpenetrate as new estates for migrating townsfolk encircle the little-changed hearts of old villages. New roads and motorways to carry the traffic on leisure and business, reservoirs to supply the growing demand for water and lines to carry electric power for the growing volume of appliances, all have to be accommodated, while the convenient household detergent threatens to pollute rivers with its foam.

In a modern industrial society in a densely populated country it is not always possible to reconcile the conflict between the community's needs and existing natural beauty or historic interest. However much planning machinery exists to contain disturbance and to preserve and foster the creation of beauty, natural or man-made, it cannot achieve this unless enough people care. The activities of amenity societies (such as the Civic Trust, the Council for the Preservation of Rural England and its Scottish counterpart, and the Council for Nature), and the wider public opinion which supports them, suggest that a growing volume of people in Britain do care.

2
GOVERNMENT

GENERAL SURVEY

The United Kingdom is a monarchical State, whose origins and traditions are to be found in the history of each of its four component parts: England, Wales, Northern Ireland and Scotland. England was unified under a Saxon king in the ninth century; Wales became part of that kingdom and Ireland was joined with it under the same king before the end of the thirteenth century; and the English and Scottish thrones were dynastically united in the person of James I and VI in 1603. In 1707 the Treaty for the Union of England and Scotland provided that the two countries 'should be forever united into one kingdom', and one Parliament (the Parliament of Great Britain) became the supreme authority in both countries. In 1801 the Act for the Union of Great Britain and Ireland 1800, which joined the Irish Parliament to the Parliament of Great Britain, established the United Kingdom. In 1922 the 26 counties of Southern Ireland (now the Irish Republic) became a completely independent country, outside the United Kingdom. Meantime, the Government of Ireland Act 1920 had enacted a constitution for Northern Ireland which perpetuated Northern Ireland representation in the United Kingdom Parliament as the supreme authority and, at the same time, provided that country with its own legislature and executive, to deal with domestic affairs.

The United Kingdom is a unitary, not a federal, State but methods of government are flexible and, to some extent, adapted to the needs of the constituent countries. England and Wales on the one hand, and Scotland on the other, continue as before the Union to have different systems of law, a different judiciary, different educational systems, different systems of local government, national churches on a different footing, and, for most domestic matters, different government departments.

There is a measure of devolution in the administration of Welsh affairs to the Welsh Office, under the Secretary of State for Wales, who is a Cabinet Minister, assisted by a Minister of State and a Parliamentary Under-Secretary. The main Scottish departments are grouped under the direction of the Secretary of State for Scotland, who is a member of the United Kingdom Cabinet. In Northern Ireland the law is derived from and similar to the law of England but the judiciary is separate; the Northern Ireland government departments are responsible to the Northern Ireland Parliament. The Channel Islands and the Isle of Man (which are Crown dependencies, not part of the United Kingdom) have their own legislative assemblies and systems of local administration and of law, and their own courts. At the same time, they have a special relationship with the United Kingdom because of their proximity to the mainland and the antiquity of their connection with the Crown. They are treated as part of the mainland for purposes of trade and postal communication and are 'territories for whose international relations Her Majesty's Government is responsible'. They are also formally subject to the United Kingdom Parliament.

The United Kingdom Parliament has the ultimate responsibility for the good government of the overseas dependencies within the Commonwealth

which are administered by territorial governments and are at various stages of development towards full self-government. The United Kingdom is also one of the independent member nations of the Commonwealth,[1] which all acknowledge the Queen as the symbol of their free association and, as such, the head of the Commonwealth; most of these independent countries owe allegiance to the Crown.

The United Kingdom constitution is formed partly by statute, partly by common law and partly by precepts and practices, known as conventions, which are not part of the law of the land since violation of them would not lead to proceedings in a court of law, but which are nevertheless indispensable to the machinery of government. The rules of the constitution have never been codified; principles and practice are both alterable, and the rules of the constitution can be adapted to changing conditions at any time by the passing of an Act of Parliament, or by the general acceptance of a new convention, without serious disturbance to existing organs and forms.

The organs of government in the United Kingdom constitution are readily distinguishable although their functions often intermingle and overlap. They are:

(1) the legislature, which consists of the Queen in Parliament, and is the supreme authority in the realm;

(2) the executive, which consists of: (*a*) the Cabinet and other ministers of the Crown, who are responsible for initiating and directing national policy; (*b*) government departments, most of them under the control of ministers and all staffed by civil servants, which are responsible for administration at the national level; (*c*) local authorities, which administer and manage many services at the local level; and (*d*) statutory boards, which are severally responsible for the operation of particular nationalised industries or public services, and which are subject to ministerial control in varying degrees; and

(3) the judiciary, which determines common law and interprets statutes, and is independent of both the legislature and the executive.

The following pages describe these three organs of government in some detail in order to show how the constitution of the United Kingdom works.

THE MONARCHY

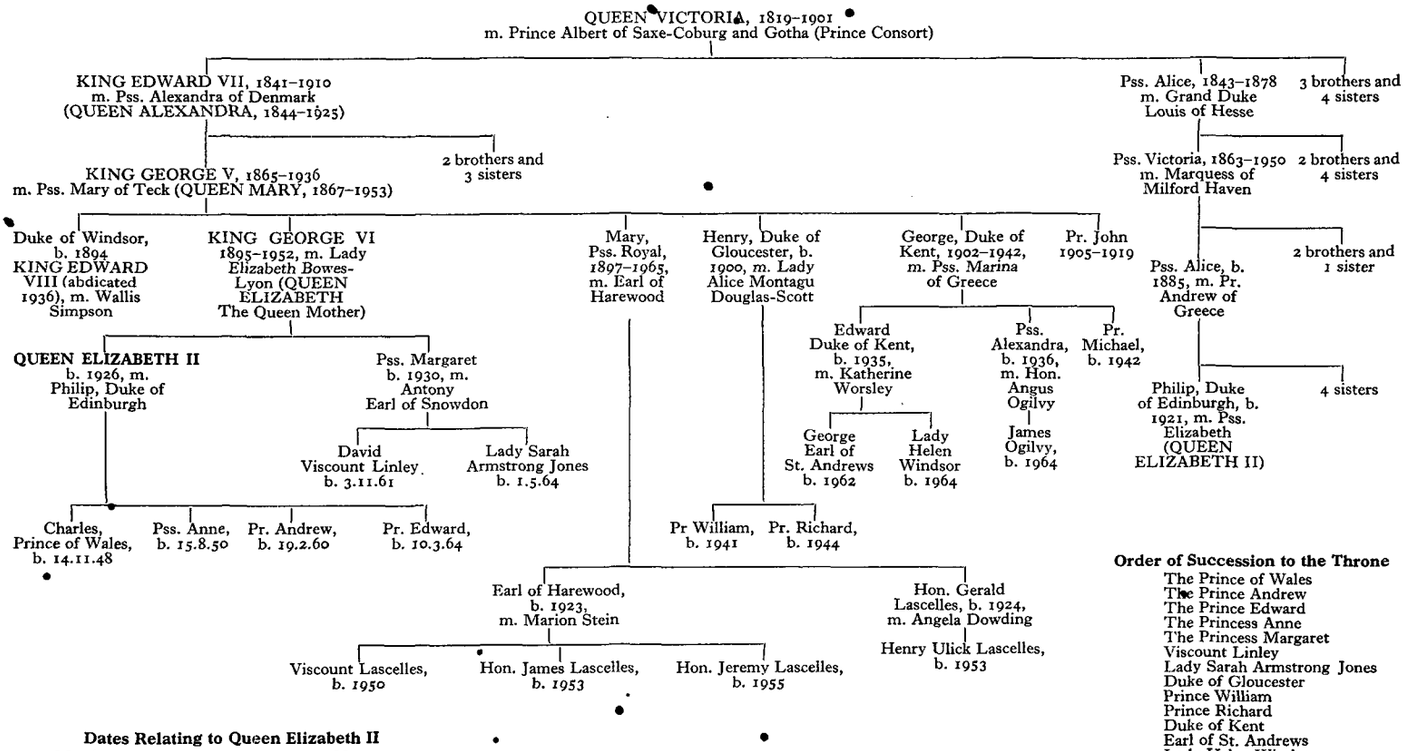
The monarchy is the most ancient secular institution in the United Kingdom. Its continuity has been broken only once in over a thousand years; and in spite of interruptions in the direct line of succession, the hereditary principle upon which it was founded has never been abandoned. Queen Elizabeth II is a descendant of the Saxon king, Egbert, who united all England in the year 829, and of Malcolm II, whose reign in Scotland (1005–34) was correspondingly important in that part of the realm.

According to the Royal Titles Act 1953, the royal title in the United Kingdom is: 'Elizabeth the Second, by the Grace of God of the United Kingdom of Great Britain and Northern Ireland and of Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith'. The form of the royal title is varied for the other member nations of the

[1] The other members are: Canada, Australia, New Zealand, India, Pakistan, Ceylon, Ghana, Malaysia, Nigeria, Cyprus, Sierra Leone, Tanzania, Jamaica, Trinidad, Uganda, Kenya, Malawi, Malta, Zambia and The Gambia.

THE ROYAL FAMILY

From the reign of Queen Victoria up to September 1965



Dates Relating to Queen Elizabeth II

Marriage:	20 Nov. 1947
Accession to throne:	6 Feb. 1952
Coronation:	2 June 1953
Official Birthday Celebration:	Early in June

In the Order of Succession the sons of the Sovereign and their descendants have precedence over the daughters. The daughters and their descendants have precedence over lateral lines.

Order of Succession to the Throne

1. The Prince of Wales
2. The Prince Andrew
3. The Prince Edward
4. The Princess Anne
5. The Princess Margaret
6. Viscount Linley
7. Lady Sarah Armstrong Jones
8. Duke of Gloucester
9. Prince William
10. Prince Richard
11. Duke of Kent
12. Earl of St. Andrews
13. Lady Helen Windsor
14. Prince Michael
15. Princess Alexandra
16. James Ogilvy

Commonwealth which owe allegiance to the Crown, to suit the particular circumstances of each.

The seat of the monarchy is in the United Kingdom, the Queen being represented by a Governor in Northern Ireland. For the performance of royal functions in the Channel Islands and the Isle of Man the Queen is represented by a Lieutenant-Governor. In the other member nations of the Commonwealth which owe allegiance to the Crown the Queen's representative is the Governor-General, who is appointed by the Crown on the advice of the ministers of the country concerned and is wholly independent of the United Kingdom Government. In the United Kingdom dependencies the Queen is usually represented by Governors (but in some cases by High Commissioners, Administrators or Residents), who are appointed by the Crown, have varying executive and legislative powers, and are responsible to the United Kingdom Government for the good government of the countries concerned.

Succession

The title to the Crown derives from the Act of Settlement 1701, which provided that 'the Crown . . . shall remain and continue to the said most excellent Princess Sophia[1] and the heirs of her body being Protestants'. Subsequent Succession to the Crown Acts have confirmed this declaration; and although succession is not bound to continue in its present line, it cannot now be altered (under a provision of the Statute of Westminster, 1931) except by common consent of the member nations of the Commonwealth which owe allegiance to the Crown.

The inheritance of the Crown is governed by rules of descent, which provide that the sons of the Sovereign are in Order of Succession to the Throne according to their seniority or, if there are no sons, the daughters in order of their seniority. When a daughter succeeds, she becomes Queen-Regnant and the powers of the Crown are vested in her as fully and effectively as though she were a king. By convention, the consort of a king takes the rank and style of her husband; but the converse does not apply and the constitution has never attached any special rank or privileges to the husband of the Queen-Regnant.

Accession

There is no interregnum between the death of one Sovereign and the accession of another. Immediately on the death of his or her predecessor the new Sovereign is proclaimed at an Accession Council to which all members of the Privy Council are summoned. The Lords Spiritual and Temporal, the Lord Mayor, aldermen and other leading citizens of the City of London, and the High Commissioners in London of the member nations of the Commonwealth are also invited to attend.

Coronation

The coronation of the Sovereign follows the accession after an interval which may last for a year or more. The ceremony has remained much the same in substance for nearly a thousand years although the details have frequently been modified to bring it into conformity with the customs of the time. The service used at the coronation of Queen Elizabeth II in 1953 was derived from that used at the coronation of King Edgar at Bath in the year 973.

The coronation service is held at Westminster Abbey in the presence of representatives of the Lords, the Commons and all the great public interests

[1] The Electress of Hanover, grand-daughter of James I of England.

in the United Kingdom, of the Prime Ministers and leading members of the other Commonwealth countries and of representatives of foreign States.

Acts of Government

The Queen is the personification of the State. In law, she is the head of the executive, an integral part of the legislature, the head of the judiciary in England and Wales, Northern Ireland, and Scotland, the commander-in-chief of all the armed forces of the Crown and the temporal head of the established Church of England. In practice, as a result of a long evolutionary process during which the absolute power of the monarchy has been progressively reduced, the Queen acts only on the advice of her ministers which she cannot constitutionally ignore. She reigns, but she does not rule. The United Kingdom is governed by Her Majesty's Government in the name of the Queen.

Within this framework, and in spite of the fact that the trend of legislation during the past hundred years has been to assign powers directly to ministers without any necessity for royal intervention, there are still important acts of government which require the participation of the Queen.

The Queen summons, prorogues and dissolves Parliament; as a general rule she opens the new session with a speech from the throne (although this may be read by the Lord Chancellor if the Queen is unable to be present); and she must give Royal Assent before a Bill which has passed all its stages in both Houses of Parliament becomes a legal enactment. The Queen is 'the fountain of justice', and as such, can remit all or part of the penalties imposed on people convicted of crime. As 'the fountain of honour', the Queen confers peerages, baronetcies, knighthoods and other honours,[1] and makes appointment to all important State offices, including those of judges, officers in the armed forces, governors, and diplomats, and to all leading positions in the established Church of England. The Queen's consent and approval are required before a minister can take up office or a Cabinet be formed. In the realm of international affairs, by virtue of her pre-eminence as head of the State, the Queen has the power to conclude treaties, to cede or accept territory, to declare war and to make peace.

These and similar acts of government involve the use of the royal prerogative[2] which has been defined as 'the residue of discretionary authority legally left in the hands of the Crown'. Ministerial responsibility for the exercise of this authority is shown in three constitutional ways in which the royal will can be expressed: by Order in Council made 'by and with the advice of the Privy Council'; by Order, Commission or Warrant signed personally by the Queen and generally bearing the signature of one or more responsible ministers; or by Proclamation, Writs, Letters Patent, or other documents under the Great Seal affixed by the Lord Chancellor in obedience to a Royal Warrant countersigned by a minister.

Ministerial responsibility for the exercise of powers by the Crown does not detract from the importance of the participation of the Sovereign in the smooth working of government; for although the Queen has no personal authority and must show complete impartiality in every field, she must be

[1] Most honours are conferred by the Sovereign on the advice of the Prime Minister; a few, i.e. the Order of Merit, the Order of Companions of Honour, the Royal Victorian Order, the Most Noble Order of the Garter, and the Most Noble and Most Ancient Order of the Thistle, are in the Sovereign's personal gift.

[2] Other powers of the Crown relate to the creation of corporations by Royal Charter; the construction and supervision of harbours; the guardianship of infants; the administration of charities; coinage; the grant of franchises, e.g., markets, ferries and fisheries; the right to treasure trove; and the right of printing or licensing others to print the Bible, the Book of Common Prayer and state papers.

informed and consulted on every aspect of the national life. The Queen holds meetings of the Privy Council, gives audiences to her ministers and other holders of office at home and overseas, receives accounts of Cabinet decisions, reads dispatches and signs innumerable State papers.

Such is the significance attached to these royal functions that provision has been made by Acts of Parliament for a Regent to be appointed to fulfil them if the Sovereign is totally incapacitated, or is under the age of eighteen on accession to the throne. The latest of these Acts—the Regency Act 1953—laid down that the first potential Regent should be The Prince Philip, Duke of Edinburgh, and thereafter those in succession to the throne who are of age. In the event of the Sovereign's partial incapacity or absence abroad, provision is made for the appointment of Counsellors of State (generally speaking, the wife or husband of the Sovereign, and the four adult persons next in succession to the Crown[1]) to whom the Sovereign may delegate by Letters Patent certain royal functions. But Counsellors of State may not, for instance, dissolve Parliament (except on the express instructions of the Sovereign), nor create peers.

Ceremonial and Royal Visits

Ceremonial has always been associated with the kings and queens of the British Isles and, in spite of the changes that have taken place with the altered outlook of both the Sovereign and the people, certain customs and usages are the same today as they were many centuries ago. Royal marriages, the birth of royal children and royal funerals are marked by ancient ceremonial, although to a lesser degree than in former days; and the birthday of the Sovereign, formerly the occasion of many royal and public functions, is today officially celebrated early in June by Trooping the Colour on the Horse Guards Parade. State banquets take place when a foreign monarch or head of State visits the United Kingdom; investitures are held at Buckingham Palace; and royal processions grace such social occasions as the Ascot Race Meeting, known as Royal Ascot, and add significance to the opening of Parliament, when the Queen drives in state from Buckingham Palace.

The Sovereign is the leader of society by order of general precedence dating from the fourteenth century and sustained until the present day by royal ordinances, established custom and the public will. The Queen and other members of the royal family visit many parts of the United Kingdom every year, and their presence at the inauguration of scientific, artistic, industrial, and charitable works of national importance ensures nation-wide interest and support. They also pay State visits to foreign governments and undertake lengthy tours in other countries of the Commonwealth.

PARLIAMENT

The supreme legislative authority in the United Kingdom is the Queen in Parliament, that is to say, the Queen and the two Houses of Parliament—the House of Lords and the elected House of Commons.

The three elements of Parliament are outwardly separate: they are constituted on different principles; they do different work in different places and they meet together only on occasions of symbolic significance such as the coronation, or the opening of Parliament by the Queen in person, when the Commons are summoned by the Queen to the House of Lords. As a law-

[1] The Regency Act 1953 provided that Queen Elizabeth the Queen Mother should be added to the persons to whom royal functions may be delegated as Counsellors of State.

making organ of State, however, Parliament is a corporate body and cannot legislate without the concurrence of all its parts (except in the case of Bills passed under the Parliament Acts 1911 and 1949).

The Parliament at Westminster is representative of all the countries of the United Kingdom. It can legislate for the United Kingdom as a whole, or any of the constituent countries separately, or for any combination of them. It can also legislate for the Channel Islands and the Isle of Man, but in these islands and in Northern Ireland it is not the only legislature, for the Northern Ireland Parliament has power to legislate for Northern Ireland on most domestic subjects (see p. 42), and the ancient legislatures of the two Channel Island Bailiwicks (the States of Jersey and the States of Guernsey) and of the Isle of Man (the Tynwald Court) legislate on domestic matters.[1] Nevertheless, the Parliament at Westminster retains supreme authority, and within practical limits there is nothing that it cannot legally do.

By the passing of the Parliament Act 1911 the life of a United Kingdom Parliament was fixed at five years (although it is usually dissolved and a general election held before the expiry of the legal term); and since one Parliament cannot bind its successor (for otherwise the succeeding Parliament would not be sovereign or supreme), each assembly has a period of time of up to five years during which it may legislate exactly as it chooses. During its life, it can make or unmake any law; destroy by statute the most firmly established convention or turn a convention into binding law; and legalise past illegalities thus reversing the decisions of the courts. It even has power to prolong its own life by legislative means beyond the normal period of five years without consulting the electorate although such power is used only in circumstances of national emergency, such as times of war.

In law, therefore, the supremacy of Parliament is absolute. In practice Parliament does not exercise its supremacy in this way. Its members bear in mind the common law which has grown up in Britain throughout the centuries and they act as far as possible in accordance with precedent and tradition. Moreover, although the validity of an Act of Parliament that has been duly passed, legally promulgated and published by the proper authority cannot be disputed in the law courts, no Parliament would be likely to pass an Act which it knew would receive no public support. The system of party government in Britain ensures that Parliament legislates with its responsibility to the electorate in mind.

The Meeting of Parliament

A Parliament, in the sense of a parliamentary period, begins and ends with a proclamation made by the Sovereign on the advice of the Privy Council. Such a proclamation on the one hand dissolves an existing Parliament and, on the other, orders the issue of writs for the election of a new one and appoints the day and place of its meeting.

The resignation of a government usually entails the dissolution of Parliament. Formerly the death of a Sovereign also involved dissolution, but since 1867 the duration of Parliament has been independent of the demise of the Crown; both Houses stand adjourned on such an occasion only until their members have taken the oath of allegiance to the new Sovereign, which they do immediately after the Accession Council has made the order for proclamation.

[1] The legislatures of the Channel Islands and the Isle of Man consist of the Queen, the Privy Council and the local assemblies. It is the duty of the Home Secretary, as the member of the Privy Council primarily concerned with island affairs, to scrutinise each legislative measure before it is submitted to the Queen in Council.

The time between the meeting of a Parliament and its prorogation or dissolution is called a session. Parliament is usually prorogued by a commission under the Great Seal (see p. 30), which appoints the day and place of its meeting in a new session. The date so appointed may be brought forward or deferred by a subsequent proclamation. The effect of a prorogation is at once to terminate all business (with certain minor exceptions) until Parliament is summoned again. A Bill not completed in one session must be reintroduced in the next, unless it is to be abandoned.

During a session either House may adjourn itself on its own motion to such date as it pleases. An adjournment does not affect uncompleted business. A reassembly of the House can be accelerated either by proclamation or by virtue of powers specially conferred by each House on its Speaker.

The average number of sitting days for the House of Commons is about 160, divided by custom into the following periods: one from November until Christmas lasting 30–40 sitting days, one from January to Easter of 40–50 sitting days, one from Easter until Whitsun of about 30 sitting days, and one from Whitsun until the end of July lasting about 40 sitting days. Nowadays, the session is sometimes concluded with a short period of up to 10 sitting days in October, after the long summer adjournment. The House of Lords sits, on average, for about 110 days in each session.

The House of Lords

The House of Lords consists of the *Lords Temporal* and the *Lords Spiritual*. The Lords Temporal may be sub-divided into (i) all hereditary peers and peeresses of England, Scotland, Great Britain and the United Kingdom who have not disclaimed their peerages under the Peerage Act 1963, (ii) all life peers created by the Crown under the Life Peerages Act 1958, and (iii) Lords of Appeal in Ordinary who are appointed under the terms of the Appellate Jurisdiction Act 1876 to assist the House in the performance of its judicial duties and who remain members of the House after their retirement from office. The Lords Spiritual are the Archbishops of Canterbury and York, the Bishops of London, Durham and Winchester, and 21 other bishops of the Church of England, according to their seniority as diocesan bishops.

Temporal peerages (both hereditary and life) are conferred by the Sovereign on the advice of the Prime Minister. Hereditary peerages carry with them a right to a seat in the House of Lords, provided the holder is 21 years of age or over. Under the Peerage Act 1963, however, anyone succeeding to a peerage may, within twelve months of succession, disclaim that peerage for his or her lifetime. Those who disclaim their peerages lose their right to sit in the House of Lords but they are able to vote at parliamentary elections and are eligible for election to the House of Commons.

Not all holders of temporal peerages with a right to sit in the House of Lords attend the sittings of that House. Those who do not wish to attend may apply for leave of absence, either for the duration of a particular Parliament or for a single session.

Members in constant attendance at the House of Lords include elder statesmen and others who have spent their lives in public service. They receive no salary for their parliamentary work, but they are entitled to travelling expenses from their homes to the Palace of Westminster (provided they attend at least one-third of the number of sittings), and (with the exception of the Lord Chancellor, the Lord Chairman of Committees and any member in receipt of a salary as the holder of a ministerial office) they may claim payment for expenses incurred for the purpose of attendance at the House (except for judicial sittings) within a maximum of four and a half guineas (£4 14s. 6d.) a day.

The House of Lords is presided over by the Lord Chancellor, who sits on the woolsack and is *ex officio* Speaker of the House. The Crown, by commission under the Great Seal, appoints several members of the House to act as deputy speakers in the absence of the Lord Chancellor. The first of the deputy speakers is the Lord Chairman of Committees, who is appointed each session and takes the chair in all committees, unless the House otherwise directs. The permanent officers include the Clerk of the Parliaments, who is charged with keeping the records of proceedings and judgments and who pronounces the words of the Royal Assent to Bills; the Gentleman Usher of the Black Rod, who enforces the orders of the House; and the Serjeant-at-Arms, who attends the Lord Chancellor.

The House of Commons

The House of Commons is a representative assembly elected by almost universal adult suffrage and consists of men and women from all sections of the community. There are at present 630 seats in the House of Commons (511 for England, 36 for Wales, 71 for Scotland, 12 for Northern Ireland).

Members of the House of Commons receive a salary for their parliamentary work and hold their seats during the life of a Parliament. They are elected either at a general election, which takes place after a Parliament has been dissolved and a new one summoned by the Sovereign, or at a by-election, which is held when a vacancy occurs in the House as a result of the death of a member, or of his acceptance of office under the Crown,[1] or as a result of his elevation to the House of Lords.

The chief officer of the House of Commons is the Speaker, who is elected by the members to preside over the House immediately after a new Parliament is formed. Other parliamentary officers of the House are the Chairman of Ways and Means, and the Deputy Chairman, both of whom may act as Deputy Speaker; these officers are elected by the House on the nomination of the Government. Permanent officers of the House, i.e. those who are not members of Parliament, include the Clerk of the House of Commons, who conducts the business of the House in the official departments under his control and is charged with such matters as keeping the records, endorsing Bills and signing orders, and the Serjeant-at-Arms, who attends the Speaker in the House.

Parliamentary Electoral System

For electoral purposes the United Kingdom is divided into constituencies, each of which returns one member to the House of Commons. Permanent Boundary Commissions for England, Scotland, Wales and Northern Ireland keep constituencies constantly under review, submit periodic reports, and may, at any time, recommend changes in the boundaries of any particular constituency or constituencies if, for instance, movement of the population has made this necessary.

The law relating to parliamentary elections is contained principally in the Representation of the People Act 1949, which repealed and re-enacted in a single statute previous legislation relating to the franchise, the conduct of elections and corrupt and illegal electoral practices. Under the provisions of this Act, election to the House of Commons is decided by secret ballot in which British subjects (except members of the House of Lords) and citizens of the Irish Republic are entitled to vote (voting is not compulsory), provided that they are 21 years old or over, and are not subject to any legal incapacity

[1] If a member wishes to resign from the House, he accepts what is technically an office of profit under the Crown.

to vote. Those eligible to vote in any constituency are those who are recorded on the register[1] of electors for the constituency as resident in that constituency on a date fixed by statute. Electors normally vote in person at polling stations especially established for the purpose, although members of the armed forces, Crown servants of the United Kingdom employed overseas, and wives of such persons, if resident overseas with their husbands, may vote by proxy. Voting by post, or in certain cases by proxy, may also be allowed if the voter cannot attend in person for such reasons as physical incapacity or the nature of his work. Any person, male or female, who is a British subject of 21 years of age or over and is not otherwise disqualified, may be elected to the House of Commons. Categories of persons disqualified for election include members of the House of Lords, clergy of the Church of England, the Church of Scotland, the Church of Ireland and the Roman Catholic Church, undischarged bankrupts, and those expressly precluded under the House of Commons Disqualification Act 1957 (for instance, holders of judicial offices, civil servants, members of the regular armed forces and the police forces, members of the legislature of any country or territory outside the Commonwealth, and holders of other public offices listed in the Act).

Parliamentary Privilege

Each House of Parliament enjoys certain privileges and immunities designed to protect the House from unnecessary obstruction in carrying out its duties. These privileges apply collectively to each House and individually to each member.

In the House of Commons, the Speaker formally claims from the Crown for the Commons 'their ancient and undoubted rights and privileges' at the beginning of each Parliament. These include freedom from arrest in civil proceedings for a period from forty days before to forty days after a session of Parliament; freedom of speech in debate; and the right of access to the Crown, which is a collective privilege of the House. Further privileges include the right of the House to control its own proceedings (so that it is able, for example, to exclude strangers if it so wishes); the right to pronounce upon legal disqualifications for membership and to declare a seat vacant on such grounds; and the right to penalise those who commit a breach of its privileges.

The privileges of the House of Lords are: freedom from civil arrest; freedom of speech in debate; freedom of access to the Sovereign for each peer individually; and the right to commit for contempt. These privileges are not formally claimed by the Speaker as in the House of Commons; they exist independently without grant.

The Party System

The party system has existed in one form or another since the seventeenth century, and has now become an essential element in the working of the constitution.

The present system is based upon the existence of organised political parties, each laying rival policies before the electorate. Whenever there is a general election or a by-election, the parties may put up candidates for election; any other citizen who wishes may also stand. The electorate then indicates, by its choice of candidate at the poll on election day, which of the opposing policies it would like to see put into effect.

The party which wins the majority of seats (although not necessarily the majority of votes) at a general election, or which is able to command a majority

[1] A register containing the names of all electors, prepared for each constituency and published yearly by the registration officers, who in England and Wales are the clerks of local councils and in Scotland are the land valuation assessors.

of supporters in the House of Commons, forms the Government. By tradition, the leader of the majority party is appointed as Prime Minister by the Sovereign, usually on the advice of senior ministers; and its most outstanding members in the House of Lords and the House of Commons receive ministerial appointments on the advice of the Prime Minister. The largest minority party becomes the official Opposition with its own leader and its own council of discussion or 'shadow Cabinet'; while the members of any other parties or any Independents who have been elected may support the Government or the Opposition according to their party's or their own view of the policy being debated at any given time.

In the general election held in October 1964, 77 per cent of the electorate voted, compared with 78·7 per cent in 1959. The number and percentage of votes cast for the principal parties is shown in Table 3.

TABLE 3
VOTES CAST AT GENERAL ELECTIONS
1964 and 1959

Party	1964	% of votes cast	1959	% of votes cast
Labour	12,205,779	44·1	12,216,166	43·8
Conservative and Associates ..	11,981,282	43·4	13,750,965	49·4
Liberal	3,101,103	11·2	1,640,761	5·9
Others[a]	367,985	1·3	254,846	0·9

[a] Others include the Speaker (for the 1964 election), Communists, Scottish and Welsh Nationalists, Irish Republicans, Independents, and members of individual parties, few of which were represented by more than one candidate.

The distribution of seats in the House of Commons resulting from the general elections of 1959 and 1964 is shown in Table 4.

The effectiveness of the party system in Parliament rests to a considerable extent upon the fact that Government and Opposition alike are carried on by agreement: that is to say, the minority agrees that the majority must govern and therefore accepts its decisions; and the majority agrees that the minority should criticise and therefore sets time aside for that criticism to be heard. The detailed arrangements of government business are settled, under the direction of the Prime Minister and the Leader of the House (who may be the Prime Minister or some other minister), by the Government Chief Whip in consultation with the Opposition Chief Whip. The Chief Whips together organise the 'usual channels' often referred to in the House of Commons when the question of the possibility of finding time for debating some particular issue is being discussed. The direction of the business of the House is primarily the responsibility of the Leader of the House, and it is his duty to provide all reasonable facilities for the House to debate matters about which it is concerned.

Outside Parliament, party control is exercised by the national and local organisations. Inside Parliament, it is exercised by the whips (the Chief Whips and their assistants, chosen within the party or by the Prime Minister for the Government party), whose duties include maintaining the voting strength of their parties by ensuring the attendance of members at important debates. The Opposition Whips have no official position, but the Government Chief Whip in the House of Commons is the Parliamentary Secretary to the Treasury; of the other Government Whips, five hold titular posts as Junior Lords of the Treasury and three are officers of the Royal Household.

There are also Government and Opposition Whips in the House of Lords. The former, who hold offices in the Royal Household, sometimes act as spokesmen for the Government in debates.

TABLE 4
MEMBERS ELECTED AT GENERAL ELECTIONS IN 1964 and 1959

1964		1959	
Labour	317	Labour	258
Conservative and Associates	303	Conservative and Associates	365
Liberal	9	Liberal	6
The Speaker[a]	1	Independent	1
	630		630

[a] When a candidate at the polls the Speaker remains aloof from party issues, standing as 'the Speaker seeking re-election'. In the past it has been customary to allow the Speaker an unopposed election but this is by no means settled practice and since the end of the second world war the Speaker has been opposed in his constituency in 1945, 1950, 1955 and 1964.

The Functions of Parliament

The main functions of Parliament are (1) to make laws regulating the life of the community, (2) to take formal action, cast in legislative form, to make available finance for the needs of the community and to appropriate the funds necessary for the services of the State, and (3) to put relevant facts and issues before the electorate. By custom, Parliament is also consulted before the ratification of certain international treaties and agreements (in spite of the fact that the making of treaties is a royal prerogative exercised on the advice of the Government and, in theory, is not subject to parliamentary approval).

Parliamentary Procedure

Both Houses of Parliament have their own standing orders, but procedure is based on custom and precedent (much of which dates back to the beginning of the sixteenth century and even earlier) rather than on written orders, which merely supplement the practice in each House. The system of debate is much the same in the two Houses: for instance, every matter is determined upon questions put from the chair or woolsack and resolved in the affirmative or negative, as the case may be; members speak from wherever they have been sitting and not from a rostrum; and members do not read their speeches. The main difference is that in the House of Commons the Speaker has a far greater measure of control.

In the House of Lords the office of Speaker carries with it no inherent authority to check or curtail debate, such matters being decided by the general sense of the House. In the Commons, on the contrary, the Speaker has full authority to give effect, promptly and decisively, to the rules and orders of the House. He must carefully guard against abuse of procedure or any infringement of minority rights, and it is his duty to allow or disallow any closure motion (i.e. a motion to end discussion so that the matter may be put to the vote). He has certain powers to check irrelevance and repetition in debate, and to save the time of the House in various other respects. In cases of grave disorder, he has power to adjourn the House or suspend the sitting on his own initiative.

Voting in the House of Commons is carried out under the direction of the Speaker, and it is his duty to pronounce the final result. If an equal number of votes is cast, the Speaker must give the casting vote; he does this (if

possible) in such a way as to avoid change and leave the question to be debated on another occasion. The procedure on voting in the House of Lords is similar to that in the House of Commons, but the Speaker or chairman has no casting vote. With the exception of questions relating to Bills and delegated legislation, the House of Lords is governed by the principle that unless there is a majority in favour, the question is decided in the negative. When the House is sitting judicially (see pp. 83 and 86) the question is put in such a way that, if the votes were equal, there would be no interference with the order under appeal.

All proceedings of either House are public, except on extremely rare occasions; the minutes (in the House of Commons called Notes and Proceedings) and the speeches (Parliamentary Debates, *Hansard*) are published daily.

Legislation

Legislation can be initiated from either side of either House; but no Bill involving taxation or the spending of public money can proceed very far unless the Government agrees to introduce a 'financial resolution' to cover it. This has the effect of giving the Government exclusive rights over a wide field of legislation, and as a result most Public Bills are presented by the Government. However, private members (i.e. members of the House who are not office holders in the Government) can introduce Public Bills on their own initiative, and such Bills can be debated on certain days expressly set aside for the purpose in each session.[1] Peers can introduce Public Bills in the House of Lords at any time during a session without notice. In addition, persons and bodies outside Parliament can promote Private Bills relating solely to matters of individual, corporate or local interest.

Bills may originate in either House, unless they deal with finance or representation when they are always introduced in the Commons. As a rule, however, Bills likely to raise political controversy go through the Commons before the Lords, while those of an intricate but uncontroversial nature are frequently introduced and fully debated in the Lords before being sent to the Commons.

The process of passing a Public Bill is basically the same in the House of Lords as in the House of Commons. The Bill receives a formal First Reading on introduction; it is then printed; and after a period of time (which varies between one day and several weeks depending on the nature of the Bill) it may be given a Second Reading after the result of a debate on its general merits or principles. In the Commons, it is then referred for detailed examination either to a standing committee or, if the House so decides, to the whole House sitting in committee; and, in the Lords, to a committee of the whole House. When the committee stage is finished, the Bill is reported to the House, and a further stage takes place during which the committee's amendments may be altered, additional amendments may be suggested and incorporated, and, if necessary, the Bill may be recommitted to committee. Finally, it is submitted for a Third Reading and, if passed, is sent on from the Commons to the Lords or from the Lords to the Commons (depending on its place of origin), where it enters on the same course again. Any amendments which the second House makes to the Bill must be agreed to by the first House, or a compromise reached, before the Bill becomes law.

[1] Private members may propose a Bill after question time on notice given, or seek leave to introduce a Bill under the 'Ten Minute Rule', i.e. the Standing Order which allows a brief speech proposing and another opposing the introduction of the Bill before the House decides whether or not to grant leave.

In practice, the Lords pass without amendment all financial Bills, such as the Finance Bill, which authorises annual taxation and amends existing taxation, and the Appropriation Bill, which authorises expenditure on the Supply Services from the Consolidated Fund.[1] As a general rule, these Bills are introduced upon resolutions in a committee of the whole House of Commons and they may be initiated only by a Minister of the Crown.

When Bills have passed through their various parliamentary stages, they are sent to the Sovereign for Royal Assent, now usually given by commission. The Sovereign's power to refuse assent has not been exercised since the early eighteenth century.

The majority of Bills introduced in the House of Lords pass through the Commons without difficulty because of their non-controversial nature; they are then returned to the Lords to be brought forward for Royal Assent. However, should any Lords Bill be unacceptable to the Commons, it would never reach the Statute Book, for no debating time would be allotted to it—at any rate until a new government came into power, when it might be revived. The Lords, on the other hand, are unlikely to be able to prevent a Bill insisted upon by the Commons from finally becoming law. In the normal course of events, they either accept a Bill from the Commons and return it unchanged; or they revise and improve it by amendments and return it for the consideration of members of the other House, who frequently agree to the amendments made. The Lords cannot require the Commons to agree to amendments; nor can they delay a Bill indefinitely. They have no powers in respect of Money Bills; and, since the passing of the Parliament Act 1949, any other Public Bill which has been passed by the House of Commons in two successive sessions may be presented for Royal Assent without the consent of the Lords, provided that a year has elapsed between the date of the Second Reading of the Bill in the Commons and the date on which it is finally passed in that House. These limitations on the powers of the Lords are based on the belief that the chief value of the Upper House, which is a non-elected assembly, lies in bringing the wide experience of its members into the legislative process, not in thwarting the elected House. In other words, proceedings in the House of Lords give time for further reflection, and often elicit new points of view.

In substance, a Private Bill goes through the same procedure as a Public Bill but most of the work is done in committee, where the promoters must prove the need for the powers or privileges that they seek and where any objections raised by opposing interests may be heard.

Parliamentary Committees

A committee of the whole House is presided over by a chairman instead of the Speaker. Its function is to consider Bills in detail, clause by clause, after their Second Reading. The Committees of Supply and of Ways and Means are committees of the whole House of Commons; they discharge the financial duties of the House concerning the grant of public money and the levying of taxation.

There are two other main kinds of parliamentary committee, both of which exist to relieve their parent House of some of its more specialised and complex work. They are:

(1) Standing Committees, which are appointed by the House of Commons as necessary, for the consideration of the committee stage of Public Bills and, in the case of the Scottish and Welsh Grand Committees,

[1] It is provided in the Parliament Act 1911 that all Money Bills sent to the House of Lords one month before the end of the session shall receive the Royal Assent notwithstanding, if they are not passed by the Lords without amendment within the month.

other business referred to them. With the exception of the Scottish Standing and Grand Committees[1] (which deal with Public Bills and other matters relating to Scotland), and the Welsh Grand Committee[2] (which considers, on a limited number of days, subjects concerning Wales and Monmouthshire referred to it), standing committees consist of from twenty to fifty members nominated for each Bill by the Committee of Selection (a body normally consisting of eleven members drawn from the main parties in the House at the beginning of each session); the parties are represented in proportion to their numbers in the House. The procedure of a standing committee is generally similar to that of a committee of the whole House.

(2) Select Committees, which are appointed to inquire into and report to the House on special matters. Select Committees may be appointed by either House when the occasion for such an appointment occurs, or they may be appointed at the beginning of a session to consider all aspects of a particular subject that may arise during the session. The latter type of committee is known as a 'sessional' committee and includes the Committee of Privileges, the Estimates and Public Accounts Committees, the Committees on Nationalised Industries, Statutory Instruments, Procedure, Public Petitions, Kitchen and Refreshment Rooms, and Publications and Debates reports. There are also the Selection Committee (see above) and the Standing Orders Committee, which have duties relating to Private Bills, and joint select committees of both Houses of Parliament which may be appointed at the instance of either House.

In addition there are the parliamentary party committees: the Parliamentary Labour Party, which is a corporate body comprising all members of the party in both Houses; and the Conservative and Unionist Members Committee, popularly known as the 1922 Committee, which consists of the back bench membership of the party.

Delegated Legislation

Delegated legislation, which is legislation not by the direct functioning of Parliament but by powers conferred on the executive by Act of Parliament (or, more rarely, by royal prerogative), has been part of the parliamentary system for at least six hundred years. Parliament, however, made but sparing use of its power to delegate legislation (except during a period of social, political and economic change in the second half of the fifteenth and most of the sixteenth centuries) until the end of the nineteenth century, when a changing conception of the part that should be played by the State in the life of the community made inroads upon parliamentary time and thus caused the system to be adopted on a more extensive scale. With the ever-increasing scope of government activity during the past sixty years, pressure on parliamentary time has become even more acute; as a result, the system of delegated legislation created under statutory powers has become generally accepted.

The system of delegated legislation empowers ministers and other authorities to regulate administrative details after a Bill has become an Act. In order to minimise the risk—inherent in the system—that delegated legislative

[1] The Scottish Standing Committee consists of thirty members nominated from Scottish constituencies with up to twenty other nominated members; in its plenary form, as the Scottish Grand Committee, it comprises all the members for the Scottish constituencies and not less than ten nor more than fifteen others.

[2] The Welsh Grand Committee consists of 36 members for constituencies in Wales and Monmouthshire, with up to 25 other nominated members selected in order to make the balance of parties in the committee approximate to that in the whole House.

powers might supersede or weaken parliamentary government, such powers are normally delegated to the Queen in Council or to authorities directly responsible to Parliament, i.e. to ministers of the Crown, to government departments for which ministers are responsible, or to organisations whose legislation is subject to confirmation or approval by ministers who thereby become responsible to Parliament for it. Moreover the Act which delegates legislative power generally defines the precise limits of this power and, in the more important cases, gives Parliament the right to confirm or annul the statutory instruments[1] by which delegated legislation is enacted. Certain Acts also require direct consultation, before such legislation is made, with organisations which will be affected by delegated legislation.

The House of Commons is aided in its supervision of delegated legislation by the Select Committee on Statutory Instruments (see p. 40). The Special Orders Committee of the House of Lords examines and reports on all Statutory Instruments requiring affirmative resolution.

Parliamentary Control

Parliamentary control of the Government in power is exercised in the final analysis by the ability of the House of Commons to force the Government to resign either by passing a resolution of 'no confidence' or by rejecting a proposal which the Government considers so vital to its policy that it has made it a 'matter of confidence'; but this has not been its prime function for many years (see p. 37). Parliamentary procedure offers a number of opportunities for a searching examination of government policy by both the Opposition and the Government's own back-benchers. These include:

(1) Question Time, which is an hour of parliamentary time on Monday, Tuesday, Wednesday and Thursday during which ministers, in rotation, answer questions put to them on matters for which they are responsible. So much parliamentary time is devoted to scheduled public business that questions are valued as the best means of eliciting hitherto unpublished information about the Government's intentions; they are also an effective way of airing, and possibly securing some redress of, grievances brought to the notice of members by their constituents.

(2) The right of members to use motions for the adjournment of the House to initiate discussions on constituency cases or matters of public concern. There is a half-hour adjournment period at the end of public business every sitting day; on a day when public business ends before the scheduled time the time saved may be used for adjournment debates; and immediately before the adjournment for each recess (Christmas, Easter, Whitsun and the Summer) there is a whole day spent discussing topics selected either by the Opposition or by private members. Moreover, if a member wishes to discuss a definite matter of 'urgent public importance' he may, at the end of Question Time, ask leave to move the adjournment of the House; if the Speaker accepts the motion as being within the terms of the Standing Order and if, the matter being referred to the House, 40 or more members rise to support the motion, the matter is debated later the same day.

(3) The practice whereby the consideration of the Estimates, in Committee of Supply, has ceased to be a consideration of the financial requirements

[1] Statutory instruments are made in accordance with the provisions of the Statutory Instruments Act, 1946, which repealed and replaced the Rules Publication Act, 1893. Instruments of delegated legislation made under the Act of 1893 were known as 'statutory rules and orders' ('S.R. & O.').

of the Government and has become an occasion for the examination, initiated by the Opposition, of some aspect of the Government's administrative policy, the cost of which has been included in the Estimates.

The means by which Parliament, and more particularly the House of Commons, exercises responsibility in the management of the revenues of the State and payments for the public service are described in Chapter 14, Finance.

The Northern Ireland Parliament

The Parliament of Northern Ireland consists of the Sovereign, a Senate and a House of Commons. The Sovereign is represented in Northern Ireland by a Governor, who summons, prorogues and dissolves Parliament in Her Majesty's name; the Senate is composed of two *ex officio* senators (the Lord Mayor of Belfast and the Mayor of Londonderry) together with 24 senators who hold office for an eight-year term, 12 being elected by the House of Commons every four years under a system of proportional representation; and the House of Commons consists of 52 members, elected by a system of parliamentary franchise similar to that which operates in Great Britain. The House continues in existence for a period of five years unless it is dissolved earlier.

The Northern Ireland Parliament has power to make laws for the peace, order and good government of Northern Ireland in relation to all matters except those especially reserved to the Parliament of the United Kingdom: the Crown or succession to the Crown; foreign relations; defence; the postal services; the Supreme Court; customs and excise; income and profits taxes; coinage; standards of weights and measures; trade marks; submarine cables; wireless telegraphy; aerial navigation; and lighthouses, buoys and beacons. Under the constitutional practices which have developed since the passing of the Government of Ireland Act 1920 the United Kingdom Parliament does not legislate on matters within the powers of the Northern Ireland Parliament unless the Government of Northern Ireland requests that this should be done. But, because certain matters have been reserved to the United Kingdom Parliament, provision was made in the Government of Ireland Act 1920 for the continued representation of the Northern Ireland constituencies in the House of Commons of the United Kingdom; in accordance with this provision, 12 members are returned to Westminster.

THE PRIVY COUNCIL

Until the eighteenth century, the Sovereign in Council, or Privy Council, was the chief source of executive power in the State. As the system of Cabinet government developed, however, the Privy Council declined in importance; many of its powers were transferred to the Cabinet, and much of its work was handed over to newly created government departments. The present-day Privy Council exists mainly to give effect to policy decisions made elsewhere.

Apart from Cabinet Ministers, who must be Privy Counsellors and are sworn of the Council on first assuming office, membership of the Privy Council (which is retained for life) is accorded by the Sovereign on the recommendation of the Prime Minister as an honour to persons who have reached eminence in some branch of public affairs in any country of the Commonwealth. There are usually about 300 Privy Counsellors.

Procedure and Functions

The Privy Council is convened by the Clerk of the Council and is usually presided over by the Sovereign. Three Privy Counsellors form a quorum,

but, as a rule, not fewer than four are summoned to attend. The whole Privy Council is called together only on the death of the Sovereign or when the Sovereign announces his or her intention to marry.

The Privy Council is responsible for the submission for the Sovereign's approval of Orders in Council, of which there are two kinds, differing fundamentally in constitutional principle: those made by virtue of the royal prerogative, for example, those embodying royal instructions to colonial Governors; and those which are authorised by Act of Parliament and are a form of delegated legislation. Members of the Privy Council attending meetings at which Orders in Council are made do not thereby become personally responsible for the policy upon which the orders are based; this rests with the ministers in whose departments the draft orders were framed, whether they are present at the meeting or not. Certain Orders in Council must be published in the *London Gazette*, which is an official periodical published by the authority of the Government.

The Privy Council also advises the Crown on the issue of royal proclamations, some of the most important of which relate to prerogative acts (such as summoning or dissolving Parliament) of the same validity as Acts of Parliament.

Committees of the Privy Council

There are a number of Privy Council committees whose meetings differ from those of the Privy Council itself in that the Sovereign cannot constitutionally be present. These committees, which have advisory functions, may be prerogative, such as the committee which deals with legislative matters submitted by the legislatures of the Channel Islands and the Isle of Man; or they may be provided for by statute as are those for the universities of Oxford and Cambridge and the Scottish universities, and that which deals with applications for the grant of charters to municipal corporations.

The administrative work of the Privy Council committees is carried out in the Privy Council Office under the control of the Lord President of the Council (see p. 44).

Judicial Committee

The Judicial Committee of the Privy Council is the final court of appeal from the courts of the United Kingdom dependencies and certain member States of the Commonwealth, deriving its appellate jurisdiction in respect of such appeals from the principle of English common law which recognises 'the right of all the King's subjects to appeal for redress to the Sovereign in Council' if they believe that the courts of law have failed to do them justice. The Judicial Committee is also the final court of appeal in a limited class of ecclesiastical matters, from the Channel Islands and the Isle of Man, and from prize courts[1] in the United Kingdom and dependencies.

Appeals come to the Judicial Committee either where a right of appeal has been specially created, for example, by statute, Order in Council or Letters Patent, or by special leave of the Sovereign in Council on the advice of the Judicial Committee. They are heard by a board of the committee, whose members are generally selected from the Lord Chancellor, ex-Lord Chancellors and Lords of Appeal in Ordinary, although other members of the Privy Council who have held high judicial office (including Chief Justices and certain other judges from other Commonwealth countries who have been sworn of the Privy Council) may also be asked to sit when business is heavy. The Judicial Committee does not deliver judgment; it advises the Sovereign, who acts on its report and approves an Order in Council to give effect thereto.

[1] Prize Courts deal with matters concerning property captured in time of war which, by grace of the Crown, falls to the forces which assist in the capture.

HER MAJESTY'S GOVERNMENT

Her Majesty's Government is the body of ministers charged for the time being with the administration of national affairs.

The Prime Minister is appointed by the Crown, and all other ministers are appointed by the Crown on the recommendation of the Prime Minister.

The majority of ministers are members of the House of Commons. There are, however, always some ministers in the House of Lords, partly because there is a statutory limit to the number of ministers who may sit and vote in the Commons while receiving salaries from the Crown, and also because every Government must be assured of spokesmen to expound and justify its intentions and its actions to the House of Lords.

Composition

The composition of the Government is subject to variation from time to time, both in the number of ministers and in the titles of some offices. The usual ministerial offices may be classified under the following heads:

Prime Minister

The Prime Minister, who is the recognised head of the Government but has no department.

Departmental Ministers

Departmental Ministers, some of whom are known as Secretaries of State. There are at present nine Secretaries of State: the First Secretary and Secretary of State for Economic Affairs; and the Secretaries of State for the Home Department; Foreign Affairs; Scotland; Wales; Commonwealth Relations; Colonies; Education and Science; and Defence. A few of the older posts have special titles: the Chancellor of the Exchequer (who is responsible for the Treasury and a number of other departments), the President of the Board of Trade and the Postmaster General.

Non-Departmental Ministers

Non-Departmental Ministers, who include the holders of various traditional offices—the Lord President of the Council, the Chancellor of the Duchy of Lancaster,[1] the Lord Privy Seal, the Paymaster General—and Ministers without Portfolio. These ministers have few or no departmental duties and are thus available to perform any special duties which the Prime Minister may wish to entrust to them.

Lord Chancellor and Law Officers

The Lord Chancellor has departmental functions; he is also in a somewhat special position as a Minister of the Crown who is also head of the judiciary in England and Wales. The four Law Officers of the Crown are: for England and Wales, the Attorney General and the Solicitor General; for Scotland, the Lord Advocate and the Solicitor General for Scotland.

Ministers of Defence

Ministers of Defence, who are appointed for the Army, the Royal Navy and the Royal Air Force under the Secretary of State for Defence.

Ministers of State

Ministers of State, who are additional ministers in government departments where the work is particularly heavy and complex, or where it involves frequent travelling overseas. There are now four Ministers of State for Foreign Affairs; three in the Department of Education and Science and at the Board of Trade; and one each in the Department of Economic Affairs, the Home Office and the Commonwealth Relations Office. The Secretary of State for Scotland and the Secretary of State for Wales are also each assisted by a Minister of State.

Junior Ministers

Junior Ministers, who generally have the title of Parliamentary Secretary or, where the senior minister is a Secretary of State, Parliamentary Under-

[1] The Duchy of Lancaster is an inheritance which, since 1399, has always been enjoyed by the reigning Sovereign; it is kept quite apart from his or her other possessions and is separately administered by the Chancellor.

Secretary of State. The primary function of most junior ministers is to relieve their senior ministers of some of their burden by taking part in parliamentary debates and answering parliamentary questions, and by assisting in their departmental duties. The Parliamentary Secretary to the Treasury and the Junior Lords of the Treasury are in a different category as Government Whips.

The Prime Minister

The head of the Government became known as the Prime Minister during the eighteenth century. The unique position of authority enjoyed by the holder of this office derives from his ability to command a majority in Parliament and from his power to submit his own choice of ministers to the Sovereign and to obtain their resignation or dismissal individually. Nowadays, by convention, the Prime Minister always sits in the House of Commons.

It is the duty of the Prime Minister to inform the Sovereign of the general business of the Government; to preside over the Cabinet; and to exercise a general supervision over departments, settling departmental differences and approving important departmental decisions where reference to the Cabinet is not required. The Prime Minister speaks for the Government in the House of Commons on the most important topics and answers questions on its general administration in that House.

The Prime Minister's other responsibilities include making recommendations to the Sovereign for the appointment of Church of England archbishops, bishops and certain other senior clergy and the incumbents of some 200 Crown livings, as well as for appointments to high judicial offices, such as Lords of Appeal in Ordinary, Lord Chief Justice and Lord Justices of Appeal. He also advises the Crown on appointments of Privy Counsellors, Lord Lieutenants of counties[1] and certain civil appointments, such as Lord High Commissioner of the General Assembly of the Church of Scotland, Poet Laureate, Constable of the Tower, and some university appointments which are in the gift of the Crown. The Prime Minister makes similar recommendations for appointments to various public boards and institutions, such as the National Assistance Board and the British Broadcasting Corporation, as well as to various royal and statutory commissions. In addition, he makes recommendations to the Sovereign for the award of many civil honours and distinctions and of Civil List pensions. He selects the trustees of certain national museums and institutions.

The Cabinet

The Cabinet is composed of a number of ministers (usually about 20) who are selected by the Prime Minister personally. Its origins can be traced back to the informal conferences that the Sovereign held with his leading ministers, independently of the Privy Council, during the seventeenth century. After the Sovereign's withdrawal from an active role in politics in the eighteenth century, and the development of organised political parties stimulated by successive extensions of the franchise from 1832 onwards, the Cabinet assumed its modern form.

The functions of the Cabinet are[2]: the final determination of the policy to be submitted to Parliament; the supreme control of the national executive in accordance with the policy agreed by Parliament; and the continuous co-ordination and delimitation of the authority of government departments.

[1] The office of Lord Lieutenant of the county was first created in the sixteenth century. Its holder was chief among the county justices and commander of the county militia.

[2] As defined in the Report of the Machinery of Government Committee (the Haldane Committee), 1918, *Cd.* 9230.

The exercise of these functions is vitally affected by the fact that the Cabinet is a group of party representatives, depending for its existence upon the support of a majority in the House of Commons.

Cabinet Meetings

The Cabinet meets in private and its proceedings are strictly confidential. Its members are bound by their oath as Privy Counsellors not to disclose information about its proceedings. The Official Secrets Acts forbid the publication of Cabinet as well as of other State papers, and a resigning minister desiring to make a statement involving disclosure of Cabinet discussions must first obtain the permission of the Sovereign through the Prime Minister. From a practical point of view, this secrecy is essential in the interests of unprejudiced discussion, which can only be maintained if there is no risk of publicity for every statement made and every point conceded.

In normal times the Cabinet meets for a few hours once or twice a week during parliamentary sittings, and rather less frequently when Parliament is not sitting. Additional meetings may be called by the Prime Minister at any time, if a matter urgently requiring discussion should arise. During Cabinet meetings decisions are reached on major issues of government policy, and on other issues which cannot be settled elsewhere. A great deal of the work of the Cabinet is carried on through the committee system, which ensures that the amount of business coming before the full Cabinet is kept at manageable proportions. The system involves the reference of any issue either to a standing Cabinet committee or to an *ad hoc* committee composed of the ministers primarily concerned, which considers the matter in detail and either disposes of it or reports upon it to the full Cabinet with recommendations for action. Ministers not in the Cabinet are called to attend its meetings when matters affecting their departments are under discussion; they may also be members of Cabinet committees.

Detailed accounts of Cabinet meetings are not prepared; only the substance of documents submitted, together with a summary of the arguments and the conclusions, are recorded; even these records have a strictly limited circulation. Responsibility for the keeping of records lies with the Secretary of the Cabinet.

Ministerial Responsibility

Ministerial responsibility means both the collective responsibility which ministers share for the policy and actions of the Government and the individual responsibility of ministers to Parliament for the work of their departments.

The doctrine of collective responsibility, which was fully accepted by the middle of the nineteenth century, imposes upon ministers the obligation to act not as individuals but (in the interests of stability of government) as a united group. It does not require every Cabinet minister to be present at every Cabinet meeting; and the obligations of individual ministers may be passive rather than active when the decision to be taken does not relate to their spheres of administrative responsibility. At the same time, every minister should be fully informed of the subject of discussion beforehand, so that if he has any objections he may voice them at the meeting. He may not repudiate, either in Parliament or in his constituency, policies which have received Cabinet approval, nor may he adopt policies that have not been agreed with the other departments concerned (including the Treasury). A minister must also be prepared to vote with the Government on all issues, and where necessary to speak in support or defence of its policy; if he feels himself unable to agree or to compromise with the view of the majority of his colleagues in Parliament or elsewhere he must resign unless the Cabinet

has agreed otherwise. A minister who does not resign in these circumstances cannot later reject criticism on the ground that he did not personally agree with the policy adopted.

The doctrine of collective responsibility also means that the Cabinet is bound to offer unanimous advice to the Sovereign, even when its members do not hold identical views on a given subject.

The individual responsibility of a minister for the work of his department means that, as political head of that department, he is answerable for all its acts and omissions and must bear the consequences of any defect of administration, any injustice to an individual or any aspect of policy which may be criticised in Parliament, whether he is personally responsible or not. Since the majority of ministers are members of the House of Commons, they are available to answer questions and to defend themselves against criticism in person. Departmental ministers who are in the House of Lords must be represented in the Commons by someone qualified to speak on their behalf, usually their Parliamentary or Under-Secretaries.

Departmental ministers are expected to take the final decision on all matters relating to their spheres of administration, unless these are of such political importance that Cabinet sanction is required. If any departmental decision brings a minister under criticism in Parliament he may be upheld by the Cabinet, which will then treat the matter as one of confidence in itself; or he may be disowned, when he alone will be liable to lose office.

The responsibility of ministers for their departments is an effective way of bringing government under public control, for the knowledge that any departmental action may be reported to and examined in Parliament discourages the taking of arbitrary and ill-considered decisions.

GOVERNMENT DEPARTMENTS

Government departments are the main instruments for giving effect to government policy when Parliament has passed the necessary legislation. They may, and frequently do, work with and through local authorities, statutory boards, and government-sponsored organisations operating under varying degrees of government control.

A change of Government does not necessarily affect the number or general functions of government departments, although a radical change in policy may be accompanied by organisational change. The widening scope of government activity in the past half-century, however, has led to the formation of many new departments. A few have existed for over 200 years.

The work of some departments, for instance the Post Office and the Board of Customs and Excise, covers the United Kingdom as a whole. Other departments, for example the Ministry of Labour, cover Great Britain (England and Wales, and Scotland, but not Northern Ireland); others, such as the Ministry of Health, cover England and Wales only, and there are similar but separate departments for Scotland and Northern Ireland. There is also a separate department with certain responsibilities for affairs in Wales.

A department is usually headed by a minister. Certain departments in which questions of policy do not normally arise are headed by a permanent official, and a minister with other duties is responsible for them to Parliament. For instance, Treasury ministers are responsible for a number of departments, including H.M. Stationery Office, the Central Office of Information, the Treasury Solicitor's Department, the Department of the Government

Actuary, the Royal Mint, the National Debt Office, the Public Works Loan Board, and the National Savings Committee. The staff of departments are all members of the Civil Service, a body of Crown servants recruited into the service as a career.

Internal Organisation

Departments differ in size and in the volume, type and complexity of their work. Since each department makes its own arrangements for discharging its duties there are variations in internal organisation. Most departments, however, have certain features in common: for example, the minister of a major department is likely to have at the head of his officials a permanent secretary (known as the Permanent Under-Secretary of State in those departments where the minister is a Secretary of State), one or more deputy secretaries, and a varying number of under-secretaries and assistant secretaries. In addition, major departments usually have a principal finance officer and a principal establishments and organisation officer. A number of establishment divisions have their own organisation and methods ('O and M') branch, the members of which act in an advisory capacity. Many departments also have their own legal advisers or solicitors, and their own information division.

Some departments maintain a regional organisation, and some that have direct contact with the public throughout the country also have local offices.

Advisory Bodies

Many government departments are assisted by advisory councils or committees (several hundred in all) which undertake research and collect information, mainly to enable ministers to ascertain informed opinion before coming to a decision involving a legislative or executive act. In some cases there is a statutory obligation on a minister to consult a standing committee. In most cases, however, advisory bodies are appointed at the discretion of the minister concerned because he feels the need for their advice.

The membership of the advisory councils and committees varies according to the nature of the work involved. Some are expert committees; others include civil servants and representatives of varying interests and professions, for instance, industrialists, trade unionists, university and industrial scientists, educationists, lawyers and local government councillors and officers.

In addition to these standing advisory bodies, there are *ad hoc* committees which the Government frequently sets up to examine and make recommendations on specific matters. For certain important inquiries Royal Commissions, whose members are selected on the grounds of their wide experience and diverse knowledge, may be appointed (by Royal Warrant). Royal Commissions examine written and oral evidence from government departments and other interested organisations and individuals, and on this evidence submit recommendations. The Government may accept the recommendations in whole or in part, or it may decide to take no further action or may delay action until a later date. Inquiries may also be undertaken by departmental committees, appointed by the head of the appropriate department.

Distribution of Functions

The following pages provide an outline of the principal functions of the main government departments. They are arranged in alphabetical order, except for the Cabinet Office, the Department of Economic Affairs and the Treasury (which, in view of their central position, are placed first) and the Scottish and Northern Ireland departments (which are grouped at the end of the section). Further information on their work is given in later sections under the relevant subject headings.

The Cabinet Office

The Cabinet Office, a Secretariat of permanent officials, was instituted during the first world war and has grown into an instrument of great importance in the co-ordination of policy at the highest level. It operates under the direction of the Prime Minister and its functions include circulating the memoranda and other documents required for Cabinet business, preparing draft agenda for approval by the Prime Minister, recording the discussions at Cabinet meetings, circulating the minutes to members of the Cabinet (and a limited number of other ministers and officials), and keeping in touch with the progress of action on Cabinet decisions. The Cabinet Office is also responsible for the security of all Cabinet documents.

Central Statistical Office

Attached to the Cabinet Office, and an integral part of it, is the Central Statistical Office, which is charged with the collection from departments of statistics relating to the national economy, their analysis, and their preparation as an agreed body of statistics to assist the Government in formulating its economic and financial policy.

The Department of Economic Affairs

The Department of Economic Affairs is headed by the First Secretary of State and Secretary of State for Economic Affairs, assisted by a Minister of State and two Parliamentary Under-Secretaries.

The Department is organised in four inter-related groups. The economic planning group works on the preparation of medium-term, long-term and very long-range forecasts of the development of the economy. The industrial policy group is concerned with medium and long-term measures affecting industry, designed to promote efficiency and growth; the work of this group is closely linked with the functions of the Economic Development Committees in regard to individual industries. The economic co-ordination group is responsible for the co-ordination of inter-departmental work and also for the application of prices and incomes policy, together with the relationship of public expenditure programmes, to the use of resources and economic growth; in addition it has important work in the co-ordination of external economic affairs. The regional policy group is responsible for regional policy and planning, including the regional aspects of policies on industry, employment, land use and transport.

The Department works in close co-operation with the Treasury and other departments.

The Treasury

Nominally the heads of the Treasury are the Lords Commissioners: the First Lord of the Treasury (now always the Prime Minister), the Chancellor of the Exchequer and five Junior Lords. In practice, the Lords Commissioners never meet as a board and their responsibilities are carried by the Chancellor of the Exchequer, assisted by the Chief Secretary to the Treasury and by the Financial Secretary. There is also a Parliamentary Secretary to the Treasury, who is the Chief Government Whip in the House of Commons.

Functionally, the Treasury is divided into four groups: the pay group, which deals with the pay and working conditions of the various classes of civil servants and handles questions about the pay of staffs in other parts of the public service; the management group, responsible for developing management services, whose activities include organisation and methods work, inquiries into and comparisons of management practices over a wide field, and work on recruitment, training, manning and grading in the Civil Service; the finance group, which brings together all questions affecting home and overseas finance; and a fourth group, concerned with balancing public expen-

diture against national resources and organising the control of this expenditure under such headings as defence, social services, agriculture and transport.

The Treasury has prime responsibility for short-term economic assessments and works in close co-operation with the Department of Economic Affairs on economic analysis and forecasting, and many other questions.

Parliamentary Counsel to the Treasury

The Office of the Parliamentary Counsel is responsible for the drafting of all government Bills, except those Bills or provisions of Bills extending exclusively to Scotland, which are handled by the Lord Advocate's Department. The Office drafts all financial and other parliamentary motions and amendments moved by the Government during the passage of Bills through Parliament; it advises departments on questions of parliamentary procedure; and it attends sittings in both Houses of Parliament. In addition, it drafts delegated legislation when specially instructed, and advises the Government on legal, parliamentary and constitutional questions falling within its special experience.

The Ministry of Agriculture, Fisheries and Food

The Ministry of Agriculture, Fisheries and Food is responsible in England and Wales for administering government policy for agriculture, horticulture and fishing. The Ministry administers deficiency payments schemes and various grants and subsidies designed to improve the efficiency of the industries, and also gives free technical advice.

Schemes for the control and eradication of animal and plant diseases are also administered by the Ministry, whose reponsibilities extend to Scotland in the operational control of certain diseases of animals.

In England and Wales the Ministry also deals with certain questions relating to legislation about food, including labelling and advertising, slaughterhouses, and the quality and cleanliness of milk. Questions relating to the supply and manufacture of food, its consumption, composition, preservation and nutritional qualities, are dealt with by the Ministry for Great Britain or the United Kingdom as a whole.

The Ministry maintains relations with other Commonwealth and foreign countries and participates in the work of certain international organisations concerned with agriculture, fisheries and food, such as the Food and Agriculture Organisation of the United Nations.

Ordnance Survey

The Ordnance Survey is administered by the Ministry of Agriculture, Fisheries and Food, although it is itself responsible for its day-to-day affairs. It is in charge of the survey and mapping of Great Britain—the maps and plans resulting from the survey ranging in scale from 1/1,250 to 1/1,250,000. The Survey also undertakes a considerable amount of agency work in compilation, drawing and printing for other departments, particularly the Ministry of Defence, the Ministry of Land and Natural Resources and the Land Registry.

The Ministry of Aviation

The Ministry of Aviation is responsible for the execution of government policy relating to civil aviation, the aircraft industry and the guided weapons industry. It is also responsible for certain aspects of space research and technology and for procuring certain equipment for the fighting services.

The Ministry's civil aviation responsibilities include the regulation of flying, the promotion of air safety and efficiency, the provision, administration and equipment of state-controlled civil aerodromes and other ground services, the organisation of research on, and development of, civil aircraft, the negotiation of international air transport agreements, the registration of

aircraft, the licensing of aerodromes, operators and personnel, and research on air navigation. The Minister appoints the members of the nationalised airline corporations and deals with various policy and financial questions affecting them. He also appoints the members of the Air Transport Licensing Board.

The Ministry's defence responsibilities include the research, development and production involved in supplying the fighting services with aircraft, guided missiles, nuclear weapons and electronic equipment.

The Colonial Office

The Colonial Office is concerned with the remaining dependent territories of the United Kingdom. Each of these territories has its own administration but the British Government is finally responsible for their good government and for their relations with other countries. In discharging its responsibilities for the constitutional and other development of the territories the Colonial Office co-operates closely with other departments, particularly the Foreign Office, the Commonwealth Relations Office and the Ministry of Overseas Development.

The Commonwealth Relations Office

The Commonwealth Relations Office advises the Secretary of State for Commonwealth Relations on all aspects of Commonwealth relations, communicates on his behalf with other Commonwealth Governments, keeps in touch with and advises other United Kingdom government departments on Commonwealth policy, provides information to the press and the public about Commonwealth activities, and deals generally with matters affecting members of the Commonwealth both as a group and as individual members.

Relations with the Republic of Ireland also fall within the responsibility of the Commonwealth Secretary; although it is no longer a Commonwealth country the Irish Republic is for most purposes not treated as a foreign country.

The Board of Customs and Excise

The primary work of the Board of Customs and Excise is to collect and administer the customs and excise duties imposed from time to time in the annual Finance Acts or by other legislation, and to advise the Chancellor of the Exchequer on any matters connected with them. The Board is also responsible for preventing and detecting evasion of the revenue laws, including smuggling and illicit distillation.

The Board undertakes a wide range of non-revenue agency work for other departments, for instance, the enforcement of prohibitions and restrictions on the importation and exportation of certain classes of goods, exchange currency control, and the compilation of United Kingdom overseas trade statistics from customs import and export documents.

The Ministry of Defence

The government department responsible for the formulation of defence policy and for the control and administration of the three fighting Services is the Ministry of Defence. The Secretary of State for Defence is in charge of the department and there are three Ministers of Defence—for the Army, the Royal Navy and the Royal Air Force respectively—who have special responsibilities for the Service with which they are concerned and general responsibilities for the defence service as a whole. The Minister of Defence for the Army also acts as deputy to the Secretary of State for Defence, with particular responsibility for the co-ordination of politico-strategic policy other than day to day operations; the Minister for the Royal Navy co-ordinates personnel matters and logistics and deals with problems of administrative rationalisation; and the Minister for the Royal Air Force

co-ordinates research, development and production, and the defence budget for the three Services.

The Meteorological Office

The Meteorological Office provides the national weather service and meteorological library. It supplies the material for sound and television forecasts and much of the weather data published by the press. Local weather information centres have been opened in London, Glasgow, Manchester and Southampton, from which inquirers may get facts and forecasts, usually free of charge, covering most of the northern hemisphere. The Office is also responsible for meteorological, climatological, and geophysical research.

The Department of Education and Science

The Department of Education and Science is organised in two administrative units. One of these is concerned with schools and other education (including vocational, recreational and adult education and the youth service) in England and Wales; the other deals with the universities and civil science throughout Great Britain. The Secretary of State for Education and Science is responsible for the whole work of the Department and is assisted by two Ministers of State, one for each of the two units.

In discharging its responsibilities for the development of primary, secondary and other education, which includes dealing with the supply, training and superannuation of teachers, the building of new schools and other institutions, the school health service, the special educational treatment of handicapped children, and the provision of school meals and milk, the Department works in co-operation with local education authorities—the councils of the counties and the county boroughs—whose duty it is to secure adequate facilities for all forms of education in their areas. Its relations with the universities are conducted through the University Grants Committee (appointed by the Chancellor of the Exchequer to advise on State aid to universities). Its activities in the field of civil science are discharged through a number of research councils, including the Medical and the Agricultural Research Councils, the Natural Environment Research Council (which carries out and supports research in earth science and ecology) and the Science Research Council (which carries out scientific research and is responsible for research grants and postgraduate training awards not within the fields of the other councils, and is also concerned with research in nuclear science and scientific space research, both in the United Kingdom and overseas). The Secretary of State is advised concerning finance for the research councils by the Council on Scientific Policy.

The Foreign Office

The Foreign Office, under the Secretary of State for Foreign Affairs, acts as a channel of communication between the British Government and the Governments of foreign States for the discussion and negotiation of all matters falling within the field of international relations, including the drawing up of international treaties and agreements. It also provides the means by which the British Government is represented in the United Nations and on other international bodies[1] and is kept informed of developments in foreign countries; by which British subjects and interests abroad are protected and trade promoted; and by which British policy is explained to foreign Governments and peoples.

[1] Other government departments provide delegates and carry the expenses of contributions to many relevant international organisations (see pp. 50, 53, 173, 221, 255 and 438). In 1964 Britain's contributions to the United Nations' regular budget, to the Special Accounts and Specialised Agencies amounted to some £13 million.

The Forestry Commission

The Forestry Commission is the national forest authority in Great Britain; it has its own annual Vote in the Estimates and is responsible for promoting the interests of forestry, the development of afforestation and the production and supply of timber in Great Britain, and for licensing the felling of growing trees.

The Minister of Land and Natural Resources is responsible for forest policy in England and Wales, the Secretary of State for Scotland in Scotland, and the Secretary of State for Wales in Wales.

The General Register Office

The General Register Office is responsible under the Registrar General for the regulation of civil marriages and for the administration of civil registration in England and Wales, for the preparation of statistics and reports relating to population, fertility, births, marriages, adoptions, diseases, and deaths and for taking the periodical census of the population. Responsibility to Parliament rests with the Minister of Health.

The Ministry of Health

The Ministry of Health is the government department responsible (in England and Wales) for the administration of the National Health Service and for the welfare services run by local authorities for the aged, infirm, blind, deaf and other persons in need; and it has functions relating to food hygiene and welfare foods. The Ministry is also concerned with the medical and surgical treatment of war pensioners in England and Wales, the Channel Islands and the Isle of Man, or living in the Irish Republic.

The exercise of the Ministry's functions in Wales has been delegated to the Welsh Board of Health, the members of which are appointed by the Minister of Health.

The United Kingdom is represented by the Ministry of Health on the World Health Organisation of the United Nations.

The Home Office

The head of the Home Office is the Secretary of State for the Home Department (the Home Secretary), who is entrusted with all the responsibilities of national administration which have not been especially assigned by law or convention to another minister. The Home Secretary is the channel of communication between the Sovereign and her subjects, and between the United Kingdom Government and the Governments of Northern Ireland, the Channel Islands and the Isle of Man.

The chief matters with which the Home Office is concerned are: the maintenance of law and order; the efficiency of the police service; the treatment of offenders, including juvenile offenders; the efficacy of the probation service; the organisation of magistrates' courts; the introduction of legislation on criminal justice; the efficiency of the fire service; the care of children by local authorities and voluntary organisations; the regulation of the employment of children and young persons; the law relating to the conduct of parliamentary and local government elections; public safety and civil defence; immigration control and naturalisation of aliens; and general questions and individual cases relating to British nationality and citizenship of the United Kingdom and Colonies.

Other matters for which the Home Office is responsible include: receiving and submitting addresses and petitions to the Sovereign and preparing presentations to Parliament; preparing patents of nobility for peers and formal proceedings for the bestowal of honours; advising the Crown on the exercise of the prerogative of mercy; making and receiving requests for the extradition of criminals; sanctioning by-laws made by local authorities in so far as they

relate to 'law and order' and 'good governance'; granting licences for scientific experiments on animals; ordering the exhumation and removal of bodies; supervising the control of explosives, firearms and dangerous drugs; and administering the State Management Scheme for control of the liquor trade in the Carlisle district.

The Ministry of Housing and Local Government

The Ministry of Housing and Local Government is generally responsible for local government in England and Wales, and exercises powers in regard to housing, town and country planning, sewerage, and other services administered by local authorities. It is responsible for sanctioning loans for most purposes for which local authorities require to borrow money and for acting as the main link between local authorities and the central Government.

As the central housing authority, the Minister supervises the administration of the housing statutes and the national housing programme; and his officers keep in close touch with the local housing authorities. Local authority proposals for dealing with slum clearance are also submitted to him.

The town and country planning work of the Ministry includes confirmation of the acquisition and disposal of land by local authorities and the payment of grants in certain cases of acquisition, clearing and compensation. The Minister also has responsibilities in connection with the designation of new towns and their development corporations and with the Commission for New Towns.

The Central Office of Information

The Central Office of Information is a common service department which produces information and publicity material, and supplies publicity services required by all other government departments. In the United Kingdom it conducts government press, television and poster advertising, produces booklets, leaflets, films, television material, exhibitions, photographs and other visual material, carries out social surveys, and distributes departmental press notices. For the overseas departments it supplies British information posts overseas with press, radio and television material, booklets, magazines, reference services, films, exhibitions, photographs, display and reading-room material; manages schemes for promoting the overseas sale of British books, periodicals and newspapers; arranges tours in the United Kingdom for official visitors from overseas; and provides exhibition stands at trade fairs (for the Board of Trade). Administratively, the Central Office of Information is responsible to Treasury ministers, while the ministers whose departments it serves are responsible for the policy expressed in its work.

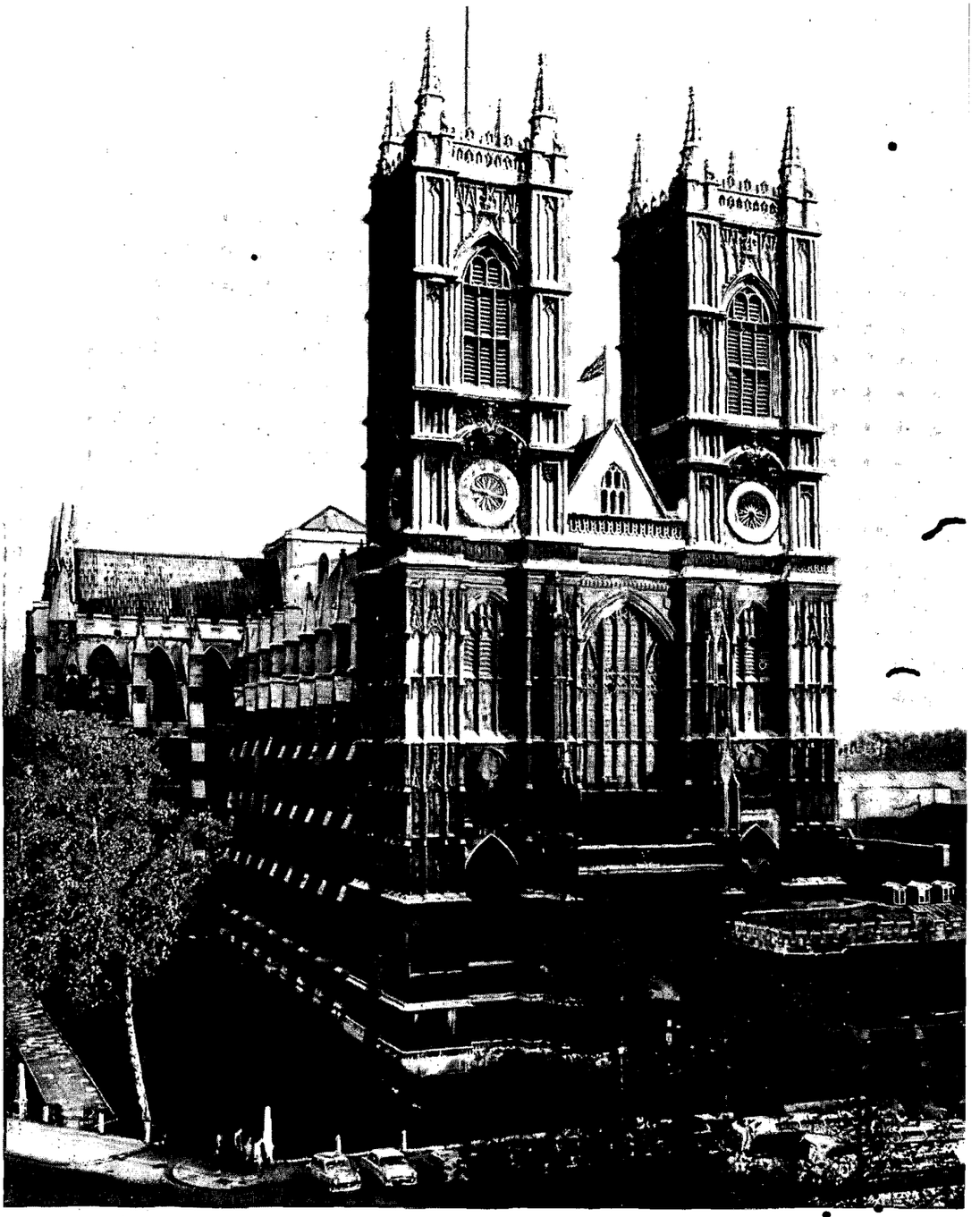
The Board of Inland Revenue

The Board of Inland Revenue administers the laws relating to income tax and surtax, profits tax, stamp duty, estate duty and certain other direct taxes, and advises the Chancellor of the Exchequer on any matters connected with them. It is also responsible for the valuation of real property for such purposes as compensation for compulsory purchase, local rates in England and Wales, and estate duty; and it collects tithe redemption annuities.

The Ministry of Labour

The Ministry of Labour co-operates with other government departments on matters of general employment policy, including the distribution of industry, and the maintenance of a high and stable level of employment.

One of the Ministry's principal functions is to help employees to find the work best suited to them and to assist employers to obtain suitable employees; to this end, it operates a national system of employment exchanges, which includes a Professional and Executive Register at 38 of the larger exchanges.



Westminster Abbey was consecrated on 28th December, 1065. The 900th Anniversary is being commemorated from December 1965 to December 1966.

LIBRARY
RAJARAMMOHUNPUR

CARE OF HANDI-CAPPED CHILDREN



Therapy and water-play at the John F. Kennedy Centre, London.



Hi-fi stereo headphones help deaf children learn to speak.

Arithmetic class for the deaf.



It also operates government schemes for vocational training and is concerned with the central administration of the Youth Employment Service, which is provided locally by the Ministry of Labour or the local authority, and it provides the Disablement Resettlement Service which helps disabled persons to secure employment.

Other functions of the department include: the resettlement in civilian employment of men released from the armed forces; the supervision, through the Factory Inspectorate, of safety, health and welfare measures for workers in industry and commerce; the collection and publication of labour statistics of all kinds; the promotion of good industrial relations; and the provision of services for conciliation, arbitration and investigation in industrial disputes.

Responsibility for the relations of the United Kingdom Government with the International Labour Organisation rests with the Ministry, which also deals with overseas questions about labour and employment and with the employment of foreign workers in Great Britain.

Besides these principal functions, the Ministry undertakes agency work for other government departments in connection with National Insurance, National Assistance, repayment of income tax to unemployed persons, and the issue of passports.

The Ministry of Land and Natural Resources

The Ministry of Land and Natural Resources participates in the formulation of national and regional plans and is generally responsible for the availability of natural resources to meet the needs of the community. It is also responsible for the development of new resources and the better use of existing resources where present use is inadequate. In this connection the Minister is to establish a Land Commission as soon as possible, and is responsible for research into the possibilities of conserving and augmenting national water resources, and for the Water Resources Board, including its finance and the appointment of its members. He takes a leading part in major projects, which involve the co-ordination of a variety of different interests in a particular river, and with which a number of different departments are concerned; and he is charged with planning the re-organisation of the water supply industry under full public ownership.

The Minister's further responsibilities relate to the National Parks Commission and its powers and duties in connection with national parks and long-distance routes and, jointly with the Secretary of State for Scotland and the Secretary of State for Wales, to the Forestry Commission and forest policy. He is closely concerned with some of the work of the Natural Environment Research Council of the Department of Education and Science, in particular in connection with nature conservancy.

The Law Officers' Department

The Law Officers of the Crown for England and Wales (the Attorney General and the Solicitor General) are responsible for the legal advice given to the Government; in addition, they have a wide range of duties in relation to the courts. The Attorney General, who is the senior Law Officer, is the Crown's representative in the courts, and legal proceedings for the enforcement of public rights and on behalf of the interests of charity are conducted in his name. His consent is required to the institution of criminal proceedings for certain offences, and the Director of Public Prosecutions is subject to his superintendence. The Procurator General (Queen's Proctor), who has certain duties connected with the operation of the divorce laws, also exercises his functions under the direction of the Attorney General. The Solicitor General

is subject to the authority of the Attorney General, with the same rights and duties. The Law Officers, who are appointed from among the leading members of the English Bar and are always members of the House of Commons, are assisted by a small professional staff.

The Lord Chancellor's Departments

The Chancellorship is a legislative, judicial and executive office held by an eminent ex-member of the Bench or of the Bar and carrying Cabinet rank.

In addition to his functions as Speaker of the House of Lords and Custodian of the Great Seal, the Lord Chancellor is in charge of more than 20 different offices and branches which are mainly concerned with legal practice and procedure. He controls the personnel and machinery of the courts of law through his patronage, through administrative powers conferred by the Judicature Act 1925, and other Acts, through his membership of the Rules Committee of the Supreme Court and his responsibility for that of the county courts; he appoints the justices of the peace and recommends to the Crown other appointments to the judiciary in England and Wales; and he is the minister responsible for the Judge Advocate General's Department, which advises the Secretary of State for Defence and the Defence Council on legal matters arising out of the administration of military law, and which reviews the proceedings of army and air force courts martial (see p. 92).

In addition, the Lord Chancellor is a leading member of the Judicial Committee of the Privy Council; he appoints the members of the Law Commission for England and Wales, the chairmen of certain administrative tribunals in England and Wales, and (with the Secretary of State for Scotland) the members of the Council on Tribunals; and he is responsible for the administration of the Land Registry (which maintains a State register of title to land), the Public Trustee Office (which may act as the executor or administrator of the estate of a deceased person or as a trustee under a will or settlement) and the Public Record Office (which preserves, and provides access to, the national archives).

The Ministry of Overseas Development

The Ministry of Overseas Development is responsible for carrying out the Government's policy for development overseas. It is responsible for the aid programme as a whole and its make-up between bilateral and multilateral aid and between capital aid and technical assistance; the terms and conditions of capital aid and the principles on which technical assistance is granted; the size and nature of the aid programme for each country; the management of capital aid and technical assistance; relations with international aid organisations; the United Kingdom interest in United Nations programmes of technical assistance; and liaison with voluntary bodies operating in the same field.

In carrying out these duties the Ministry works in close co-operation with the overseas departments (the Foreign Office, the Commonwealth Relations Office and the Colonial Office) and other departments concerned. It is also responsible for the Commonwealth Development Corporation, which provides capital for certain development projects in Commonwealth countries. The aid aspects of the United Nations Trade and Development Conference are the concern of the Ministry, as is United Kingdom participation in UNESCO and FAO.

The Paymaster General's Office

The Paymaster General's Office acts generally as a banker for government departments other than the Boards of Inland Revenue and Customs and Excise, and the Post Office, for all of which separate arrangements exist. Money granted by Parliament is transferred (in such sums as may be required

from day to day) from the Exchequer account to the account of the Paymaster General at the Bank of England. Most departmental payments are made by means of payable orders drawn on the Paymaster General's Office; these are similar to cheques, and their recipients obtain payments through the commercial banks, whose accounts at the Bank of England are in turn reimbursed by the Paymaster General's Office.

The department is also responsible for the regular payment of many public service pensions, including those of civil servants, teachers, and members of the National Health Service, as well as the retired pay and pensions of officers of the armed forces, their widows and dependants.

The Ministry of Pensions and National Insurance

The Ministry of Pensions and National Insurance is responsible (1) for the social security services established by the Family Allowances Acts, the National Insurance Acts and the National Insurance (Industrial Injuries) Acts, and for reciprocal social security arrangements with other countries, and (2) for the award and payment of pensions and allowances for disablement or death due to service in the armed forces of the Crown (including service in the Home Guard), or due to war injuries sustained by naval auxiliaries, merchant seamen, civil defence personnel and civilians in the second world war, and for the welfare of pensioners and their dependants and war orphans. In addition to its responsibilities for war pensioners in the United Kingdom and in the Irish Republic, the Ministry is responsible for the administration of war pensions and for the medical treatment of war disablement of United Kingdom pensioners living in Northern Ireland and, through its various agencies, in other countries overseas. The Ministry maintains an office in Ottawa to serve pensioners in North America.

The National Assistance Board

The National Assistance Board is responsible to Parliament through the Minister of Pensions and National Insurance for the administration of the State service of financial assistance to persons in need and unable to maintain themselves and of the non-contributory pension scheme under the Old Age Pensions Act 1936; it is also responsible for assessing the means of persons applying for legal aid.

The Post Office

The Post Office, which is controlled by the Postmaster General, operates the inland postal, telegraph, telephone and remittance services and, in co-operation with other countries and interests, the corresponding overseas services.

Through its 25,000 post offices it also undertakes numerous agency functions, including the operation of the Post Office Savings Bank, the issue of savings certificates and bonds, the sale of broadcast receiving and other licences, the sale of stamps for National Insurance contributions, and the payment of grants and allowances, such as National Insurance payments, retirement pensions and family allowances. A considerable volume of scientific research and technical development relating to telephone, telegraph and radio systems and the mechanisation of the postal services is carried out by the engineering staff of the Post Office.

All Post Office income is paid into, and all its outgoings are met from, a self-contained fund under the control of the Postmaster General.

The Postmaster General is also responsible to Parliament for broad questions of national policy concerning the sound and television broadcasting services.

The Ministry of Power

The Ministry of Power has the general duty of ensuring the effective and co-ordinated development of fuel and power supplies in Great Britain, and

of promoting economy and efficiency in their distribution and consumption. The business of producing and distributing gas and electricity and of producing coal is operated by the boards of the three nationalised industries which are responsible to the Minister on policy issues. The Ministry is also responsible for government relations with the petroleum industry; it regulates the construction and operation of privately owned industrial pipelines; it has certain functions in relation to the iron and steel industries; and it is specifically responsible for the use of atomic energy as a source of industrial power and for the safety of nuclear installations other than those operated by the United Kingdom Atomic Energy Authority.

The Ministry is concerned with the general co-ordination of fuel research; it administers the legislation governing the safety and health of workers in or about coal mines, metalliferous mines and quarries, and it conducts or arranges for research on these matters and on other specific projects.

The Department of the Procurator General and Treasury Solicitor

The Treasury Solicitor provides a common legal service for a large number of government departments in England and Wales; the duties of his Department include drafting and preparing litigation and prosecutions, representing other departments in court, and giving general advice on the interpretation and application of the law. The Department undertakes a considerable amount of conveyancing connected with the transfer of real property and with the administration of the residuary estates (undisposed of by will) of certain deceased persons, and it deals with the outstanding property and rights of dissolved companies. The Statutory Publications Office is staffed and controlled by the Treasury Solicitor, who reports annually to the Statute Law Committee (a body appointed by the Lord Chancellor from among the judiciary and legal profession in England and Scotland) on its work.

Some government departments are wholly dependent on the Treasury Solicitor for their legal work; others have their own legal staffs for a proportion of the work and draw on the Treasury Solicitor for special advice, and often, for conveyancing; and others, whose administrative work is based on or deals with a code of specialised law or involves a great deal of legal work, have their own independent legal sections.

The Treasury Solicitor is also Procurator General (Queen's Proctor).

The Ministry of Public Building and Works

The Ministry of Public Building and Works is responsible for the execution of works services for the Ministry of Defence; the provision of office accommodation for government departments (including public buildings overseas), and of research establishments and many other types of accommodation required by civil and Service departments; the design, purchase, supply and maintenance of furniture and equipment for, and the supply of fuel, household articles and stores to, government departments and certain other bodies; the administration of the Ancient Monuments Acts and the maintenance of those monuments and historic buildings in the department's charge; the making of grants, on the advice of the Historic Buildings Councils, towards the maintenance of historic buildings of outstanding interest; the maintenance of royal palaces and certain official residences; the provision of services for certain State ceremonial occasions; and the management and maintenance of the royal parks and certain other open spaces.

The Ministry is the point of contact within the Government for the construction industries and the building materials industries; it has general responsibility for co-ordinating information about current and future building

programmes and for advising on the level of building activity. Regular consultation with the industries at national and regional levels and a comprehensive statistical service are maintained. The Ministry is also responsible for research and development work carried out in connection with building, for disseminating the results of such work, and for encouraging the construction industries to make full use of them.

The Stationery Office

Her Majesty's Stationery Office, responsible to the Chancellor of the Exchequer, is the central agency for government printing, binding and publishing, and for providing government departments with duplicating, addressing and distributing services, office machinery, equipment and supplies, commercially published books and periodicals, and desk stationery. It also provides certain of these services for the armed forces of the Crown.

The Controller is Queen's Printer of Acts of Parliament and the copyright of all British Government documents is vested in him. About a third of all official printing, including all parliamentary needs, is done in the Stationery Office's twelve printing and binding works, the remainder being carried out by private printers under contract. As government publisher, the Stationery Office is responsible, through its nine government bookshops as well as the normal bookselling channels at home and abroad, for sales of official publications. It is also the United Kingdom agent for United States, Canadian and Italian government publications and for those of the principal international and European inter-governmental organisations.

The Ministry of Technology

The Ministry of Technology has the general responsibility of guiding and stimulating a major national effort to advance technology and new processes in British industry. It has powers to carry on and support scientific research and the dissemination of its results and to further the practical application of the results of scientific research. It is the sponsor department for the machine tool, electronics, computer and telecommunications industries; it administers a number of research establishments; and it aids with grants about 50 autonomous industrial research associations, financed mainly by contributions from industrial membership.

The Minister is also responsible for the United Kingdom Atomic Energy Authority and for the National Research Development Corporation.

The Minister of Technology is chairman of the Advisory Council on Technology, the membership of which includes persons experienced in scientific, economic, industrial and trade union matters.

The Board of Trade

The Board of Trade, under the President of the Board of Trade, has a general responsibility in respect of the United Kingdom's commerce, industry and overseas trade, including commercial relations with other countries, import and export trade, the protective tariff, industrial development and consumer protection. It is also responsible for general distribution of industry policy and for the shipping and shipbuilding industries.

The Board's further responsibilities are (1) the promotion of exports, (2) statistics of trade and industry (both at home and abroad), including the censuses of production and distribution, and (3) the administration of certain regulative legislation, for example in relation to patents, registered designs, copyright, trade marks, weights and measures, merchandise marks, companies, bankruptcy, insurance, shipping, distribution of industry, films, and enemy property.

In addition, the Board of Trade is the department generally responsible for government relations with all industries which are not specifically the concern of other departments. In this connection, it provides both a channel of communication with and a point of contact for these industries, and a central place at which knowledge about them is accumulated, analysed, and used as a basis for advising ministers and other departments. The main industries which fall outside the scope of the Board of Trade's specific concern are food, agriculture and fisheries, building and quarrying, iron and steel, shipbuilding, fuel and power, machine tools, electronics, computer and telecommunications, and transport (except shipping).

The Ministry of Transport

The Ministry of Transport has powers and duties relating to inland transport, in Britain, including certain statutory duties concerning railways, roads, road transport and inland waterways. The Minister appoints the members of the nationalised transport boards (British Railways Board, London Transport Board, British Transport Docks Board, British Waterways Board and Transport Holding Company) and agrees the general lines on which their development programmes are drawn up. He is the highway authority for trunk roads and motorways in England, allocates the funds provided by Parliament for road expenditure (including grants for classified roads vested in local authorities) and has many powers and duties relating to road traffic and safety.

The Minister is also responsible for general policy in connection with the development of United Kingdom ports and for the operation of ports in the event of war.

The Welsh Office

The Secretary of State for Wales, who is assisted by a Minister of State and a Parliamentary Under-Secretary, has executive responsibilities for roads, housing, new towns, town and country planning, water and sewerage, national parks, forestry, and the organisation of local government and information services in Wales. He is also responsible, in conjunction with the Department of Economic Affairs, for directing the development plan for Wales and he exercises supervision over the execution of national policies in Wales by other departments, particularly the Department of Education and Science, the Board of Trade, and the Ministries of Agriculture, Fisheries and Food, Health, Labour and Transport.

The Welsh Office is centred in Cardiff; there is also a small ministerial office in London.

SCOTLAND

The Secretary of State is responsible in Scotland for a wide range of functions which in England and Wales are divided among a number of departmental ministers. He is assisted at ministerial level by a Minister of State and three Parliamentary Under-Secretaries of State. There are also two Scottish Law Officers.

The Secretary of State's statutory functions are discharged by four main departments of equal status (the Department of Agriculture and Fisheries for Scotland, the Scottish Development Department, the Scottish Education Department, and the Scottish Home and Health Department), each under a Secretary responsible to the Secretary of State.

The responsibilities of the Secretary of State for the preparation and implementation of the economic plans for Scotland (which form part of, or are related to, the national economic plan and national policies) are discharged through the Permanent Under-Secretary of State and other Scottish Office

staff with the advice of the Scottish Economic Planning Council and the assistance of the Scottish Economic Planning Board and the officials of the departments principally concerned.

The day-to-day administration of the departments is conducted in Edinburgh, but each department has representatives in London for liaison and parliamentary duties. The London office is generally known as the Scottish Office, the term also used to describe all Scottish administration for which the Secretary of State is responsible.

The Scottish Ministers are advised and assisted (particularly on questions with which more than one of the departments are concerned or which fall outside the province of any of them) by the Permanent Under-Secretary of State, Scottish Office, who is free from departmental duties.

The Department of Agriculture and Fisheries for Scotland

The Department has a general responsibility for, and in most cases administers, government measures for the promotion and development of farming in Scotland. In certain of these functions the Department is assisted by eleven agricultural executive committees, constituted of members of the agricultural industry and organised on an area basis.

The Department has responsibilities for the oversight and protection of the Scottish inshore, deep sea and fresh-water fisheries. It also has functions relating to harbours, to steamer services in the Highlands and Islands and to general questions concerning Highland development.

The Scottish Development Department

The Scottish Development Department is concerned with a number of the main services affecting the physical development of Scotland, such as town and country planning, new towns, housing, roads, water supplies and sewerage, coast protection, flood protection, and the prevention of river and air pollution (most of which are administered locally by town and county councils) and with the policy of the Electricity Boards in Scotland. The Department is responsible for general policy in regard to local government, including its financial aspects such as valuation, rating, and the allocation of the Exchequer general and equalisation grants.

The Scottish Education Department

The Scottish Education Department supervises the administration of the Education (Scotland) Acts and guides, through the local education authorities and other bodies, the development of public education in Scotland in all its forms. The Department's functions include: the supervision of the training of teachers and the issue of teachers' certificates; the regulation of teachers' salaries and the administration of the Teachers (Superannuation) (Scotland) Regulations; the control and distribution of specific Exchequer grants in aid of educational expenditure; and the award of students' allowances to those taking full-time degree and comparable courses. The Department also exercises general supervision over the child care and adoption services, remand homes, and approved schools and is concerned with the administration of the Royal Scottish Museum.

The Scottish Home and Health Department

The Scottish Home and Health Department is responsible for: (a) the central administration of functions relating to law and order; and (b) the health and welfare services in Scotland. Under (a) the Department is concerned with the police and probation services, criminal justice, legal aid and the services needed by the courts, and is directly responsible for the administration of prisons and borstal institutions. It is also the central authority in Scotland for the fire service, for civil defence, and for legislation concerning

shops, theatres, cinemas and licensed premises (which are directly maintained by the Department in districts in which State management is in operation). Under (b) the Department is responsible for the administration of the National Health Service. Its work in connection with the associated welfare services includes the supervision of local arrangements for the aged and handicapped, and medical and surgical treatment for war pensioners.

Other Administrative Departments

In addition to the main departments, there are a number of other Scottish departments, all of which work in varying degrees under the direction of the Secretary of State. Such departments include the Scottish Information Office, which undertakes information services on behalf of the Scottish departments and, to some extent, for Great Britain departments in Scotland, and acts as the agent in Scotland of the Central Office of Information; the Department of the Registrar-General for Scotland (the General Registry Office); the Scottish Record Office; and the Department of the Registers of Scotland. There are also Scottish branches of the Great Britain and United Kingdom departments under the direction of controllers, who are responsible for ensuring that the execution in Scotland of the policy and procedure of their departments is in accordance with Scottish conditions and needs.

The Law Officers and Legal Departments

The Law Officers of the Crown for Scotland (the Lord Advocate and the Solicitor General for Scotland) are the chief legal advisers to the Government on Scottish questions and the principal representatives of the Crown for the purposes of litigation in Scotland. The Lord Advocate is also closely concerned with questions of legal policy and administration and is himself responsible for the institution and direction of all prosecutions on indictment in Scotland, and the control of summary prosecutions in the sheriff court.

In some of this work the Lord Advocate is assisted by the *Lord Advocate's Department*, the members of which also act as legal advisers on Scottish questions to certain government departments who have no Scottish legal adviser of their own. The work relevant to prosecutions is centred in the *Crown Office* in Edinburgh.

The Parliamentary Draftsmen for Scotland are incorporated in the Lord Advocate's Department and are responsible to the minister concerned and to the Law Officers for the drafting of all government Bills in so far as they affect the law of Scotland. Their responsibilities in this connection are similar to those of the Parliamentary Counsel to the Treasury.

NORTHERN IRELAND

Executive and administrative powers on matters under the jurisdiction of the Northern Ireland Parliament are vested in the Crown, and exercised by the Governor, acting on the advice of the Northern Ireland Cabinet, through a number of departments. Each of the seven ministries (Agriculture, Commerce, Development, Education, Finance, Health and Social Services, and Home Affairs) is under the control of a Minister responsible to the Northern Ireland Parliament. In addition, there are a National Assistance Board and an Exchequer and Audit Department which, together with the Ministries of Home Affairs, Education, and Agriculture, have functions indicated by their titles. The other departments have duties of a varied nature, which are summarised below.

The Prime Minister's Department

The Prime Minister's Department includes the Cabinet Secretariat, the Information Service and the Economic Section. It corresponds with the Government of the United Kingdom on major matters of policy and acts as

a channel of communication between the Governor and the Cabinet and between the Cabinet and departments.

The Ministry of Finance

The basic functions of the Ministry of Finance are the settlement of financial questions with the United Kingdom Treasury, the financial control of Northern Ireland departments, and the management of the Civil Service. In connection with these functions the Ministry is responsible for the control of borrowing, the issue of Ulster Savings securities, government loans to local or public authorities, the collection of stamp duties, death duties and certain excise duties, the collection of land purchase annuities and the staffing, recruitment and training of the Civil Service and the regulation of its conditions.

Other responsibilities of the Ministry include the provision of buildings for the Northern Ireland Government and certain departments of the United Kingdom Government, the preservation of ancient monuments, the Public Record Office, valuation, ordnance survey, the Land Registry and the Registry of Deeds, censuses, the registration of births, deaths and marriages, and certain duties in relation to charities and charitable funds.

The Office of the Parliamentary Draftsmen, which prepares Bills for introduction into Parliament, is attached to the Ministry.

The Ministry of Commerce

The Ministry of Commerce is concerned with industrial information and statistical services; the progress of industrial production and trade in Northern Ireland; the development of existing enterprises and the attraction of new ones; and the administration of schemes of financial assistance to industry. The department also has responsibilities in relation to electricity and gas undertakings; harbours; the tourist trade; the regulation and inspection of mines and quarries; mineral development; scientific development; weights and measures; the registration of companies and friendly societies; and the administration of the Assurance Companies Acts and the Industrial Assurance Acts.

The Ministry of Development

The Ministry of Development is responsible for housing, planning, water supplies, sewerage, local government matters, the planning of new towns, roads, railways and public transport.

The Ministry of Health and Social Services

The Ministry of Health and Social Services is responsible for the work connected with employment services, industrial training, industrial conciliation, national insurance, industrial injuries and family allowances, and has functions relating to hospitals and health and welfare services.

THE CIVIL SERVICE

A civil servant in Britain is a servant of the Crown (not being the holder of a political or judicial office), who is employed in a civil capacity and whose remuneration is found wholly and directly out of money voted by Parliament. The number of civil servants under this definition is about a million, for it includes several hundred thousand government industrial employees in such establishments as Royal Ordnance factories and Royal Navy dockyards. The term 'Civil Service' is, however, generally used only to cover 'non-industrial' members of the staffs of the various government departments in the United Kingdom or working overseas. The total number of non-industrial civil

servants employed in all departments, at home and overseas, is nearly 700,000[1]; more than one-third are women.

Although the civil servant is legally a servant of the Crown, in practice he serves the minister in charge of the department in which he works by advising on the formulation of policy and by carrying out policy decisions once they have been taken. From time to time the minister changes but the civil servant remains to serve his successor. In Britain changes of government do not involve changes in departmental personnel, since it is considered that continuity makes for administrative stability.

Development of the Modern Civil Service

The Civil Service in its present form is a product of the past hundred years. Before then, departments were free to choose their own staffs, qualifying standards were unknown, there was no central supervision, and political jobbery was rife. Measures of reform instigated during the nineteenth century included the substitution of open competition for the practice of obtaining civil service appointments by favour or purchase, and the establishment of an independent body, the Civil Service Commission, to organise recruitment to the service. The great expansion in State activity in the last fifty years, and the consequent increase in the numbers of civil servants and the scope of their duties, have led to further reorganisation: recruitment competitions have been adapted to a developing educational system; co-ordination between the various departments has been improved; and many commissions and committees of inquiry have been appointed by the Government to make recommendations for increased efficiency in the conduct of public business. Moreover, civil servants, though they remain employees of their departments, have become members of an integrated service with common conditions of employment and their traditions and standards of conduct belong, not to individual departments, but to the Civil Service as a whole.

Control of the Service

Uniformity in the Civil Service derives mainly from the fact that the Treasury exercises general control. One of the two Joint Permanent Secretaries to the Treasury is the official head of the Home Civil Service and the principal adviser of the Prime Minister on matters affecting the Civil Service as a whole, and in particular on appointments to senior posts in the service. The Treasury is responsible for the salaries and conditions of employment of all civil servants; it controls the total number of staff and the creation of higher posts, maintains a central organisation and methods division which serves all departments which do not maintain an organisation and methods branch of their own, and deals with general questions relating to training after entry into the Civil Service. It is also concerned with the number of departments and the distribution of functions between them.

Civil Service Classes

Because modern government touches almost every aspect of life, the Civil Service comprises officers with a wide variety of professional and technical qualifications. Where officers of a particular type are required in more than one department they are organised in general service or linked departmental classes. This ensures similar grading and salary structures for the same type of officer in each department. The main classes are:

1. *The Administrative Class*, which is responsible for advising ministers on

[1] Including part-time staffs—two part-time officers being reckoned as equivalent to one whole-time officer.

policy, for dealing with any difficulties which may arise in carrying out existing policy and for forecasting the probable effects of new measures and regulations. This relatively small class, which numbers about 2,300, is recruited largely from the universities: non-graduates form about one-quarter of the total. (The equivalent grades in the Diplomatic Service (see below) number about 1,000.)

2. *The Executive Classes* (General and Departmental, numbering some 77,000), which are responsible for the day-to-day conduct of government business, including, for instance, the higher work of accounts and revenue collection, within the framework of established policy. Members of these classes may, after entry, train for specialist work such as that of auditor, actuary or statistician.
3. *The Specialist Classes* (General and Departmental), which number about 131,000 in a variety of different categories, carry out the wide range of specialised activities which are now undertaken by the Government. The categories include accountants, architects, doctors, engineers, lawyers, surveyors and scientists in all branches of science. The professionally qualified staff are assisted by a large number of technical and drawing office staffs.
4. *The Clerical Class* (General and Departmental) comprises about 130,000 officers who undertake all the usual clerical work involved in running departmental business: for instance, the preparation of accounts and the keeping of records, the handling of particular claims in accordance with known rules, and the summarising and annotation of documents for the assistance of senior officers. The personal secretaries of senior officers are included in this group, together with officers directly responsible for the supervision of clerical work.
5. *The Ancillary Clerical Classes* (with about 102,000 members), which include clerical assistants, shorthand typists and typists, duplicator operators and a rapidly increasing number of machine-operating grades.
6. *Messengerial and Minor Classes* (with some 34,000 members) which, in addition to messengers, include paper keepers, office cleaners and similar workers.

In addition there are other departmental classes where employment is peculiar to one department: for instance, the Post Office, with its postmen (115,000), telephone operators (53,000), postal and telegraph officers (23,000) and a wide range of staff for the installation, maintenance and development of the telephone, telegraph and wireless systems. Other examples are the Factory Inspectorate of the Ministry of Labour and the Schools Inspectorate of the Ministry of Education and Science.

The Diplomatic Service

The Diplomatic Service, comprising some 6,400 civil servants, was created on 1st January, 1965, to take in the duties, personnel and posts of the former Foreign Service, Commonwealth Service and Trade Commission Service. The offices of Secretary of State for Foreign Affairs and Secretary of State for Commonwealth Relations remain separate but the staffs of the Foreign and Commonwealth Relations Offices are drawn from the combined service.

The Diplomatic Service has its own grade structure, corresponding by salary with the grades of the Administrative, Executive and Clerical Classes[1]

[1] The numbers in these separate classes are included in the equivalent Home Civil Service Grades.

of the Home Civil Service; it also has Secretarial, Communications and Security Guard branches. Various specialists and advisers from home departments or the armed forces may serve at overseas posts on secondment or attachment to the Diplomatic Service.

The Northern Ireland Civil Service

The Government of Northern Ireland has its own Civil Service which deals with matters transferred to its jurisdiction under the Government of Ireland Act 1920. Subject to regional differences, the Northern Ireland Civil Service is modelled on its counterpart in Great Britain, but recruitment to permanent and pensionable posts is effected through the medium of a separate Civil Service Commission. Interchange of staff between the two Civil Services occurs to a minor extent only, and is a matter for departmental agreement in individual cases.

Public Services of Overseas Dependent Territories

Britain's dependent territories fill vacancies in their public services by the appointment of suitably qualified local candidates wherever possible; but because not all vacancies can be filled in this way, the Ministry for Overseas Development and the Crown Agents for Oversea Governments and Administrations are asked to recruit other candidates, principally from the United Kingdom.

Recruitment of Staff

The recruitment of permanent civil servants in the Home Civil Service of Great Britain and the Diplomatic Service is in the hands of the Civil Service Commission which, in the selection of entrants, is independent of both ministerial and parliamentary control; its members are appointed by the Crown on the advice of the Government. The normal method of entry is by open competition, conducted in accordance with regulations approved by the Treasury and consisting of written examination or interviews, or both. The main points of entry into the main classes of the Home Civil Service are planned to correspond to definite levels in the British educational system, and it is the Commission's duty to study the requirements of the Civil Service in the light of the education provided by the schools and universities.

Temporary civil servants are normally recruited by the department concerned. No special qualifying examinations are required.

Training after Entry

In all except the smaller government departments, there are full-time training officers and instructors who organise both general and technical courses, ranging from courses of systematic instruction for recruits in all classes to 'refresher' courses covering technical subjects or broader subjects, such as management, organisation and communications, for more experienced staff. Young people are given opportunities to continue their studies under 'day release'[1] schemes.

Methods of training include discussion groups, case studies, instructional films and the preparation of self-instruction programmes ('programmed learning'). There are also exchanges to enable civil servants to study the working of appropriate outside bodies. Officers in the early years of their service may be transferred from branch to branch and, more rarely, from department to department, in order that they may gain as wide an experience as possible of Civil Service activities, and there are openings for selected

[1] Schemes by which young employees and apprentices are released by their employers for study, usually on one day a week.

officers to travel abroad or to study at universities, technical colleges and other educational establishments. Facilities are provided for officers who take up private studies to have some degree of assistance, depending upon the vocational value of the subject.

Training is co-ordinated by the Training and Education Division of the Treasury, which is also responsible, with the National Whitley Council[1], for guidance and some aid to departments in the organisation and performance of their training through a team of Training Liaison Officers. The Division also runs central courses for members of the administrative, professional and scientific classes at different stages of their careers and trains departmental instructors and other special groups, for instance, superintendents of typists, secretaries and staff in establishment divisions.

The Civil Service National Whitley Council's Joint Committee, set up to review training in the Service since 1944, published its report on training in 1964. Discussions on its implementation are proceeding with departments.

Promotion

A period of probation (lasting from one to two years according to grade, with extensions in certain instances) is the rule for all new entrants to the permanent Civil Service. Promotions from grade to grade are made by departments; those from class to class partly through centrally conducted competitions (open only to serving members of specified Civil Service classes), and partly by departments themselves. All promotions to the administrative class from other classes require Treasury approval. Promotions to most of the highest positions in the Civil Service, i.e. permanent secretaries, deputy secretaries, principal establishments officers and principal finance officers, must be approved by the Prime Minister; he is advised in these matters by the official head of the Home Civil Service.

Conditions of Service.

Machinery for negotiation on conditions of service affecting the Civil Service as a whole is provided by the National Whitley Council, which is composed jointly of official and staff representatives. Negotiating machinery for separate sections of the service is provided through the various staff associations which civil servants are encouraged to join (for instance, the Civil Service Clerical Association, the Union of Post Office Workers, the Society of Civil Servants, the Institution of Professional Civil Servants, and the Association of First Division Civil Servants), and through departmental Whitley Councils (of which there are about 70).

In general, the civil servant receives a salary which is based on a fair comparison with that paid for similar work outside the service and usually he receives annual increments up to the maximum of the scale of the grade to which he belongs. In addition, although a civil servant holds office at the pleasure of the Crown and may therefore be dismissed at any time, in practice he enjoys a considerable measure of security of tenure. Thus every permanent civil servant, who is capable and efficient, may reasonably expect a full career in the public service and a pension on retirement[2]—though this, again, is not a legal right.

Civil servants are required to work a specified number of hours each week. Overtime is paid to members of most of the lower salary groups if they work

[1] Whitley Councils are representative bodies for negotiation and joint consultation between managements and staffs; the councils are named after Mr. J. H. Whitley, former Speaker of the House of Commons and chairman of a committee which investigated industrial unrest from 1916 to 1919.

[2] Temporary civil servants are eligible for pensions after 20 years' continuous service.

longer than the required hours. The standard working week for office staffs is 42 hours[1] in London and 43 hours[2] in the provinces. Annual leave varies according to grade up to a maximum of six weeks, i.e. 30 working days, a year. Sick leave on full pay, less any national insurance benefit received, may be granted to permanent civil servants for up to six months in any twelve months, and on reduced pay up to a maximum of one year's sick leave in any four years; any officer whose health is permanently impaired may be retired on medical grounds.

Political and Private Activities

Officially, the position and functions of a civil servant remain the same whichever political party is in power; and it is his duty to serve the government of the day irrespective of his own political opinion. The extent to which a civil servant, as a private individual, is free to participate in political activities varies according to grade. For this purpose civil servants are divided into three groups: those who are completely free to engage in all kinds of national and local political activities (although if they intend standing for Parliament, they must resign their appointment before nomination day[3]); those who are free, subject to the acceptance of the need for discretion and with the permission of the department, to take part in most activities except parliamentary candidature; and those who are debarred from national political activities though they may seek permission to take part in local government and political activities. In the non-industrial Civil Service, the completely free groups are the manipulative grades of the Post Office, and the minor grades such as cleaners and messengers. The intermediate group includes mainly clerical and typing grades, and the granting of permission by the department depends, broadly, on the nature of the work done. The group which is not allowed to take part in national political activities includes the executive, the professional, the scientific and technical, and the administrative grades. In general, because the reputation of the service must be closely guarded, permission to take part in local political activities will be refused to members of this group if the local activities are conducted on the same party lines and through the same party organisations as national political activities. Where permission is granted, it is subject to a code of discretion and to the obligation to notify the department of election or co-option to a local council.

Civil servants of every grade may, of course, exercise the right of all citizens to register their private political opinions on appropriate occasions, for instance, at general or local authority elections. They may also engage in such private activities as they wish, provided that these do not in any way conflict with their official duties, nor with the provisions of the Official Secrets Acts 1911 and 1920, and the Prevention of Corruption Act 1906. However, since a civil servant must not use his official position to further his private interests, he is subject to certain restrictions in commerce and business: for instance, he may not hold private interests in public contracts and he may not use official information in writing, broadcasting or lecturing without the approval of his department.

Security

The political views of civil servants are not as a general rule a matter of official concern, but there are some civil service duties in which secrecy is so vitally important to State security that the Government does not feel

[1] These hours are to be reduced to 41 in October 1965.

[2] These hours are to be reduced to 42 in October 1965.

[3] Any civil servant in this group who is not elected will be reinstated in his previous capacity on application within a week of the declaration of an election result.

itself justified in employing any one to carry them out whose reliability is in doubt. For this reason no one who is known to be a member of, or actively associated or in sympathy with, the Communist Party or with Fascist organisations is employed in connection with secret work.

Each government department is responsible for its own internal security and the Security Service, which operates independently under a Director-General who is responsible for its efficiency to the Home Secretary, deals with national security. In addition, there is a Security Commission which, if requested by the Prime Minister in consultation with the leader of the Opposition, may investigate and report on breaches of security in the public service and, in certain circumstances, advise whether any change in security arrangements is necessary or desirable.

LOCAL GOVERNMENT

Government on a local basis has been part of the administrative system of the United Kingdom for many centuries. In its present shape it dates back to the late nineteenth century, when the conception of a comprehensive system of locally elected councils to manage various services provided for the benefit of the community was first incorporated in statute law. The large increase in population since that time, and the equally massive transformation in the range, complexity and scale of local authority functions, have made it necessary to review local government throughout England and Wales. In Greater London the system has been reorganised and proposals have been made in other areas (see p. 77) for a new structure more closely related to contemporary and possible future needs.

Relationship between Central and Local Government

Local authorities are set up under the authority of Parliament, and their powers and duties are defined by Acts of Parliament. Basically councils are responsible to the law and to the local electors and not to the central Government. They determine their own budgets, and no minister of the Crown has power to suspend or dismiss them, nor to inquire into the way in which they organise their business. However, in respect of certain services, Acts of Parliament dealing with local government give ministers of the Crown defined powers, some of which are designed to secure a measure of national uniformity in the standard of service provided, or to safeguard public health, while others are for the protection of the rights of individual citizens. For some services the minister concerned has wide powers of supervision; for some there are strictly limited powers; for others no provision at all is made for ministerial supervision.

In addition to their statutory powers, ministers concerned with local government give assistance to local authorities by the general issue of advisory circulars and by giving advice in individual cases.

The Ministry of Housing and Local Government is the main link between local authorities and the central Government in England; in Scotland the Scottish Development Department is responsible for general policy in regard to local government; in Wales, the Welsh Office; and in Northern Ireland the Ministry of Development.

Principal Types of Local Authority

The main pattern of local government organisation in England and Wales (outside the Greater London area) and Northern Ireland is a division of the country into county boroughs and administrative counties. The county boroughs (mostly with populations of over 75,000) are separate from the

counties and independent of them. The administrative counties are subdivided into county districts—non-county boroughs, urban districts and rural districts, the last-named being further divided into parishes[1] (except in Northern Ireland). Scotland is divided into counties (including four counties of cities) which are independently administered; large and small burghs, and districts. Each local authority division is administered by its own elected council. In England and Wales (outside the Greater London area) there are 58 county councils, 82 county borough councils, 276 non-county borough councils, 547 urban district councils, 473 rural district councils,[2] about 7,500 parish councils and some 3,300 parish meetings (in parishes not large enough to have a parish council); in Scotland, 33 county councils (two pairs being combined for certain purposes), 200 town councils (including four for counties of cities) and 198 district councils (two counties not being divided into districts); and in Northern Ireland, two county borough councils, 6 county councils, 10 non-county borough councils, 24 urban district councils and 31 rural district councils.

The Greater London area is administered by the councils of 32 London boroughs and the City of London, and by the Greater London Council (GLC).

Constitution and Election of Councils

Local councils comprise a number of unpaid elected councillors (and, in some cases, aldermen elected by the councillors), presided over by a chairman who has varied ceremonial and civic duties to perform in addition to his work on the council. In most boroughs of England and Wales and Northern Ireland the chairman is the Mayor; in the City of London and certain important boroughs, the Lord Mayor; in the Scottish counties, the Convener; and in the burghs, the Provost or Lord Provost.

The normal term of office of a councillor elected to any form of local government is three years; aldermen normally hold office for six years. In some local authority areas the whole council retires every third year and another is elected immediately; in other areas elections are held annually, when one-third of the councillors retire. Procedure at local government elections is governed by rules laid down by the Representation of the People Act 1949.

Any person (including a member of the House of Lords) is entitled to vote at a local government election provided that he or she is 21 years of age or over on the qualifying date, is a British subject or a citizen of the Irish Republic, is not subject to any legal incapacity and is registered as a local government elector for the area for which the election is held. In Great Britain a person qualifies for registration as a local government elector if, on the qualifying date for the register (compiled annually), he or she is resident in the council area or occupies therein, as owner or tenant, any rateable land or premises of a yearly value of not less than £10. In Northern Ireland, in order to qualify for registration as a local government elector, a person must have been born in Northern Ireland or, alternatively, have resided continuously in the United Kingdom for seven years immediately prior to the qualifying date and must have either a resident occupier's or a general occupier's qualification.

Voting takes place at polling stations arranged by the returning officer concerned, and under the supervision of a presiding officer appointed for the purpose. The procedure for local government voting in Great Britain is similar

[1] There are usually some 20–30 parishes in a rural district.

[2] Including the Isles of Scilly.

to that for parliamentary elections, although facilities for postal voting are more restricted. Each elector has one vote for each seat contested in his electoral area; he need not record all his votes, but must not give more than one vote for each candidate.

Most candidates for election as councillor stand as representatives of one of the national political parties; a few stand as members of an association representing some local interest, or as independents. Each candidate must be nominated by two electors, as proposer and seconder; and in England and Wales (except in elections for rural district councils and parish councils) eight other electors for the area must assent to the nomination. In Scotland each county and district council candidate requires two proposers and each town council candidate a proposer and five assenters. Candidates must be of British nationality, over 21 years of age, and must (1) be registered as local government electors in the register of electors for the area for which they seek election, or (2) have resided within that area during the whole of the twelve months preceding the election (or within 3 miles in the case of parish councils), or (3) in England and Wales, own freehold or leasehold land in the area. Candidates are also subject to a number of statutory disqualifications designed to ensure that unsuitable persons do not offer themselves for election.

Procedure at local government elections in Northern Ireland is governed by the Electoral Law Act (N.I.) 1964 and regulations made thereunder by the Ministry of Home Affairs for Northern Ireland. These regulations are, in general, similar to those which apply in Great Britain, though differing in certain particulars; for example, the town clerk or the clerk to the council is the returning officer for all elections to the authority; there is no postal voting and the only persons who may vote by proxy are Service voters.

Most local authority areas are divided into electoral districts for local council elections. Administrative counties are split up, in accordance with orders made by the Secretary of State for the Home Department, the Minister of Housing and Local Government, the Secretary of State for Scotland, into 'electoral divisions'. Boroughs (except London boroughs), urban and rural districts in England and Wales, and burghs in Scotland, are either divided into 'wards', or, if they are small, left as single units. In rural districts the wards are based on parishes which, if large enough, may be split into parish wards.

County divisions each return one member to the council. In the first elections (held in April 1964) each London borough elected two to four councillors to the Greater London Council: in future elections, boroughs are to be divided into electoral areas (covering in most cases the same areas as parliamentary constituencies), each of which will return one councillor. In other types of local authority area each ward may return one or more members.

Functions and Services

It is the primary duty of every local authority to provide and administer such environmental and social services as Acts of Parliament require it to provide and administer. It may provide additional services under the permissive powers of a general Act or under powers granted to it by local or Private Bill legislation.

The responsibilities of local authorities depend upon their type, as follows: in England (outside the Greater London area) and Wales county borough councils are all-purpose authorities, while both county councils and county district councils have particular functions allotted to them,[1] which they

[1] For instance, county councils are generally responsible for the police, fire and civil defence services, while the district councils administer most of the environmental and sanitary services.

exercise independently to a considerable extent, although there is a certain degree of delegation from county councils to county district councils, especially of duties connected with town and country planning and the education, health and welfare services. Parish councils or parish meetings have a few functions of local interest which they may exercise of right. In Scotland the town councils of the counties of cities are all-purpose authorities; elsewhere, the county councils, the town councils and the district councils all share in local government work. In Northern Ireland the position is broadly similar to that in England and Wales, except that local authorities are not called upon to provide or administer police, civil defence or (except in Belfast) fire services; moreover county councils do not in general delegate any of their functions to county district councils.

In Greater London the basic units of local government are the London boroughs; the GLC is responsible only for those services which, by their nature, require unified administration and control over the whole area. In the City of London (an area of approximately one square mile in the centre of the metropolis) the City Corporation exercises the general powers administered and duties performed by the London borough councils.

Local authority services may be classified under three heads: environmental, protective and personal. The environmental services are designed to secure local good order, amenity and public health. They include the inspection and abatement of nuisances, drainage, sewerage, street cleansing, refuse collection and disposal, litter prevention, rodent control, the supervision of water supplies, measures for ensuring food hygiene and for preventing air pollution, and the provision of baths and washhouses. They also include the services for bridge and highway construction and maintenance, for street lighting, public safety on the roads, and the provision of recreation grounds, parks and similar amenities. Town and country planning is the major environmental service. The protective services are the fire service, the civil defence service and the police service, while the personal services range from health services, education and housing to the provision of public entertainment.

Local services concerned primarily with health and welfare cover the provision of ante-natal, post-natal and child welfare clinics, and some residential and day nurseries; the provision and supervision of midwifery services, health visitors and home nursing facilities; measures for the prevention of illness and the aftercare of physically or mentally sick persons; the provision of domestic help where necessary; the ambulance service; the provision of facilities for vaccination and immunisation against certain infectious diseases; and the services for the permanently disabled or handicapped, for the aged and infirm and for children deprived of a normal home life. Education and culture are promoted by the establishment and maintenance of various types of schools; by the provision of adult education centres, and art and technical colleges; by the award of grants and scholarships to students of all kinds; and by the provision of libraries, art galleries and museums. Housing needs are met, as far as possible, by building new houses (mainly to let), acquiring old houses and converting them to provide additional accommodation, planning for slum clearance, seeing that adequate standards are maintained in both newly built and older houses, and generally ensuring that housing conditions are satisfactory.

Some local authorities also engage in trading services, such as passenger transport, water supply, and harbour, dock and pier services; they also have power to initiate schemes to attract industrial development.

The above is only a brief outline of local authority services. Fuller information is given under the relevant subject headings in later chapters of this book.

Internal Organisation of Local Authorities

Local authorities are free to a very considerable extent to make their own internal arrangements and to choose the means and methods by which they will discharge their responsibilities. Most councils use the committee system, whereby questions of policy and principle are decided in full council, and committees are appointed to carry out the detailed administration of the various services. Parish councils and the smaller district councils are often able to do their work efficiently in full session although they appoint committees from time to time, when any special study or experience is required. The more important of the committees of the larger authorities divide their work among sub-committees, which stand to the parent committee in a relation similar to that of the main committees to the whole council. The execution of the policy decided upon by the council and the committees rests with salaried officers and employees, whose number may vary from about half a dozen in a small rural district to several thousands in the large counties and in the larger county boroughs and burghs.

Apart from one or two minor provisions regarding the representation of specialists on committees and the length of time certain members may hold office, committees of councils are free from legal restrictions; even those which are mandatory committees are constituted according to individual requirements and not according to any set pattern laid down. For purposes of classification, however, they may be divided into two kinds: ordinary committees and joint committees. Ordinary committees may be further divided into mandatory committees, the appointment of which is compulsory under an Act of Parliament; other standing committees, which are appointed in accordance with the standing orders of the council on a permanent basis according to the extent of the council's business; and special committees, which a council may set up for a limited period to deal with a particular problem that once solved is unlikely to recur.

Joint committees or joint boards consist of representatives of more than one authority. They may be established, outside the Greater London area, for services that can be more effectively administered over a wider area than that controlled by a single council, for instance, town and country planning, water supplies and the police service.

The powers and duties of local authority committees (which may be advisory or executive) are usually laid down in the appointing council's standing orders. A council is free to delegate all its powers to committees, except its powers in connection with raising loans, levying rates, or making financial demands on other authorities liable to contribute (raising precepts in England and Wales and levying requisitions in Scotland) which are legally reserved to the council as a whole. County and county borough councils exercise their powers of delegation to a considerable extent, but in most districts and parishes councils use their committees only in an advisory capacity.

The public and the press are admitted to all meetings of the council (and of some committees) but may be excluded while a particular item is considered if the council resolve that publicity for that matter would be prejudicial to the public interest.

Officers and Employees

Generally speaking, councils are free to make such appointments as they deem necessary for carrying out their work, although certain posts (for

instance, the clerk, the treasurer, and the medical officer of health) are compulsory in almost all councils. Choice of personnel is left to a great extent to the individual council: in theory, the appointment of certain chief officers is subject to some central control but, in practice, the nominee of the council is nearly always accepted.

As a general rule, employees are of three kinds: heads of departments or chief officers, whose duties are mainly of an administrative and managerial kind; subordinate officers employed in a professional, clerical or technical capacity; and manual workers who are employed to do the physical work for which the council is responsible. Senior staff appointments are usually made at the instance of the committee or committees particularly concerned; most junior appointments are made by heads of departments, who are also responsible for engaging manual workers. Appointments and engagements are always made in conformity with the council's set establishment and committees are informed of any appointments which they have not made themselves.

Rates of pay and conditions of service for local authority staff are within the jurisdiction of the employing council (except for the rare case where the proposed salary of an officer requires the approval of a government department, as in the case of the clerk of a county council in England and Wales). They are based on recommendations made by the Whitley Councils (see note on p. 67), of which the largest, in England and Wales, are the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services and the National Joint Industrial Council for Local Authorities' Non-Trading Services (Manual Workers) and, in Scotland, the Joint Negotiating Committee for Chief Officials of Local Authorities (Scotland) and the Joint Industrial Councils for Local Authority Services. In England and Wales conditions of service and salary scales for senior local government officers are determined by separate joint committees. The local government service in Northern Ireland has its separate joint negotiating machinery at various levels.

All local government officers are expected to maintain a high standard of conduct; as public servants they 'must not only be honest in fact, but must be beyond the reach of the suspicion of dishonesty'.

Local Government Finance

There are three sources of local authority income: government grants (about two-fifths); local rates, paid by occupiers of land and buildings (about two-fifths); and rents from municipal houses, dividends and interest (about one-fifth). Capital investment is, for the greater part, financed by borrowing. Government grants occasionally take the form of capital grants, paid on approval of claims made by local authorities for specific services, principally roads and public lighting; more often they are made on an annual basis, either as specific grants, i.e. for a particular service, or as non-specific grants. The latter include the general grant and the rate-deficiency grants (equalisation grants in Scotland), the latter being paid to authorities whose rateable resources in relation to population are below the average for their class. These two grants account for about four-fifths of all annual grants. Specific grants are paid as 'unit' grants (a fixed annual payment according to the number of units provided) for houses or as 'percentage' grants (a percentage of approved expenditure) for a small number of services—mainly school milk and meals, the police service and the construction and upkeep of roads.

Grants

The largest single grant is the general grant, which is paid by the Minister of Housing and Local Government to county, county borough and the

London borough councils in England and Wales and by the Secretary of State for Scotland to county and town councils in Scotland. This grant is apportioned among the authorities according to a formula that takes into account the size of the population in their areas and also such factors as the number of children of school age, of young children and of old people and of exceptionally high or low densities of population. The total amount of grant in any year is fixed in advance, after consultation between the ministers and the local authority associations.

In Northern Ireland there is a system of grants towards the cost of specific services (for example, education, roads, housing, health and welfare, water supplies and sewerage), supplemented by a general Exchequer contribution which compensates for derating and takes account of the needs and resources of individual authorities.

Rates

Rates are a form of local tax paid by the occupiers of land and buildings (except agricultural land and buildings) as contributions to the cost of local services. They are levied by a poundage on the rateable value of property; in England and Wales this is equivalent to its net annual value which, in turn, is based on the rent which it might reasonably be expected to command if let from year to year with the tenant bearing the rates and the cost of insurance and repairs. Valuation for rating in England and Wales is undertaken by valuation officers of the Board of Inland Revenue, who are independent of the local authorities. In the latest valuation lists (1963) rateable values for all classes of property are based on current rental values. The Rating (Interim Relief) Act provides for grants to local authorities in areas with a high proportion of persons over 65 years of age and empowers local authorities to remit, in cases of hardship, part of the increase in domestic rate bills caused by revaluation. In addition, transitional assistance is being given for eight years by the Greater London Council to the councils of the home counties (Essex, Surrey, Kent and Hertfordshire) of which parts have been absorbed into the Greater London area to offset extra rate burdens caused by the reorganisation of London government; and the Ministry of Housing and Local Government has a scheme for reducing disparities in the rates levied in Inner London. Charities pay half the full rate on property they occupy for charitable purposes but may be given further reliefs by the rating authorities, who are empowered to reduce or remit the rates for a wide range of non-profit-making bodies.

Appeals from valuations may be made to local valuation courts, each consisting of three members of an independent local valuation panel, and thereafter to the Lands Tribunal.

In Scotland valuation is on a basis similar to that in England and Wales; but it is carried out by assessors appointed by the councils of counties and counties of cities. Appeals lie to the valuation appeal committee of each valuation area and thereafter to the Lands Valuation Appeal Court of the Court of Session. A Scottish Valuation Advisory Council has been established by the Secretary of State for Scotland. In Northern Ireland the valuation authority is the Commissioner of Valuation, whose department is part of the Ministry of Finance. Industry and freight transport in Northern Ireland are rated at a quarter of their net annual value.

In England and Wales the responsibility for levying and collecting the rates lies with the councils of county boroughs and county districts, with the London borough councils and with the City Corporation. The rate poundage for each county district consists mainly of a district rate and a county rate, calculated in accordance with the respective requirements of the two

authorities, and the proceeds of the latter are passed on to the county council. In rural districts the rate levied in each parish takes into account precepts issued by the parish council or parish meeting. In Greater London the GLC raises revenue by precepting on the London boroughs and the City. Rates in Scotland are levied by the town councils in burghs and by county councils elsewhere; to cover their expenditure, district councils levy a requisition each year to the county council; a town council has to meet an annual requisition from the county council in respect of the burgh's share of the expenditure on functions exercised by the county council throughout the county, including the burgh. In Northern Ireland county councils are responsible for making, levying and collecting the rates, except in such parts of the county as fall within the jurisdiction of the county borough, borough, or urban district councils.

Loans

Loans may be raised by local authorities for financing such items of capital expenditure as are sanctioned by the Minister of Housing and Local Government, Secretary of State for Wales, the Secretary of State for Scotland, or, occasionally, the government department responsible for the service for which the capital is required. The Greater London Council applies annually for parliamentary sanction to raise the money it needs for capital expenditure. In Northern Ireland the government department responsible for the service also issues the appropriate loan approvals. Borrowing powers for specific purposes may also be taken under Acts of Parliament of local application.

Local authorities may raise long-term loans by issuing stock upon the Stock Exchange and by private bonds which may or may not be quoted on the Stock Exchange. Although these bonds may be for any period, local authorities normally issue them for one year. Local authorities also have right of access to the Public Works Loan Board, which is financed by the Exchequer and also acts as lender of last resort to local authorities which cannot borrow on reasonable terms on the market. Local authorities may also borrow temporarily for a limited proportion of their outstanding loan debt.

Control of Finance

Internal control of finance is exercised on behalf of the council concerned by a finance committee, whose function it is to keep the financial policy of the council under constant review. In England and Wales an external audit is carried out (except for certain general accounts in most of the county borough and about two-thirds of the borough councils) by district auditors appointed by the Ministry of Housing and Local Government. County borough councils must use the services of the district auditor for accounts which relate to children and education, and local health and welfare services. In both county and non-county boroughs rating and coast protection are also subject to district audit. For their other accounts borough councils use mainly professional auditors; a few use 'elective audit', which provides for the appointment of three auditors: two elected by the local government electors and one appointed by the mayor. In Scotland the accounts of each authority are audited by a professional auditor appointed by the Secretary of State for Scotland and paid by the council concerned, and in Northern Ireland by special local government auditors appointed by the Ministry of Development.

Local Government Reorganisation

In the seventy years since the existing local government structure was set up, the population of England and Wales has grown by nearly 14 million, the greatest concentration of people being in the London area and the five other conurbations of England (see p. 17). At the same time, the number and scope of local authority activities have progressively increased: local authorities are nowadays responsible not only for most of the environmental and personal

welfare services, but also for important functions in relation to a number of services of nation-wide concern.

In contrast to all this, the basic pattern of local government has remained virtually unchanged. In some areas, and more especially in those with a high density of industry and population, developments inevitably have led to some confusion and loss of efficiency, since the structure is no longer in balance with the work that modern councils have to do. Local government in Greater London has already been reorganised; elsewhere in England a Local Government Commission has been reviewing local government in the five special review areas of the West Midlands, Tyneside, West Yorkshire, South-East Lancashire and Merseyside and in the counties and county boroughs. Before making proposals the Commission must consult the local authorities and other interested bodies and persons, and take their views into account. The final reports must be submitted to the Minister of Housing and Local Government who decides whether or not to accept the Commission's proposals after holding public local inquiries, where necessary, to hear objections. Proposals are put into effect (with or without modifications) by means of orders made by the Minister, which must be laid before Parliament. The Commission has already submitted its proposals for about two-thirds of the country; the Minister has announced his decision on a number of them and some have also been approved by Parliament. The Commission's reviews are being followed by reviews of county districts and parishes carried out by the county councils. By July 1965 one council had completed its review.

In Wales a new pattern of local government is being considered; and in Scotland the present local government structure, which has been in existence for thirty years, is also under review.

THE FIRE SERVICE

The fire services in Great Britain are organised on a local basis, subject to a measure of central control exercised by the Home Secretary (in England and Wales) and the Secretary of State for Scotland. The fire services in Northern Ireland are controlled by two authorities, the Belfast Corporation and the Northern Ireland Fire Authority, which are responsible to the Minister of Home Affairs. Every part of the United Kingdom is covered by a public fire brigade.

FIRE AUTHORITIES IN GREAT BRITAIN

There are 131 local authority fire brigades in England and Wales and 11 in Scotland. In England and Wales, under the Fire Services Act 1947, separate fire brigades are administered by the county or county borough councils, which are the fire authorities for their areas and have powers and duties which they exercise either separately or as combined authorities where neighbouring councils care to make such arrangements in the interests of the efficiency of the service. The Greater London Council is the fire authority for the Greater London Fire Brigade. In Scotland the local authorities are grouped in eleven areas each with a single brigade; with the exception of Glasgow, where the town council of the city is the responsible authority, each area is administered by a joint committee representative of the councils of the counties and large burghs in the area.

Central Control

The Home Secretary and the Secretary of State for Scotland may make regulations regarding the maintenance of discipline, appointments and promotions, training, the design and performance of equipment, and pensions

in local fire brigades, and their approval is necessary for certain reductions in establishment schemes. In matters affecting the fire brigades as a whole (excluding discipline and similar matters), each minister is advised by the appropriate Central Fire Brigades Advisory Council, consisting of representatives of the local authority associations, representatives of the chief officers (firemasters in Scotland) and other members of the brigades, and other persons having special qualifications. The National Joint Council for Local Authorities' Fire Brigades in Great Britain and the National Joint Council for Chief Officers of Local Authorities' Fire Brigades in Great Britain are the negotiating bodies on conditions of service of members of the brigades. Inspectorates of fire services advise the Secretaries of State on operational and technical matters.

Establishment Schemes

Each fire authority is required to draw up a scheme showing the establishment of officers and other ranks (both whole-time and part-time), the number and location of fire stations and the number and type of appliances considered necessary for the provision of an all-over cover of its area. Establishments vary considerably according to the fire risks in the area concerned and are not always up to strength, but in the whole of England and Wales there are about 23,700 whole-time and 16,800 part-time firemen, operating more than 3,500 fire-fighting appliances (including pumps, turntable ladders, water tenders, and emergency and salvage tenders) housed in some 1,600 fire stations. In Scotland there are approximately 2,800 whole-time and 2,600 part-time firemen, 560 fire-fighting appliances, and 320 fire stations.

Equipment

It is the duty of each fire authority to buy such vehicles and equipment as are required. Equipment is standardised, and appliances are bought by fire authorities to specifications which ensure that essential standards are maintained and yet allow sufficient freedom of design to meet local requirements.

Operational Methods

Each fire authority must appoint a chief fire officer (firemaster in Scotland) to be the head administrative and executive officer for its fire services. The appointment must be approved by the Home Secretary or by the Secretary of State for Scotland. The chief fire officer or firemaster is responsible to the fire authority for seeing that the fire brigade is organised and managed in accordance with policy.

All brigades have a central headquarters for operational control. Control is, however, usually exercised on a local basis by divisional officers in charge of the geographical divisions into which most areas are divided. Each divisional officer has at his disposal a staff of whole-time officers and men, often supplemented—particularly in country areas—by part-time officers and men; and he is responsible for mobilising this force in the strength necessary for dealing with any outbreaks of fire in his division. Constant communication is maintained between divisional and brigade headquarters and, if at any time an outbreak of fire should grow beyond the capabilities of a divisional force, help is sent from one or more neighbouring divisions in its area, or even from the area of another fire authority. Under arrangements for mutual help made by all fire authorities, the nearest available force is sent to the scene of a fire, regardless of area boundaries.

Fire Losses

In England and Wales the number of fire calls a year rose from about 247,170 in 1960 to 358,000 in 1964, including false alarms and special service calls for such purposes as rescuing persons and animals trapped in dangerous

situations, dealing with crashed aircraft, and pumping and salvage operations. In Scotland the number of fire calls, including false alarms and special services, over the same period rose from 31,745 to 32,925.

During these years estimated fire losses in the United Kingdom rose by over £33 million, accounted for in part by the growth in the value of properties and goods, in part by the increase in the number of properties at risk, and in part by an increase in the number of fires.

Personnel

About three-fifths of the total number of firemen work on a whole-time basis. The part-time firemen include: retained firemen who, in return for a retaining fee, undertake to attend fires if called upon; volunteer firemen, who receive no remuneration; and auxiliary firemen, who are enrolled as members of individual fire brigades but with restricted duties. A growing number of fire authorities employ women on communication and mobilising duties. In addition, there are the fire-fighting organisations outside the local authority service; for example, those maintained by the Service departments of the Ministry of Defence, the Ministry of Aviation, and by some large industrial and commercial concerns.

Recruits and junior ranks in the fire service in England and Wales receive practical training in basic firemanship at training schools run by fire authorities. In Scotland similar training is carried out at a central training school which is the responsibility of the Scottish Home and Health Department. Advanced and specialised training courses, including fire prevention courses, are provided for the higher ranks at the Fire Service College, Wotton House, near Dorking, Surrey, which is maintained by the Home Office and the Scottish Home and Health Department as the central training institution for the fire services, and at the Fire Service Training Centre (an annexe to the college) at Moreton-in-Marsh, Gloucestershire. The Home Office Fire Service Department arranges facilities for properly accredited officers from overseas fire services to study the organisation, current training methods, appliances and equipment of the British fire brigades.

A number of fire authorities in England and Wales have recently introduced schemes for the employment of junior firemen between the ages of 16 and 18 years, with a view to their being enrolled as regular firemen at the age of 18.

A report of a joint committee of the Central Fire Brigades Advisory Councils has given guidance on the broad lines on which local training schemes should be based, leaving discretion on certain matters to local authorities. The report suggests the adoption of syllabuses of practical fire service training, physical, general and technical education.

Finance

The fire authorities bear the cost of maintaining the fire service. There is an Exchequer contribution which is included in the aggregate amount of the local authority general grant (see p. 74). For the purpose of arriving at the amount of this contribution, the Government receives from fire authorities (at the time when the grant is to be considered) details of the last known actual expenditure for a year, together with estimates for the impending general grant period.

Fire Prevention

Side by side with fire-fighting operations, fire authorities have important responsibilities in respect of fire prevention. A statutory obligation was placed upon them by the Fire Services Act 1947 to maintain adequate arrangements for giving advice about fire prevention to anyone who required it. In addition,

the fire authorities have been made the enforcing authority for fire precautions under a steadily growing number of Acts of Parliament, of which the most notable are the Factories Act 1961, and the Offices, Shops and Railway Premises Act 1963. There are provisions relating to fire and fire prevention in a large number of other Acts with which fire authorities are concerned, either in their own right as fire authorities or by virtue of the advisory functions of their fire brigade.

Within brigades, the work of fire prevention is entrusted to a staff of fire prevention officers. Other sources of advice on fire prevention include the various insurance companies who advise their policy holders, and the Fire Protection Association, a non-profit-making body established by the Fire Offices' Committee[1] as an advisory centre on a nation-wide basis for industry and the general public on protection of life and property against fire.

Research

Research into all aspects of fire prevention and fire fighting, and in particular into the relationship between the frequency and severity of outbreaks of fire, the effects of fire fighting and the provision of protective equipment within buildings, is undertaken by the Joint Fire Research Organisation under the general direction of the Fire Research Board. The cost of the Organisation is shared equally between the Ministry of Technology and the Fire Offices' Committee who, jointly, nominate the members of the Fire Research Board. The Organisation operates from a fire research station at which tests are carried out.

FIRE SERVICES IN NORTHERN IRELAND

In Northern Ireland the Belfast Corporation controls the Belfast Fire Brigade and is responsible for the area inside the city boundary, and the Northern Ireland Fire Authority covers the rest of the country outside Belfast.

The Belfast Fire Brigade maintains five whole-time stations and has an establishment of 263 officers and men manning 13 appliances, while the Northern Ireland Fire Authority has one whole-time station in Londonderry and 44 other stations throughout the remainder of the area, and an establishment of 104 whole-time officers and men and 658 part-time firemen, manning 72 appliances.

Finance

The Fire Services (Amendment) Act (Northern Ireland) 1963 provides that the amount of fire service grant payable to the Northern Ireland Fire Authority should be 50 per cent of the loan charges in respect of capital expenditure which do not exceed £90,000 and 25 per cent of the amount (if any) by which the loan charges exceed £90,000, together with 50 per cent of the first £240,000 of other net expenditure and 25 per cent of the excess over that amount. Expenditure in excess of the fire service grant is apportioned among the local authorities liable to contribute to the funds of the Authority. Under the Fire Services Acts, the Belfast Fire Brigade cannot qualify for the payment of fire service grant.

[1] The Fire Offices' Committee is representative of some, but not all, of the fire insurance companies in Britain.

3
LAW AND ORDER

THE LAW

In the United Kingdom the maintenance of public order depends on the obedience which the public accord to the law. Individuals obey the law out of a sense of private conviction or public duty, or, in the last resort, because they know that if they fail to do so they will be penalised by the authorities of the State. On the other hand, the use of penal measures by State authorities must be, and in fact is, confined to what the law allows.

Although the United Kingdom is a unitary state, it does not have a single body of law applicable universally within its limits; and in England and Wales, Northern Ireland, and Scotland, respectively, separate systems are in force (see p. 26). There are, however, similarities between the systems. As between England and Wales on the one hand and Northern Ireland on the other the similarity is general, due to the closeness of the association between these countries since the twelfth century. As between Scotland and the rest of the United Kingdom the differences are more extensive, although the existence, during the past 250 years, of a common Parliament, a common public opinion on broader issues, and a common court of appeal for civil cases has resulted in substantial identity at many points.

A feature which is common to all the systems of law in the United Kingdom (and differentiates them from some continental systems) is that there is no complete code. The sources of law in all the British systems include statutes dealing with particular subjects, and a large amount of unwritten or 'common' law, which can be gathered from numerous decisions of the courts and from other sources. English law today is contained in about 3,000 Acts of Parliament, several thousand Statutory Instruments and over 300,000 reported cases.

Statute law includes Acts of Parliament and delegated or subordinate legislation made under powers conferred by Parliament. It is absolutely binding on all courts of the United Kingdom, taking precedence over any other source of law. A large volume of modern legislation, particularly in the social field, applies throughout the United Kingdom.

The common law of England originated in the customs of the realm and was built up by decisions of the courts. A supplementary system of law, known as 'equity', came into being during the Middle Ages to provide and enforce more effective protection for existing legal rights. It was administered by a separate court and later became a separate body of legal rules. In 1873 the courts of equity were fused with the courts of common law, so that all courts now apply both systems but, where they conflict, equity prevails.

In Scotland the basis of common law, which largely depends on the canon law of Rome, helped by continental commentators, is embodied in the writings of certain seventeenth, eighteenth and early nineteenth century lawyers of great repute who, between them, described systematically almost the whole field of private and criminal law as existing in their times. Broadly speaking, the principles enunciated by these lawyers, together with the many judicial decisions which have followed and developed those principles, form the body of Scots non-statutory law. Scotland has never had a separate

system of equity—equitable principles having always permeated the ordinary rules of law.

A feature common to the legal systems of the United Kingdom is the distinction made between the criminal law and the civil law. Criminal law is concerned with wrongs against the community as a whole; civil law is concerned with the rights, duties and obligations of individual members of the community between themselves.

CRIMINAL LAW IN ENGLAND AND WALES

Criminal Courts

The courts of ordinary criminal jurisdiction in England and Wales include: magistrates' courts, which try the less serious offences and conduct preliminary inquiries into the more serious offences; courts of quarter sessions, which try most of the more serious offences; and courts of assize, including the Central Criminal Court (for Greater London) and the Crown Courts in Liverpool and Manchester, which try the gravest offences and cases of special difficulty. All trials at quarter sessions and assizes are conducted with a jury (see p. 94).

Magistrates' Courts

Most magistrates' courts consist of two to seven lay magistrates who are unpaid and do not normally possess any legal qualifications but obtain advice on points of law, when required, from the clerk to the justices. In some of the large cities, however, there are also paid, or 'stipendiary', magistrates who are professional lawyers; they usually sit alone. In inner London there is a unified system of magistrates' courts, in which either a metropolitan stipendiary magistrate or lay justices may sit. The great majority of offences (over 97 per cent) committed are disposed of in magistrates' courts.

Specially qualified magistrates sit in *juvenile courts*[1] to hear cases involving young persons under 17 years of age who are charged with any offence except homicide or are brought before the court as being in need of care or protection, as beyond control, or as persistent truants. These courts also deal with many applications for the adoption of children.

Domestic Proceedings are also tried by not more than three justices, of whom one should be a man and one a woman. The hearing of domestic proceedings is separated from other business and, as in juvenile courts, the public is excluded.

Quarter Sessions

Courts of quarter sessions sit at least four times a year; in the busier places, they meet much more frequently than this.

All counties have courts of quarter sessions and 98 boroughs also have separate courts which exercise jurisdiction within their own boundaries. In counties the courts are generally presided over by a bench of lay magistrates under a legally qualified chairman. In boroughs the courts are presided over by a single judicial officer, the Recorder, who is a barrister specially appointed to act part-time in this capacity. In Greater London there are five areas, each with its own quarter sessions. Each of these courts must be presided over by a full-time paid chairman or deputy chairman.

Assizes

Courts of assize are branches of the High Court presided over by High Court judges and held at assize towns—generally in the county town of each county and in certain of the other larger towns and cities. The judges go round 'on circuit' three times a year—on the autumn, winter and summer assizes. Each town is visited once on each circuit; the larger towns are visited twice.

[1] The Government has announced plans for taking children under 16 out of the ambit of the criminal law and the courts and appointing local family councils, with which the parents of the children would be associated, to deal with them. It is also proposed to divorce the arrangements for the trial and treatment of young people in the 16–21 age group as far as possible from the ordinary criminal courts and from the penal system as it applies to adults.

After the trial of criminal cases in each town, the judges deal with civil cases.

Crown Courts

In Liverpool and Manchester, Crown Courts act both as quarter sessions for the two cities and as assize courts for South Lancashire. The courts are presided over by the Recorders of Liverpool and Manchester, who are whole-time judicial officers.

The Central Criminal Court

The Central Criminal Court at the Old Bailey in the City of London acts as the court of assize for the criminal business of Greater London. The court sits in virtually continuous session; more than one court sits at one time and each is presided over by a salaried judicial officer.

Criminal Appeals

Appeals may be brought on a point of law, by either the prosecutor or the defendant, direct from the magistrates' court to the High Court; but the more usual appeal is that of a convicted person against his conviction or his sentence, which is heard by quarter sessions.

Appeals against convictions or sentences by quarter sessions, assizes or Crown Courts go to the *Court of Criminal Appeal*[1]. Appeals on questions of law may be brought as of right, but on other grounds only by leave of the court. The Lord Chief Justice usually presides in the Court of Criminal Appeal, which consists of three or, in special cases, five judges of the Queen's Bench Division. On appeal against conviction the court has power to quash the conviction and direct the appellant's acquittal or, if the appeal is allowed on grounds of fresh evidence only, to order a retrial.

A further appeal from the Court of Criminal Appeal to the *House of Lords* can be brought if the court certifies that a point of law of general public importance is involved and it appears to the court or the House of Lords that the point is one that ought to be considered by the House.

Proceedings Before Trial

Prosecutions

There is no restriction on the right of a private citizen to institute criminal proceedings, but most prosecutions in England and Wales are, in fact, initiated and conducted by the police. In some cases the consent of the Attorney General or the Director of Public Prosecutions or, less frequently, a government department is required. The Director of Public Prosecutions is also concerned with prosecutions in all the more serious classes of indictable offences (i.e. offences involving formal written accusation); in courts where a substantial number of cases with which he is concerned are tried, standing counsel are appointed by the Attorney General to appear on his behalf. At the Central Criminal Court in London, for instance, there is a panel of counsel known as Treasury Counsel, who are retained to prosecute in the Director's cases.

Arrest

In criminal cases arrest may be effected either on a warrant issued by a judicial authority on information laid before it or, in certain cases, without a warrant. In the latter circumstances, a police officer may release the defendant on bail, that is to say he may discharge him temporarily, subject to his entering into a recognisance, with or without sureties, for a reasonable sum of money, to appear in court at the time appointed for the trial. Magistrates also have discretion to grant bail, and this discretion is liberally exercised in accordance with well-established principles. An arrested person must be charged at once with the offence of which he is suspected; under the Judges Rules,[2] once a person has been charged with or informed that he may be

[1] Recommendations for a reconstituted Court of Appeal with a Civil and a Criminal Division have been made in an inter-departmental committee report.

[2] These Rules do not have the force of law but carry very great weight.

prosecuted for an offence, no further questions relating to that offence may be put by the police, save in exceptional circumstances for the purpose of preventing or minimising harm or loss to any person or to the public, or for clearing up an ambiguity in a previous answer or statement. Unless the offence of which an arrested person is suspected is serious, he must be granted bail if he cannot be brought before the court within a day.

If anyone is detained in custody otherwise than upon lawful grounds[1] he (or, if he is unable, someone acting on his behalf) may sue out a writ of *habeas corpus* against the person who detained him, this person then being required to appear before the court on the day named to show cause for detention. The writ of *habeas corpus* may be granted by a single judge of the High Court but may be refused only by a divisional court of the Queen's Bench Division.

Trial

Nearly all criminal cases are tried first in magistrates' courts. Most involve either summary offences which may be disposed of by the justices sitting together without a jury, or the less serious indictable offences which may be dealt with in the same way, if the defendant consents. For the more serious offences the magistrates sit as 'examining justices' to determine if there is sufficient evidence to justify committal of the defendant for trial in a higher court before a jury.

Since criminal law presumes the innocence of the accused until his guilt has been conclusively proved, the prosecution should not have any advantage, apparent or real, over the defence. Every accused person has the right to employ a legal adviser for the conduct of his defence and if he cannot afford to pay he may be granted legal aid at the public expense. Anyone remanded in custody may be visited in prison by his legal adviser. During the preparation of the case, it is customary for the prosecution to inform the defence of any relevant documents which it is not proposed to put in evidence and to disclose them if asked to do so.

All criminal trials are held in open court and the rules of evidence (which are concerned with the proof of facts and much the same in civil and criminal trials) are rigorously applied[2]. For instance, although the uncorroborated evidence of one witness is, as a matter of English law, sufficient, conviction in criminal cases solely on the evidence of an accomplice (or accomplices) is, in practice, never allowed unless the judge has warned the jury of the danger of convicting without corroboration.

During the trial the accused has the right to hear and subsequently to cross-examine (normally through his counsel) all the witnesses for the prosecution; to call his own witnesses who, if they will not attend the trial of their own free will, may be 'subpoenaed', or legally compelled, to attend; and to address the court either in person or through his counsel. But he cannot himself be questioned unless he consents to be sworn as a witness in his own defence. The right to cross-examine the accused, even when he is so sworn, is limited by law, with the object of excluding inquiry into his character or into past offences not relevant to the particular charge on which he is being tried. Furthermore, although confessions made in the course of

[1] These are: in pursuance of criminal justice; for contempt of court or of either House of Parliament; for disobeying a court order to pay a civil debt when able to do so; detention of persons found to be mentally disordered; detention of children by their parents or guardians. The writ of *habeas corpus* runs in both criminal and civil cases.

[2] The law of evidence is currently under review by the Criminal Law Revision Committee (in relation to criminal trials) and the Law Reform Committee (in relation to civil trials).

previous judicial proceedings are admissible as evidence if they have been made upon oath, no confessions made in any other circumstances should be admissible unless it can be proved that they were made voluntarily, i.e. without fear of prejudice or hope of advantage.

In criminal trials by jury it is, broadly speaking, the duty of the judge to determine questions of law, to sum up the evidence for the benefit of the jury, and to acquit the accused or pass sentence, according to the verdict of the jury; but the jury alone decides the issue of guilt or innocence. The verdict of a jury must be unanimous; if its members are unable to reach agreement, the case must be tried before a new jury.

If the jury returns a verdict of 'not guilty', the prosecution has no right of appeal and the defendant cannot be tried again for the same offence. If a defence of insanity is accepted by the jury the verdict is 'not guilty by reason of insanity' and the accused will be detained in a suitable hospital. From a verdict of guilty or of not guilty by reason of insanity there is a right of appeal on the part of the defendant to the appropriate court.

CIVIL LAW IN ENGLAND AND WALES

Civil Courts

The main courts of civil jurisdiction in England and Wales are the county courts, which are the courts for the lesser cases, and the High Court, where the more important cases are tried. Most appeals go to the Court of Appeal and from there may go to the House of Lords.

County Courts

County Courts (of which there are nearly 400) are so located that no part of a county is more than a reasonable distance from one of them. They are presided over by a paid judge, who almost always sits alone, although he may sit with a jury consisting of eight persons if either party wishes it and the court makes an order to that effect. There are 79 county court judges now in office, each having a circuit, which is either one court or a group of courts, depending on the amount of work to be done.

Generally speaking the jurisdiction of the county courts includes all civil actions where the amount claimed is not more than £400 or where, in actions for the recovery of land, the rateable value of the land is not more than £400 a year. Cases outside these limits may be tried in the county court by consent of the parties, or may be transferred to the High Court. Some actions, in particular actions for libel and slander, cannot be brought in the county court.

In addition to the ordinary county courts, there are still a few local courts with somewhat similar jurisdiction. Most of these are survivals from the medieval borough courts, and have little or no work to do at the present time, but the Liverpool Court of Passage, the Salford Hundred Court and the Mayor's and City of London Court are still well used.

The High Court of Justice

The High Court of Justice forms part of the Supreme Court of Judicature. Its jurisdiction is both original and appellate, and covers virtually all civil causes and some criminal causes.

The High Court is divided into the Chancery Division, the Probate, Divorce and Admiralty Division, and the Queen's Bench Division. The work is distributed between them in accordance with the Rules of Court (see p. 83) and the practice of the courts. Although the rules do not give exclusive jurisdiction in any matter to any one division, in practice each division has a separate field of jurisdiction and the judges are attached to a particular division.

The High Court is staffed by 55 puisne[1] judges. The Lord Chancellor is, in strict law, the president of the whole High Court (although, in practice,

[1] Judges without any other special office.

he does not sit in any Division); he is also nominally head of the Chancery Division, of which the Master of the Rolls[1] is another nominal member; there is a President for the Probate, Divorce and Admiralty Division; and the Lord Chief Justice of England presides over the Queen's Bench Division. For the hearing of cases at first instance, High Court judges sit singly. Appellate jurisdiction is exercised either by divisional courts consisting of three (or sometimes two) judges, sitting in one of the three Divisions of the High Court or, in some cases, by a single judge.

Appellate Courts

Nearly all appeals from magistrates' courts, ministerial decisions and the decisions of judges sitting in Chambers[2] are heard in the first instance in the appropriate divisional court of the High Court,[3] but all the more important appeals in civil actions come before the Court of Appeal, which is part of the Supreme Court of Judicature, and some (with leave of the Court of Appeal or of the House of Lords) before the House of Lords, which is the ultimate court of appeal in civil cases in the whole United Kingdom.

The Court of Appeal hears appeals from the High Court, the county courts and assizes in civil cases. The Lord Chancellor, the Lord Chief Justice, the President of the Probate, Divorce and Admiralty Division, and most of the Lords of Appeal in Ordinary are members of the court, but its effective head is the Master of the Rolls, who is assisted by nine Lord Justices of Appeal; the Court sits in divisions, each with three judges.

The judges in the House of Lords are the Lords of Appeal in Ordinary, who must have a quorum of three, but often sit as a group of five, and sometimes of seven. Lay peers may not attend the hearing of appeals (which normally takes place in a committee room and not in the legislative chamber), but peers who hold or have held high judicial office may sit. The president is the Lord Chancellor.

Civil Proceedings

In England and Wales civil proceedings are instituted by the aggrieved person; no preliminary inquiry as to the authenticity of the grievance is required. The most common form of proceedings is an action commenced by a writ served on the defendant by the plaintiff, which notifies the defendant that the plaintiff has a claim on him and states the nature of the claim. If the defendant intends to contest the claim, he 'enters an appearance' by informing the court to this effect and documents setting out the precise question in dispute (the pleadings) are then delivered to the court.

Because civil proceedings are a private matter, they can at any time be abandoned or compromised without leave of the court[4] and, in fact, in the great majority of cases, the parties to a dispute are able to settle their differences through their solicitors before the stage of actual trial is reached. Actions that are brought to court are usually tried by a judge without a jury, except in cases involving claims for defamation, false imprisonment, unlawful arrest, seduction, or breach of promise to marry, when either party may insist on trial by jury, or in a case of fraud, when the person charged may claim this right. In trials where a jury is present, it is responsible for deciding questions of fact

[1] Originally keeper of the records and assistant to the Lord Chancellor, the Master of the Rolls has for centuries held high judicial office.

[2] Decisions reached during proceedings which, under the rules of the court, do not require to be heard in court.

[3] Quarter sessions have appellate jurisdiction in respect of some magistrates' courts decisions.

[4] Matrimonial causes are exceptional in that all cases (whether defended or undefended) must come before a judge.



POLICE SERVICE

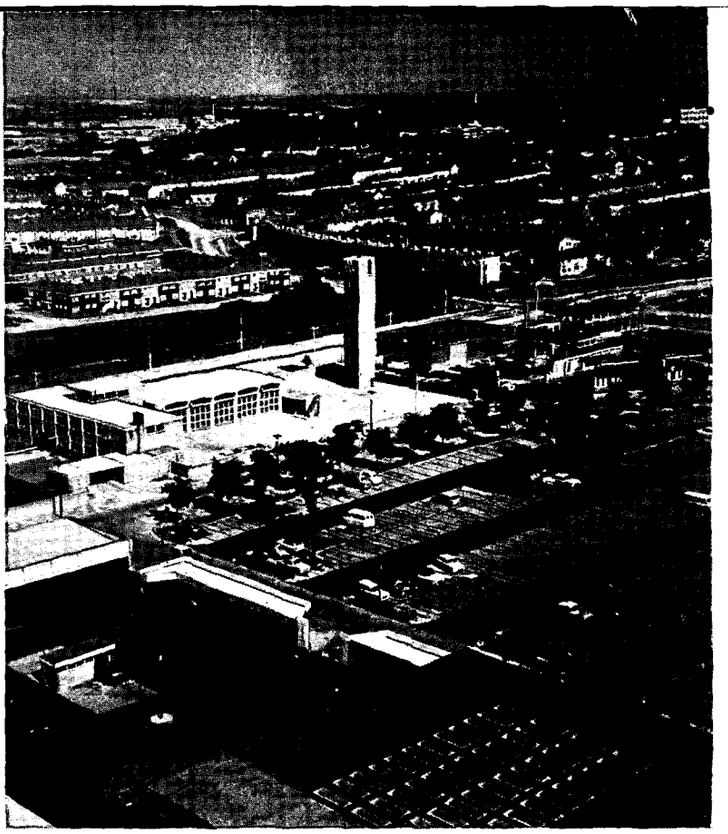
Enquiry desk at a police station.

UNIVERSITY OF NORTH BENGAL
RAJA RAMMOHUNPUR



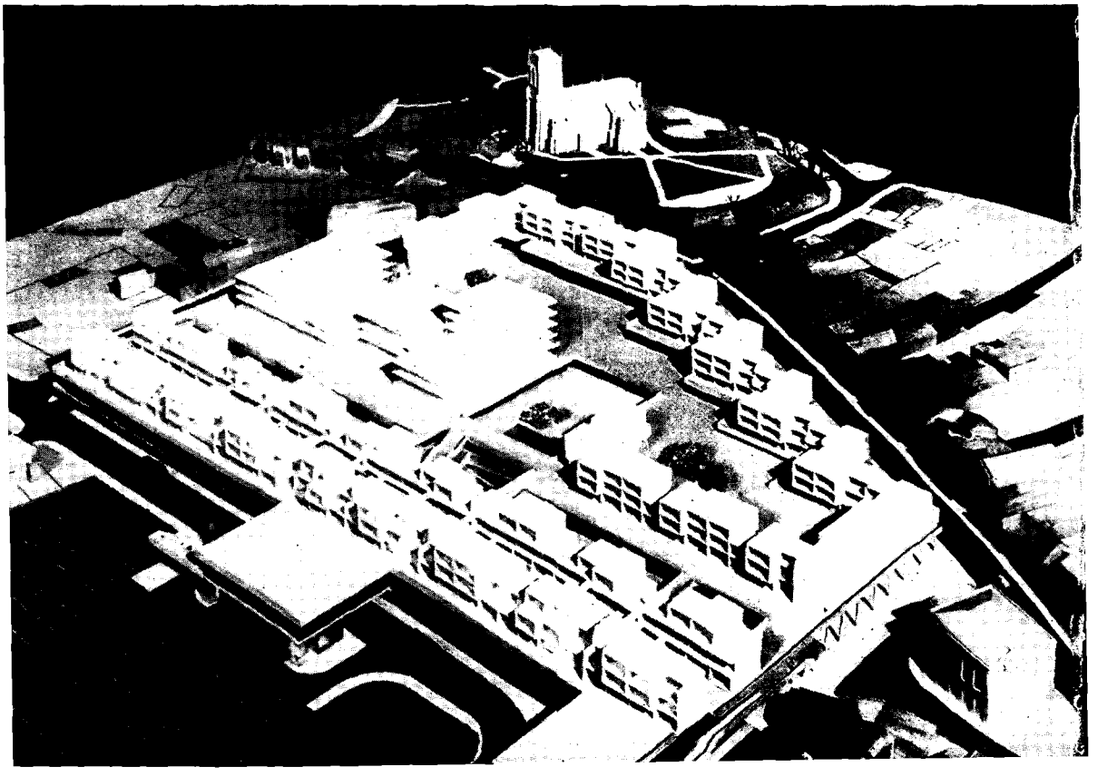
A policeman giving roadside first-aid.

NEW TOWNS



General view, Basildon.

Model of the projected town centre development at Andover, Hampshire.



(as in criminal trials) and also the amount of damages to be awarded to the injured party.

Judgments in civil cases are enforceable through the authority of the court. Refusal to obey a judgment directing the defendant to do something or to abstain from doing something may result in imprisonment for contempt of court. Arrest under an order of committal may be effected only on a warrant of the court.

As a rule, the court awards the costs of an action (the barrister's fees, solicitor's charges and essential disbursements) to the winning party, although in practice he always pays part of them. In certain circumstances (for instance, extravagance or negligence in the conduct of the case), the court may, in its discretion, refuse to order that one party's costs should be borne by the other.

CRIMINAL LAW IN SCOTLAND

Courts of Criminal Jurisdiction

Criminal cases in Scotland are heard either under solemn procedure, that is, where proceedings are taken on indictment and the judge sits with a jury, or under summary procedure, where the judge sits without a jury. All cases in the High Court of Justiciary and the more serious ones in the sheriff court are tried under solemn procedure. Proceedings are taken under summary procedure in the more minor cases in the sheriff court, and in the justice of the peace and burgh (or police) courts.

Burgh (or Police) Courts

These courts are established in burghs. The judges are town councillors who are serving (or have served) in the office of magistrate of the burgh. In Glasgow stipendiary magistrates act as judges of two of the courts.

Justice of Peace Courts

These courts are organised on a county (and county of city) basis, the judges being the justices of the peace for the county (or county of city).

Any court of summary jurisdiction sits as a *juvenile court*[1] when hearing charges only against persons under 17 years of age. Special justice of the peace juvenile courts have been established in three counties and in the city of Aberdeen.

The Sheriff Court

Scotland is divided into sheriffdoms, each consisting of a county or combination of counties, and these sheriffdoms are further divided into sheriff court districts. A sheriffdom has a sheriff and a number of sheriffs-substitute who act as the judges of the court. The sheriff courts exercise an extensive civil jurisdiction, as well as a criminal jurisdiction.

The High Court of Justiciary

The High Court of Justiciary is the supreme criminal court of first instance. Any one of the following judges is entitled to try cases in the High Court: the Lord Justice General (who is also the Lord President of the Court of Session), the Lord Justice Clerk, or any one of the 14 Lords Commissioner of Justiciary who are also judges of the Court of Session. The seat of the court is in Edinburgh, but the judges go on circuit to preside at trials in other towns.

Criminal Appeals

A person convicted in the High Court or in a sheriff court on indictment may appeal to the High Court of Justiciary (a) against his conviction on any ground which involves a question of law alone, or, with leave of the High Court or upon the certificate of the judge who presided at the trial that it is a fit case for appeal, on any ground, and (b) against his sentence, with the leave of the High Court, unless the sentence is one fixed by law. Appeals are heard

[1] It has been recommended by the Children and Young Persons (Scotland) Committee (1964) that all children under 16 years should be taken out of the ambit of the criminal courts and dealt with by specially constituted 'juvenile panels'.

by three or more judges, and there is no further appeal to the House of Lords.

A person convicted summarily may appeal to the High Court, but only on questions of law and procedure, and not on issues of fact.

Proceedings Before Trial

Prosecutions

In Scotland the police make preliminary investigation of all cases of crime discovered by or made known to them, but it is for the Public Prosecutor concerned (the Lord Advocate in the High Court, the Procurators Fiscal in the sheriff court, and the justice of the peace fiscal and burgh prosecutor in the justice of the peace and burgh courts respectively) to decide whether or not to prosecute and, in the case of the Procurator Fiscal, to decide whether to proceed summarily or to charge the accused by petition with a view to proceedings on indictment.

Arrest

The police in Scotland have the same powers of arrest as have the police in England and Wales. The Judges Rules do not apply in Scotland, but when an accused person is arrested, he should be cautioned and have the charge read over to him. Thereafter, only the accused's voluntary statements should be used in evidence at his trial, and the court will reject any statements made by him unless it is satisfied that they have been fairly obtained.

As in England and Wales, a person apprehended in Scotland must be brought before the court competent to deal with his case with the least possible delay. There is no equivalent in Scotland to the public preliminary investigation before examining magistrates held in England and Wales prior to committal for trial. Where a prosecution on indictment is contemplated, the accused is brought before a magistrate for judicial examination. The magistrate then commits the accused for trial, but he may first commit him for further examination. Eight days may elapse between commitment for further examination and commitment for trial.

Persons in custody, other than those charged with murder or treason, may be liberated on bail by the sheriff or, if the offence is within the jurisdiction of a summary court other than the sheriff court, by that court or the police. Even in the case of murder or treason, bail may be accepted at the discretion of the Lord Advocate or the High Court of Justiciary. There is a right of appeal to the High Court by the accused person against the refusal of bail, by the prosecutor against the granting of bail, or by either party against the amount fixed.

The writ of *habeas corpus* does not apply in Scotland, but the High Court of Justiciary has power to release persons unlawfully detained and accused persons must, in any event, be brought to trial within 110 days of committal.

Trial

In trials on indictment, the first 'pleading' diet takes place in the sheriff court, when the accused is called upon to plead guilty or not guilty. If he pleads not guilty, the case is continued to the second 'trial' diet in the appropriate court. If he pleads guilty, and it is a case which is to be dealt with in the sheriff court, the sheriff may dispose of it at once. If it is a High Court case it is continued to the second diet in the High Court for disposal.

The second diet is held at least nine day after the pleading diet, either before the sheriff or the High Court, with a jury. Evidence is led (without opening speeches) and there are closing speeches for the prosecution and for the defence, followed by the judge's charge to the jury. The jury may return a verdict of 'not guilty' or 'not proven', both of which result in acquittal, or they may find the accused 'guilty', in which case the court proceeds to deliver sentence. The verdict (unlike that of an English jury) may be by a majority. Fairness to the accused is ensured by the fact that, with a few minor exceptions,

no person may be convicted without the evidence of at least two witnesses, or corroboration of one witness by facts and circumstances which clearly implicate the accused person in the crime.

At summary trials the accused is asked to plead to the charge at the first calling of the case and, if he pleads guilty, the court may dispose of the case. Where the plea is 'not guilty', the court may proceed to trial at once or it may appoint a trial diet for a later date.

CIVIL LAW IN SCOTLAND

Civil Courts

The main courts of civil jurisdiction in Scotland are the sheriff courts which, in their civil capacity, correspond roughly to the county courts in England and Wales, and the Court of Session, which is the supreme civil court in Scotland.

Sheriff Courts

The civil jurisdiction of the sheriff court extends to nearly all actions and is unlimited by the value of the case. Much of the work is done by the sheriff-substitute, against whose decisions an appeal may be made to the sheriff-principal or directly to the Court of Session. Minor civil matters (actions not exceeding £5 in value) may be tried by justices of the peace.

The Court of Session

The Court of Session has universal jurisdiction, sits only in Edinburgh, and has sole jurisdiction, *inter alia*, in divorce actions. The court is divided into two parts: the Outer House, a court of first instance, and the Inner House, which is mainly an appeal court. The Inner House is divided into two divisions of equal status, each consisting of four judges—the first division being presided over by the Lord President and the second division by the Lord Justice Clerk. From the Inner House an appeal may lie to the House of Lords.

The Scottish Land Court

The Scottish Land Court is a special court that deals with certain agricultural matters. The court is presided over by a legal chairman, who has the rank and dignity of a judge of the Court of Session.

Civil Proceedings

In Scotland civil proceedings are initiated by the service on the defender of a writ or summons, which sets out the nature of the decree which the pursuer seeks, a statement of facts upon which the pursuer founds his claim, and a statement of the legal propositions upon which the pursuer maintains he is entitled to the remedy which he seeks. In Court of Session actions the next step is the calling of the summons, which is the publication of the action in the court lists. If the defender intends to contest the action, he must 'enter appearance' within two days of calling and thereafter lodge defences to it. In ordinary sheriff court actions 'entering appearance' is followed by the 'tabling' of the case, which involves a formal appearance in court. In summary and small debt actions the defender is simply given notice of the date on which the action will be heard. It is much more common in Scotland than in England and Wales to have legal debates in court as to the competency or relevancy of the written pleadings prior to the proof.

In Scotland a pursuer can abandon his case, including any matrimonial case, at any time, but where abandonment is sought after the commencement of the proof or trial, only with leave of the court. Trial by jury in civil action in Scotland is much more common than in England and Wales, being the usual form of proof in actions for damages for personal injuries.

COURTS IN NORTHERN IRELAND

Both civil and criminal courts in Northern Ireland are similar to those in England and Wales with some minor modifications to suit a smaller community. The superior courts comprise the Supreme Court of Judicature (consisting of the High Court of Justice and the Court of Appeal) and the Court of Criminal Appeal. The High Court is the superior court of first

instance, is divided into the Chancery Division, the Queen's Bench Division (including probate, matrimonial and Admiralty proceedings) and the circuit courts (assizes) and is constituted of the Lord Chief Justice, as president, and two judges. The Court of Appeal, which is the appellate tribunal, is constituted of the Lord Chief Justice and two Lords Justices of Appeal.

The inferior courts are the county courts and courts of summary jurisdiction (petty sessions). Courts of quarter sessions have been amalgamated with the county courts, which now exercise both civil and criminal jurisdiction and are presided over by county court judges, of whom there are five (two of them having the title of Recorder—of Belfast and of Londonderry). At least four sittings of the court are held annually in each division. Petty sessions courts are composed of one resident magistrate (who corresponds to a stipendiary magistrate in England and Wales) who sits alone except in some specific cases, for instance in a special crimes court, where two may adjudicate. Juvenile courts are composed of one resident magistrate and two lay members, one of whom must be a woman.

SPECIAL COURTS

Coroners' Courts

Coroners' courts are common law courts convened when a person appears to have died a violent or unnatural death or a sudden death of which the cause is unknown, and in certain other circumstances. In such cases, it is the duty of the local coroner (who may be a barrister, a solicitor, or a medical practitioner of not less than five years' standing, appointed by county, county borough, or certain borough councils) to hold an inquiry into how, when, and where the deceased died; he may hold an inquest in court for this purpose, and he must do so if he has reasonable cause to believe that the deceased has died a violent or unnatural death or has died in prison or in circumstances for which an Act of Parliament provides that an inquest must be held. A jury must be summoned in certain cases, including those in which there is reason to suspect that the death was due to murder, manslaughter, or infanticide, or was caused by an accident arising out of the use of a vehicle on the public highway. If the jury returns a verdict of murder, manslaughter or infanticide by a particular person, the coroner must commit that person for trial at assizes. If the death is merely a sudden death of which the cause is unknown, the coroner need not hold an inquest, but may order a post-mortem examination to ascertain the cause of death. The law and practice relating to coroners' courts, the reporting of deaths to the coroner and other matters are under review by an inter-departmental committee.

In Scotland the office of coroner does not exist. The Procurator Fiscal inquires privately into all sudden and suspicious deaths in his district and may report the result of his inquiries to the Crown Agent in order that Crown Counsel may consider what proceedings, if any, are required.

In Northern Ireland coroners are appointed by the Minister of Home Affairs and must, on appointment, be either barristers-at-law of not less than five years' standing practising in Northern Ireland or practising solicitors of the Supreme Court of Judicature in Northern Ireland of not less than five years' standing.

Administrative Tribunals

Administrative tribunals consist of persons or bodies exercising judicial or quasi-judicial functions outside the ordinary hierarchy of the courts. As a rule, they are set up by Act of Parliament or under powers conferred by statute, which also govern their constitution, functions and procedure.

The continuing expansion of governmental activity and involvement in the social and economic affairs of the nation has greatly multiplied the occasions

on which the individual may find himself at issue with the administration, or with another body of persons or an individual; consequently there has been a substantial growth in the number of tribunals (there are over 2,000 in existence) and in the range of their activities during the past twenty years. Their constitution follows a fairly general pattern: all, for instance, consist of an uneven number of persons so that a majority decision can be reached; members are usually appointed by the minister concerned with the subject but other authorities (for instance, the Crown, the Lord Chancellor and the Master of the Rolls) have the power of appointment in appropriate cases and the Lord Chancellor, or the Lord President of the Court of Session in Scotland, makes appointments in all cases where a lawyer chairman or member is required; and, with some exceptions, members of tribunals hold office for a period specified in the warrant or instrument by which they are appointed. Administrative tribunals may be broadly classified as follows:

(i) those which have permanent members appointed for their special knowledge, and a chairman who must be a lawyer of experience: for instance, the *Transport Tribunal*, which has jurisdiction over British Railways passenger fares within the London area and London Transport road and rail fares and also hears appeals relating to road carriers' licences throughout Great Britain, and the *Lands Tribunal*, which has jurisdiction in a variety of matters relating to the value of property;

(ii) those which are purely administrative: for instance, the *Special Commissioners of Income Tax*, who hear appeals on income tax matters from the rulings of the Inland Revenue officials;

(iii) those which deal exclusively with matters of interest to one government department or public authority: for instance, the *Pensions Appeal Tribunals*, which hear appeals against the rejection by the Minister of Pensions and National Insurance of war service pension claims; and

(iv) those which consist of ordinary people appointed by a minister to arbitrate between individuals: for instance, the *Rent Tribunals*, which have jurisdiction in the determination of rents of certain properties.

There are also tribunals which enforce professional discipline, such as the General Medical Council and the Disciplinary Committee of the Law Society, but these are entirely different in constitution from the statutory tribunals and have no jurisdiction over the general public.

Although there is no general provision respecting appeals from statutory tribunals, the Tribunals and Enquiries Act 1958 and other Acts provide for an appeal, at least on a point of law, from all the more important tribunals to the High Court and, in Scotland, to the Court of Session. An appeal may also lie to a specially constituted appeal tribunal, to a minister of the Crown or to an independent referee. An advisory body known as the Council on Tribunals (appointed jointly by the Lord Chancellor and the Secretary of State for Scotland) exercises general supervision[1] over the tribunals and reports on particular matters, those peculiar to Scotland being dealt with by the Scottish committee of the Council.

Criminal Injuries Compensation Board

The Criminal Injuries Compensation Board, first appointed in 1964 by the Home Secretary and the Secretary of State for Scotland after consultation with the Lord Chancellor, consists of a chairman of wide legal experience and five other legally qualified members. Its function is to entertain applications

[1] Excluding supervision of the professional disciplinary tribunals.

for *ex gratia* payments of compensation, in certain circumstances, to victims of crimes of violence in Great Britain or on a British vessel or aircraft. Compensation is assessed on the basis of common law damages and, generally speaking, takes the form of a lump sum payment. During the first nine months of the scheme nearly £66,500 was paid out.

Courts Martial

Courts martial have jurisdiction over serving members of the armed forces under the Army Act and the Air Force Act of 1955 and the Naval Discipline Act of 1957. Civil offences committed in the United Kingdom by members of the armed forces are, however, normally dealt with in the ordinary criminal courts.

Courts martial may be convened by any authorised officer. A judge advocate, who is a qualified barrister, sits with the court to advise upon law and procedure and to sum up upon the evidence whenever a case of importance is involved. The Judge Advocate General's Department acts for the Air Force as well as the Army, but the Navy has a separate Judge Advocate of the Fleet.

Appeals lie to the Courts Martial Appeals Court, and from that court to the House of Lords if the court certifies that a point of law of general public importance is involved and it appears to the court or the House of Lords that the point is one that ought to be considered by the House.

ADMINISTRATION OF JUSTICE

There is no Minister of Justice in the United Kingdom. In England and Wales, responsibility for the administration of the judicial system when it does not rest with the courts themselves, lies partly with the Lord Chancellor and partly with the Home Secretary; in Scotland it lies with the Secretary of State. In England the Lord Chancellor is concerned with the composition of all courts, both criminal and civil, with parts of criminal procedure and with everything relating to civil law, and the Home Secretary with criminal law, preventing offences, apprehending offenders, part of the process of trying them, and virtually the whole of their treatment. The Prime Minister is also concerned in that he is responsible for recommending to the Crown the highest judicial appointments.

The administrative business of the Supreme Court of Judicature and the appointment of the officers of the court (for instance, the masters, registrars and clerks) is partly in the hands of the Lord Chancellor and partly in the hands of the appropriate judges. The Lord Chancellor is concerned with legal procedure in that he is a member of the Rule Committee which makes the rules of the Supreme Court, appoints the County Court Rule Committee and has power to alter or disallow the rules made by it. He is concerned with law reform in that he appoints the members of the Law Commission for England and Wales, set up under the Law Commissions Act 1965 as a permanent body consisting of five lawyers of high standing, charged with the duty of scrutinising the law with a view to its systematic development and reform, including the possibility of codification, the elimination of anomalies, the repeal of obsolete and unnecessary enactments, and the reduction of the number of separate enactments. The Commission has to submit to the Lord Chancellor programmes of reform which may recommend their further examination by itself or by some other body, such as a Royal Commission or the existing Law Reform Committee or Criminal Law Revision Committee[1].

[1] The Law Reform Committee and the Criminal Law Revision Committee are standing committees of judges and lawyers, appointed respectively by the Lord Chancellor and the Home Secretary, to examine such aspects of the civil and criminal law as may be referred to them by the appropriate minister.

The Lord Chancellor may also ask the Commission to prepare draft Bills or advise government departments. In the course of its work the Commission has power to consider the legal systems of other countries.

Magistrates' courts are mainly administered by the magistrates themselves, chiefly through committees known as magistrates' courts committees (committee of magistrates in inner London); but the local authorities, with financial assistance from the Government, are responsible for meeting their costs, and the Home Secretary, besides exercising a general oversight, has certain specific responsibilities, including the approval of boundary changes, approval of the appointment of justices' clerks, and deciding disputes on financial matters.

In Scotland the Secretary of State appoints the staff of the High Court of Justiciary and the Court of Session and is responsible for the staffing and general organisation of the sheriff courts. He is also responsible, jointly with the Lord Advocate, for appointing the members of the Law Commission for Scotland, which has been set up on lines similar to the English Law Commission, but with the members, other than the chairman, acting only part-time.

In Northern Ireland the administration of the superior courts has been reserved to the United Kingdom Parliament. The judges are appointed by the Crown and are removable only on an address of both Houses of that Parliament. The Minister of Home Affairs for Northern Ireland is responsible for the staffing and general organisation of the county and petty sessions courts; the judges of the county court and resident magistrates are appointed by the Governor of Northern Ireland.

THE PERSONNEL OF THE LAW

The operation of the law requires the participation of judges with whom, aided in certain cases by juries, the decision of disputed cases rests; of the officers of the court, who have general or specialised functions of an administrative (and sometimes of a judicial) nature in the courts to which they are attached; and of the barristers (advocates in Scotland) and solicitors who are entrusted with representing the interests of the parties to a dispute.[1]

Judges

The courts of the United Kingdom are the Queen's Courts (since the Crown is the historic source of all judicial power) and the Sovereign, acting on the advice of ministers, is responsible for all appointments to the judiciary. In England and Wales appointments to the highest positions—the Lords of Appeal in Ordinary, the Lord Chief Justice, the Master of the Rolls, the President of the Probate, Divorce and Admiralty Division and the Lords Justices who are the judges of the Court of Appeal—are made on the recommendation of the Prime Minister, while the Lord Chancellor recommends the appointment of the puisne judges, the county court judges (except in Lancashire where they are recommended by the Chancellor of the Duchy of Lancaster), the chairmen of quarter sessions, the recorders of boroughs, and the metropolitan and other stipendiary magistrates. Justices of the peace are appointed on behalf of the Crown by the Lord Chancellor,[2] who is advised, as to a county by the Lord Lieutenant[3] with the assistance

[1] The law allows full liberty to the individual to conduct his own case, both in its initial and final stages, if he thinks fit. The more usual practice, however, is to be legally represented.

[2] Except in Lancashire, where the Chancellor of the Duchy acts on behalf of the Crown in this matter.

[3] The office of the Lord Lieutenant of the county was first created in the sixteenth century. Its holder was chief among the county justices and commander of the county militia.

of a local advisory committee, and as to the boroughs by separate advisory committees.

In Scotland the Prime Minister makes recommendations for the appointment of the Lord Justice General and Lord President and also of the Lord Justice Clerk. Power of submission for appointment of all other judges lies with the Secretary of State for Scotland. The Secretary of State is responsible for the appointment and removal of justices of the peace.

Judges are not engaged in politics, except in the case of the Lord Chancellor who, as well as being head of the judiciary, is a leading member of the Government in power. With the exception of justices of the peace, judges have always been appointed from practising barristers or advocates and neither their training nor their career is in any way dictated by the State.

Once appointed, judges normally hold office for life or until statutory retiring age. However, in certain circumstances (for instance, in cases of misconduct or proven incapacity) judges of the inferior courts in England and Wales may be removed from their position by the Lord Chancellor. In Scotland the Secretary of State may issue an order for the removal from office of a sheriff-principal on a report prepared by the Lord President of the Court of Session and the Lord Justice Clerk, on the grounds of inability, neglect of duty or misbehaviour, but this order is required to lie before both Houses of Parliament for a period of four weeks and is subject to annulment by a resolution of either House. A sheriff-substitute may similarly be removed from office, but in his case no parliamentary procedure is necessary.

In England and Wales all superior judges (other than the Lord Chancellor who, as a Cabinet Minister, changes with the Government) are subject to a power of removal only by the Sovereign on an address presented by both Houses of Parliament.[1] Since 1701 only one such address has been moved (against a judge convicted of misappropriation of funds, in 1830); and it can be stated with confidence that Parliament would never use this means to attempt to interfere with judicial independence. Similarly, although no court in the United Kingdom would ever question the validity of an Act of Parliament which had been legally promulgated and published it might, through its interpretation of the statute, come to a decision contrary to the policy of the Government which introduced the Act. In such a case the Government could try to persuade Parliament to clarify or amend the statute by new legislation. It would not be open to it to penalise the judge or to try to influence the court in any other way.

Juries

A jury in England and Wales summoned to assizes or county quarter sessions, or in a civil action, consists of twelve persons (except in county courts, where juries consist of eight persons). In Scotland the jury consists of fifteen persons in criminal cases and twelve in civil cases and in Northern Ireland of twelve in criminal and seven in civil cases. Most householders (men and women alike) are liable for jury service if they are British subjects between the ages of 21 and 60, but persons following certain occupations can claim exemption.[2] A jury is completely independent of both the judiciary and the executive. In criminal cases the accused can have up to seven jurors (in Scotland, five) changed without giving reasons and both defence and prosecution can object

[1] There is no statutory provision for removal of judges of the Court of Session or High Court of Justiciary from office and it is probable that special legislation would be required to effect such a dismissal.

[2] The conditions for jury service in England and Wales were the subject of a report issued by a departmental committee in April 1965.

for cause shown (for instance, lack of impartiality), but once members of the jury have been sworn, they are protected from interference of any kind. It is an offence to threaten or attempt to corrupt a juryman either before or during a trial.

At certain inquests at coroners' courts in England and Wales and Northern Ireland and at Fatal Accident Inquiries in Scotland, a jury is required to be present to return a verdict on how, when and where a deceased person died. Juries in this instance consist of from seven to eleven jurors. A jury is also required at an inquest held by a coroner to decide whether objects of gold or silver found in the ground are 'treasure trove'.

The Legal Profession

The legal profession is divided into two branches: barristers (advocates in Scotland) and solicitors. Each performs distinct duties—solicitors undertake legal business for lay clients, while barristers advise on legal problems submitted through solicitors and conduct proceedings in the higher courts—though certain functions are common to both.

A barrister in England is required to have reached an accepted educational standard, to have passed the legal examinations conducted by the Council of Legal Education and to have become a member of one of the four Inns of Court—Gray's Inn, Lincoln's Inn, the Middle Temple and the Inner Temple. A barrister with a substantial junior practice may apply to the Lord Chancellor for a patent appointing him Queen's Counsel—a proceeding known as 'taking silk'. Most higher judicial appointments are made from among barristers who have become Queen's Counsel. The professional conduct of a barrister is subject to the scrutiny of the General Council of the Bar; but disciplinary powers are vested exclusively in the Benchers of the Inns of Court.

A prospective solicitor in England and Wales must be considered suitable by the appropriate committee of the Law Society (the professional organisation of solicitors) and he must enter into 'articles of clerkship' with a practising solicitor of not less than five years' standing before he can begin his professional career. The term of articles lasts for three or five years, depending upon the educational qualifications of the student. An articled clerk must pass the necessary examinations held by the Law Society and, unless he has been a barrister or is a law graduate of a university, he is generally required to attend a course of studies at a recognised law school. Once a solicitor is qualified, he may become a member of the Law Society.

In Scotland a prospective advocate must show evidence of his general scholarship (normally by holding an arts degree) and his knowledge of law (normally by holding a law degree of a Scottish University). The conditions applying for the admission of solicitors are broadly similar to those applying in England and Wales. The analogous professional organisations are the Faculty of Advocates and the Law Society of Scotland.

In Northern Ireland barristers are members of the Inn of Court of Northern Ireland; there is also a General Council of the Bar of Northern Ireland. The professional organisation for solicitors is the Incorporated Law Society of Northern Ireland.

LEGAL AID AND ADVICE

Schemes for free legal assistance to persons of slender means and resources have existed for centuries in some courts—to a limited extent in England and Wales, and to a somewhat greater extent in Scotland. The Legal Aid and Advice Act 1949, and the corresponding Legal Aid (Scotland) Act 1949, were introduced to improve existing arrangements in civil proceedings so that no one would be financially unable to prosecute a just and reasonable claim

or to defend a legal right, and also to make the facilities already available in criminal proceedings more easily accessible to those who needed them.

The scheme established by the Act of 1949 for providing legal aid in civil matters has been gradually brought into operation, until today legal aid is available for nearly all types of civil proceedings in nearly all courts of law. It is also available for oral legal advice and in certain circumstances where the assistance of a lawyer is needed but which do not (or do not yet) involve litigation.

Legal Aid in Civil Cases

Free legal aid in civil cases is available to persons with very small incomes and capital, and contributory legal aid to those in higher income and capital groups. The majority of people are financially eligible for legal aid.

The legal aid scheme in England and Wales is run by the Law Society under the general guidance of the Lord Chancellor. It is operated by 12 area committees and a network of local committees composed of barristers and solicitors (who may be paid a fee), with a salaried staff. The cost is met from the Legal Aid Fund, drawn from three sources: contributions from assisted persons; costs recovered from opposite parties in litigation; and a grant from the Exchequer.

Applicants for free legal aid must show that they have reasonable grounds for asserting or disputing a claim. A successful applicant is allowed to select from a panel a solicitor who, if necessary, instructs a barrister, and the case is then conducted in the ordinary way. Certain types of action, including libel and slander, are excluded from the scheme.

In Scotland the legal aid scheme is administered by the Law Society of Scotland through a supervisory central committee, the Supreme Court committee and sixteen local committees. To obtain legal aid for litigation an applicant is required to show 'probable cause' and produce in support of his application a statement corroborated according to the requirements of Scottish law. Assistance is available in connection with appeals to the House of Lords from the Court of Session, in civil proceedings before the Court of Session, the Lands Valuation Appeal Court and the sheriff courts and in matters not involving litigation. Where litigation is not involved, the applicant must show he has reasonable grounds for taking the proposed legal action.

Legal Aid in Criminal Courts

Free legal aid is available in the criminal courts in England and Wales[1] under the Poor Prisoners' Defence Act 1930, which provides for the granting of either a legal aid certificate which entitles the recipient to the services of a solicitor (or, in the case of a preliminary inquiry into a charge of murder, of a solicitor and counsel) in defending a charge heard summarily or at committal proceedings in indictable cases, or a defence certificate which provides both solicitor and counsel in a trial on indictment. The granting of these certificates is in the discretion of the justices or judge before whom the applicant is to be tried, except in the case of a person committed for trial on a charge of murder, when a defence certificate must be granted if the defendant has insufficient means.

Free legal aid for an appeal to quarter sessions is provided for in the Summary Jurisdiction (Appeals) Act 1933, which lays down that, in proper cases, an appeal aid certificate may be granted by a magistrates' court or quarter sessions. The granting of legal aid appeals to the Court of Criminal

[1] The system of legal aid in criminal proceedings is under review by a departmental committee.

Appeal rests with a judge of that court who may also grant legal aid for the purposes of a further appeal to the House of Lords.

The cost of legal aid in magistrates' courts is paid out of the Legal Aid Fund. In the higher courts payments are made in the first instance out of local authority funds and the cost is reimbursed by the central Government.

Legal aid in criminal proceedings in Scotland came into operation in 1964 to replace voluntary arrangements operated by the legal profession; it is now available in the High Court of Justiciary, the sheriff courts and the special juvenile courts (see p. 87). In these courts legal aid is available to all persons in custody on their first appearance in court. Otherwise, it is granted at the discretion of the court except in appeals where the final decision whether or not to grant legal aid is in the hands of the Supreme Court Committee of the Law Society of Scotland.

Legal Advice

Oral advice on legal matters is available, both in England and Wales and in Scotland, free of charge to persons in receipt of national assistance and at a very reasonable cost, i.e. at 2s. 6d. for an interview of up to thirty minutes, to those of limited means. Advice is given by practising solicitors paid out of the legal aid funds of the two countries. The scheme is administered by the two Law Societies, which also run voluntary schemes (for a fee of £1) for those who do not qualify for statutory assistance.

Legal Aid in Northern Ireland

In Northern Ireland free legal aid in criminal cases is afforded to poor persons under the Criminal Justice (Northern Ireland) Act 1945, the cost being met from public funds.

Under the Legal Aid and Advice Act (Northern Ireland) 1965, a legal aid and advice scheme similar to that in operation in England and Wales has been introduced. The scheme is to be administered by the Incorporated Law Society of Northern Ireland and is expected to come into operation by the end of 1965.

TREATMENT OF OFFENDERS

The chief aims of the penal system of the United Kingdom are to deter the potential law-breaker and to reform the convicted offender. The element of deterrence is intended to lie in the fear of detection, public trial, and possibility of punishment rather than in the severity of the punishment itself. In England and Wales the penal system is under review by a Royal Commission which is re-examining, in the light of modern knowledge of crime and its causes, the concepts and purposes which should underlie the punishment and treatment of offenders.

Penalties

Except in relation to murder and certain rare offences for which there is a fixed penalty, the court has discretion to select the penalty (within maxima prescribed by law) that it considers most suitable in the light of the circumstances of the offence and the offender. In general, the courts have power to impose either imprisonment or a fine for serious offences (both in certain cases); while most minor offences are punishable by a fine only, with the alternative of imprisonment if the fine is not paid. Moreover, the court has discretion to discharge an offender absolutely, to place him on probation or (in England, Wales and Northern Ireland only) to discharge him conditionally (i.e. subject to the condition that he commits no offence during a specified period not exceeding twelve months). Summary courts, when they consider

sentencing a first offender to imprisonment, must be satisfied that no other method of dealing with him is appropriate.

In England and Wales no offender under the age of 17 years may be sentenced to imprisonment. Offenders aged 17 and under 21 are not sentenced to imprisonment for any period between six months[1] and three years (unless they are persistent offenders, in which case a sentence of imprisonment of 18 months or more may be passed). In Scotland, no offender under 21 may be detained in a prison. Methods of dealing with young offenders are described on p. 102.

Corrective training or preventive detention may be imposed on persistent offenders. Corrective training, which lasts from two to four years (seven years in Northern Ireland), is designed to correct a man's criminal tendency and encourage him to become a responsible citizen. Preventive detention may be imposed on offenders with a long record of previous offences, whose response to previous institutional training has been unsatisfactory; the sentence runs for not less than five years (three in Northern Ireland) or more than 14 years, as the court decides.

Since 1957 the death penalty in Great Britain for murder has been limited to murders classified as 'capital murder'. These are not necessarily the type of murder regarded as the most wicked, but are those which strike especially at the maintenance of law and order and on which the deterrent effect of capital punishment is believed to be most likely to operate, i.e. murder done in the course or furtherance of theft, murder by shooting or by causing an explosion, murder committed to escape lawful arrest or to effect or assist escape or rescue from legal custody, murder of a police officer (or person assisting him) acting in the execution of his duty, or murder by a prisoner of a prison officer (or person assisting him) acting in the execution of his duty. The penalty for murder not in capital categories is imprisonment for life, except that the death penalty continues to apply where a person who is convicted of murder has previously been convicted of another murder committed in Great Britain on a different occasion. Murderers under the age of 18 years at the time that the crime was committed are not sentenced to death or to life imprisonment, but 'to be detained during Her Majesty's pleasure'. If it can be proved that a person accused of murder was suffering from such abnormality of mind as substantially impaired his mental responsibility at the date of conviction, he is entitled to be convicted of the lesser offence of manslaughter.

It is the long-established practice for the Home Secretary or the Secretary of State for Scotland to review every capital case before the law is allowed to take its course and to consider whether there are grounds for advising the Crown to exercise the prerogative of mercy. Where a reprieve is recommended, the sentence of death is commuted to one of imprisonment for life. A person subject to a sentence of life imprisonment is liable to be detained for the rest of his life, but the Home Secretary may, if he thinks fit, release him on licence at any time. In recent years, the period served, in an average case, by persons whose death sentences have been commuted has been about nine years, but the period varies according to the circumstances of the particular case and the question of whether the prisoner's release would be likely to involve risk to the public.

[1] The Criminal Justice Act 1961 provides for the eventual abolition of short-term sentences (less than six months) for young offenders—such sentences to be replaced, when sufficient accommodation is available, by detention in a detention centre for between three and six months.

A Bill providing for the complete abolition of the death penalty is at present (September 1965) before Parliament.

In Northern Ireland provision is made in the Criminal Justice Bill (Northern Ireland) for the abolition of the death penalty in all but four categories of murder: murder of a constable or other person in the service of the Crown in the course of duty involving enforcement of the law, maintenance of law and order or the administration or advancement of justice; murder done in the course of furtherance of any seditious conspiracy or of the activities of an unlawful organisation; murder which has been deliberately or callously planned in advance; and murder done in the course of a planned and deliberate crime likely to involve the use of violence.

Administrative Authorities

In England and Wales the Home Secretary is the minister generally responsible for legislation relating to the treatment of offenders, for collecting statistical and other information about the operation of the penal system, for reviewing the advantages and defects of the various methods of treating offenders, and for bringing information about these methods to the attention of the courts. He is specifically responsible for supervising the approved schools, for promoting the efficiency of the probation service, and for providing, maintaining and managing prisons, borstal institutions, detention centres, remand centres and attendance centres.

The law requires that visiting committees or boards of visitors should be appointed at every prison, borstal institution, detention centre or remand centre, partly to ensure that local interest in the administration of these establishments is preserved and partly to provide some independent and unofficial check on the administration, and particularly on the punishment, of inmates. For each prison to which offenders may be committed directly by a court, a visiting committee of justices of the peace is appointed by the various courts of quarter sessions in the area, in numbers fixed by the Home Secretary. For all other prisons and for borstals, detention centres and remand centres a board of visitors is appointed by the Home Secretary; not less than two members must be justices of the peace.

The penal systems in Scotland and Northern Ireland are based on principles similar to those applied in England and Wales. In Northern Ireland the system is the responsibility of the Ministry for Home Affairs.

Prisons

The post-war increase in the total number of people found guilty of indictable offences led to severe overcrowding in prisons and strained the resources of borstals, detention centres and remand centres. In addition, many of the existing prisons dated from the middle of the nineteenth century and were unsuited to modern methods of penal treatment. Measures to deal with the problems include a substantial increase in the number of prisons and other penal institutions and in due course the reconstruction or replacement of a number of old prisons.

The Prison Rules state that 'the purpose of the training and treatment of convicted prisoners shall be to encourage and assist them to lead a good and useful life'. To this end prisoners in England and Wales are classified into groups, according to their record, character and potentialities, and assigned, so far as circumstances permit, to the establishment best suited to their needs. The separation of male from female prisoners is required by statute; otherwise classification is a matter for administrative direction. Untried prisoners are separated from convicted prisoners and those under 21 are separated from adults. Prisoners serving their first sentence, and those considered suitable to

associate with them, are classified as the Star Class and are separated from other prisoners (the Ordinary Class).

Prisons are classified as general local, special local, regional training, and central. All convicted prisoners are first received at the general local prison for the area, where they are assessed and, in appropriate cases, transferred to another class of prison. The function of the central prisons is to accommodate all prisoners serving long sentences (a long sentence being defined as over four years for most classes of men prisoners and over three years for women). The function of regional training prisons is to accommodate selected prisoners whose sentence is not long enough to qualify them for a central prison but is long enough (twelve months' minimum) for a comprehensive course of training, and who are judged likely to benefit from such a course; all prisoners sentenced to corrective training are sent to regional training prisons. The function of the special local prisons is to relieve overcrowding by accepting from general local prisons convicted prisoners of any class who are not eligible for transfer to a regional training prison or a central prison. All general local prisons are closed; all other classes of prison include open as well as closed prisons.

Privileges and Discipline

On reception under sentence, all prisoners, except those sentenced to imprisonment for life, are credited with remission of one-third of their sentence (one-fourth in Northern Ireland in respect of sentences of less than two years), provided that this does not reduce their sentence below 31 days (in Scotland, 30 days). A life prisoner may be released on licence by the Home Secretary or, in Scotland, by the Secretary of State (see p. 98). All prisoners become entitled to certain personal privileges at successive stages in their sentence.

For breaches of discipline in prison, the prison governor, the visiting committee or the board of visitors have power to order, among other penalties, forfeiture of remission (postponement of eligibility for release) and forfeiture of privileges.

Training

In prison training, efforts are being made to provide (1) work of a kind likely to help fit prisoners to earn their living after release, with technical training in skilled trades for certain persons, (2) suitable educational facilities, and (3) opportunities for the development of a sense of personal responsibility, including (for suitable prisoners) training in open conditions.

Employment

New problems in the organisation and management of industries in prisons have arisen as the result of changes that have taken place both in industrial methods and in the prison system during the past thirty years, and because of the substantial increase in the number of prison inmates for whom employment must be found. The whole subject is therefore being studied by a standing Advisory Council on the Employment of Prisoners, appointed by the Home Secretary and the Secretary of State for Scotland. The Council has so far made three reports: the first deals with suitable kinds of work, job training and earnings for prisoners; the second with the employment and industrial training of borstal inmates; and the third with the organisation of prison industries.

Except in local prisons in England and Wales, where the hours are shorter, most prisoners spend about 40 hours a week in the prison workshops or in other employment such as building, farm work, domestic work and gardening in the prison precincts. A few prisoners are employed outside the prisons

on various projects, such as agriculture, land drainage, road works and forestry.

In England, Wales, and Scotland, small payments are made to inmates for the work they do, and good work is rewarded by payments above the minimum; in Northern Ireland there is a progressive system of earnings, which is not related to output nor to work done.

Education

Educational schemes are provided in prisons in England, Wales, and Scotland by the local education authorities with the advice of the government departments responsible for education in their respective countries, and in Northern Ireland by the Ministry of Home Affairs. In England and Wales the local authorities also provide tutor organisers and most of the instructors; in all cases the full cost of their services is reimbursed. Evening classes and a wide range of correspondence courses are also available; and the system of vocational training courses in operation in a number of prisons enables suitable trainees to take the examinations of recognised examining bodies.

Educational schemes are supplemented by periodical lectures, film displays, concerts, and dramatic performances. Prisoners may also use the prison library, which in most cases is now stocked by the county, city or borough library committee.

Medical Services

Medical attention is provided by full-time and part-time medical officers whose duties include not only the care of the physical and mental health of prison inmates, but also the oversight of those services which affect health in prisons.

A few prisons and borstals have their own psychiatric clinics (with qualified medical staff, visiting psychotherapists and psychiatric social workers) to which inmates may be transferred where necessary. In England and Wales there is one psychiatric prison, with accommodation for some 350 people, and a prison psychological service, whose officers are employed to assist governors and medical officers in their work of examining and classifying prisoners, and to advise on methods of training. The hospital facilities of the National Health Service (see Chapter 5) are also available for the treatment of prisoners in appropriate cases. Arrangements may be made, where necessary, for prisoners to receive treatment after release.

Religion and Welfare

A chaplain of the Church of England (in Scotland, of the Church of Scotland and in Northern Ireland, of the Church of Ireland and Presbyterian Church), a Roman Catholic priest and a minister of the Methodist Church are appointed to every prison. Ministers of other denominations are either appointed or specially called in as required. Regular services are held and religious instruction given. Chaplains not only visit every prisoner soon after reception, shortly before release and regularly during the sentence, but they also pay daily visits to all prisoners who are sick or undergoing cellular confinement and any others who apply to see them.

All prisons now have resident social workers appointed to them; welfare is, however, the concern not only of the social workers but of the prison staff as a whole, in particular of the chaplains and assistant governors.

Prisoners may write and receive letters regularly and may be visited by their relatives and friends at specified intervals. They may also receive visits from prison visitors specially appointed for the purpose. The voluntary work of prison visitors in England and Wales is co-ordinated and guided by the National Association of Prison Visitors.

Discharge and After-Care

The social workers appointed to prisons are available to help in any personal problems that a prisoner may have; to take such steps as may be practicable to alleviate any anxieties he may express about the circumstances of his dependants; and to encourage and assist him to make suitable plans for his future. Social workers in prisons work closely with those agencies in the community whose aid the prisoner and his family may need either during his sentence or after his release.

In England and Wales pre-release courses, at which experts hold open forum with prisoners nearing their release on the domestic, social and industrial problems with which they are likely to be faced, are conducted at all prisons. Specially selected prisoners amongst those sentenced to preventive detention, long-term imprisonment and, in Scotland, corrective training are allowed to work in ordinary civilian jobs outside prison during the months immediately preceding their discharge; hostels for this purpose have been established at several prisons. Home leave, allowing five clear days at home, is extensively granted to many categories of prisoners with sentences of two years or over towards the end of their sentences to enable them to make family adjustments and contacts with potential employers.

In England and Wales statutory supervision applies to prisoners released from preventive detention and corrective training, to young prisoners and to young persons discharged from borstals and detention centres. The sanctions for failure to observe the conditions of supervision are recall to prison, borstal or detention centre. Statutory supervision is carried out by probation officers of the probation and after-care service, which is also responsible for the after-care of prisoners released from sentences of less than four years (three years in the case of most women) who are not subject to compulsory supervision.

In Scotland after-care duties are carried out by after-care officers of the Scottish Home and Health Department.

In Northern Ireland the after-care of all prisoners is carried out by the discharged prisoners' aid societies with the help of probation officers.

Treatment of Young Offenders

Under the English legal system, a child under the age of ten cannot be charged with an offence. A child between ten and 14 years old, who is charged with an offence other than homicide, must be dealt with in a juvenile court unless charged jointly with an adult. A young person (i.e. one between 14 and 17 years of age) charged with an indictable offence may be dealt with summarily (as is usually the case) or committed for trial by jury. In certain cases young persons may claim to be tried by jury, though this right is rarely exercised.

In Scotland all children and young persons between eight and 17 years of age who are charged with offences must be dealt with in juvenile courts, unless they have been charged in conjunction with adult offenders or are proceeded against on indictment.

In Northern Ireland, likewise, a child or young person between the ages of eight and 17 will normally be dealt with by a juvenile court unless charged jointly with an adult or committed for trial by jury in the case of an indictable offence. Such committal may take place at the request of the accused's parents or at the discretion of the juvenile court.

Methods of treatment available in law for dealing with children and young persons found guilty of committing an offence include: absolute discharge; conditional discharge (in England and Wales and Northern Ireland); fines imposed upon the offender or, in certain circumstances, upon his parents;

probation; committal to the care of a fit person (normally the appropriate local authority) until the age of 18; or committal to an approved school. Offenders aged not less than 10 and under 21 years may be ordered to attend an attendance centre; aged not less than 14 and under 21, they may be detained in a detention centre; aged not less than 15 and under 21, they may be sent for a period of borstal training. In Scotland offenders of 17 and under 21 found unsuitable for detention centre or borstal training may be detained in a young offenders' institution.

Remand

In England, Wales and Scotland remand homes are provided by local authorities for the custody of boys and girls under the age of 17 before their appearance in court, or between court appearances (while inquiries are made as to the best method of treatment for them), while they are awaiting vacancies in approved schools, or for a short period (up to a month) of punitive detention. In Northern Ireland the responsibility for providing or arranging for the provision of remand homes rests with the Ministry of Home Affairs.

In addition to remand homes, remand centres are being established in England and Wales (and are planned for Scotland), to which a court may send young persons between the ages of 17 and 21 who would otherwise be remanded to prison, and those under 17 years old who are unsuitable for remand homes.

The system of remand offers valuable opportunities for observation, the results of which are included in reports for the guidance of those responsible for the future of young offenders.

Approved Schools

Approved schools are residential schools for boys and girls under the age of 17 years who, the courts consider, need not only removal from home but also a fairly long period of training. These boys and girls may be sent to approved schools because they have committed an offence or are in need of care or protection or on certain other grounds not involving the commission of an offence. The schools may be provided by local authorities, by voluntary organisations concerned with the welfare of children and young people on a national scale, or by local committees formed by people interested in such work. In England and Wales the schools must be approved by the Home Secretary; in Scotland, by the Secretary of State for Scotland; and in Northern Ireland, where they are known as training schools, by the Ministry of Home Affairs.

The schools are for boys only or for girls only. They are classified according to age on admission, and include separate schools for Roman Catholics. Assignment to a school in the appropriate age group is determined by such considerations as the location of the school in relation to the home, the type of training provided, and the probable reaction of a child or young person to the individual personalities of the staff.

The main ingredients of approved school training are education in the formal sense, religious education and guidance, craft training (for the older groups), attention to health and to the use of recreation and leisure, social training and personal case-work. Its primary object is the re-adjustment of the boys and girls for their return to the community; contact is maintained with their homes while they are in approved schools and after they have left help and supervision are given.

A child or young person may be detained in an approved school or training school for three years, except for boys and girls under the age of 12 years and 4 months at the time of committal, who may be kept until the age of 15 years and

4 months, and those over the age of 16 on committal, who can be detained only up to the age of 19, or 19½ if they have been found guilty of absconding or of serious misconduct in an approved school. In England and Wales a boy or girl aged 15 years or over, and in Scotland any approved school pupil, who presents a threat to the discipline of a school may be temporarily transferred on a justice's warrant to another establishment pending inquiry as to the best means of dealing with him. In England and Wales a boy or girl of 15 years or over who is detained in an approved school as an offender and is thought to be more suitable for borstal training may, with the consent of the Home Secretary, be brought before a magistrates' court, which has power to order removal to borstal. Managers of approved schools are under an obligation to review the progress of each pupil in their charge with a view to granting a release as soon as he or she is fit for it; release within the first six months of the detention period requires the consent of the reponsible minister. Statutory responsibility for after-care of boys and girls released from approved schools rests on the school managers who are assisted in this work by welfare officers and the probation and child-care services.

Attendance Centres

A number of attendance centres have been established in England and Wales to deal with boys between the ages of 10 and 17 found guilty of offences for which an adult can be sentenced to imprisonment. This form of treatment is designed to teach young offenders a respect for the law and to give them some instruction in the proper use of leisure. Boys ordered to attend must do so during their spare time on Saturday mornings or afternoons; they may be required to attend for up to three hours on any one occasion and for a total of not less than twelve hours (with certain exceptions) and not more than twenty-four. The activities include a period of instruction in handicrafts, or a lecture (for example, on first aid) and a period of physical training or disciplinary tasks under supervision. Efforts are made at the centres to induce the boys to join a youth club or other suitable organisation.

There are also two centres for youths aged 17 to 21, which operate on lines similar to those adopted at the juvenile centres, but the activities are adapted to meet the needs of the older age group.

Detention Centres

Detention centres provide a means of treating young offenders for whom a long period of residential training in an approved school or borstal does not seem necessary but who cannot be taught respect for the law by such measures as fines or probation. In England and Wales junior centres are available for boys between the ages of 14 and 17 years, and senior centres for boys between the ages of 17 and 21. One centre is also available for girls between the ages of 16 and 21. In Scotland there are two senior centres. Detention in England and Wales may be for not less than three and not more than six months; if consecutive sentences are passed, the total term may not exceed nine months at any one time. Remission of up to one-sixth of the sentence may be earned for good conduct. In Scotland the fixed period for all detention centre sentences is three months.

As the intention is primarily deterrent, the life of a centre is strict and vigorous, demanding a brisk tempo and the highest possible standard of discipline and behaviour in every aspect of training. The routine provides a normal working week of 44 hours, including one hour daily devoted to physical training, and experience has shown that much positive training can be given within the limits of this framework. Boys of compulsory school age receive full-time education, and classes of further education are provided for others in the evenings. Statutory supervision for up to 12 months of young

persons discharged from detention centres is undertaken by probation officers.

Borstal Institutions

The borstal training system consists of different borstals specialising in different types of young offender, classified according to such criteria as age, intelligence and criminal sophistication. There are also a few borstals for special purposes, such as allocation or recall. In England and Wales the period of detention ranges from six months to two years and is followed by supervision for two years from the date of release. In Scotland, where there is no minimum period of detention, the maximum is two years and the supervision period is for one year from the date of release from the institution. Sentences in Northern Ireland are for periods not exceeding three years including the period under supervision; normally release does not take place until at least nine months of the sentence has expired. The system is essentially remedial and educational, based on personal training by a carefully selected staff. Emphasis is placed on vocational training in skilled trades; there is much freedom of movement and many borstals are open establishments. An initial period of classification ensures that each young offender is sent to the institution best suited to his or her requirements.

Probation

The probation service is designed to secure the rehabilitation of an offender while he remains at work or at school under the supervision of a probation officer, whose duty it is to advise, assist and befriend him. A cardinal feature of the service is that it relies on the co-operation of the offender. Before making a probation order, the court must explain its effects and make sure that the probationer understands that if he fails to comply with the requirements of the order he will be liable to be dealt with for the original offence. A probation order cannot be made without the consent of the person concerned unless (in England, Wales, and Northern Ireland only) he is under 14 years of age. The order usually requires the probationer to keep in regular touch with the probation officer, to be of good behaviour and to lead an industrious life. It may also require him to live in a specified place, or to submit to treatment for his mental condition. A probation order is made for not less than one year and not more than three years.

Every magistrates' court and superior criminal court must have available the services of probation officers of both sexes. In England and Wales the appointment of probation officers is the responsibility of probation committees composed of justices and in Scotland of probation committees composed of *ex officio* members and members appointed by the local authorities, but first appointments are subject to confirmation by the Home Secretary and the Secretary of State for Scotland respectively. In Northern Ireland the Minister of Home Affairs himself appoints the probation officers. Training facilities in England and Wales are provided by the Home Office on the advice of the Advisory Council for Probation and After-Care and are made available by arrangement to Northern Ireland officers. In Scotland training is mainly provided during the first year of appointment and before the officer enters on the duties of the service.

Research

Research into the causes and prevention of crime and into various methods of dealing with offenders is increasingly recognised as of vital importance in dealing with the problems of delinquency. A research unit of the Home Office carries out a wide programme of research and maintains liaison with academic organisations. Government grants for criminological research at universities and other institutions are likely to amount to over £90,000 in 1965–66.

The principal university research establishment is the Institute of Criminology in Cambridge University, which, in addition to its research activities, conducts advanced courses in criminology for people engaged in work relating to the treatment of offenders and the administration of the criminal law, and a postgraduate course in criminology. Research is also undertaken at many other universities, including Oxford, London, Glasgow and Edinburgh.

Special Inquiries

In addition to research, special inquiries into particular questions are conducted, as necessary, by advisory bodies or specially appointed committees. Reports have been issued on such matters as corporal punishment, the non-residential treatment of offenders under 21 years, preventive detention, and the organisation of after-care for discharged prisoners.

THE POLICE SERVICE

The police service of Great Britain is organised in a system of locally administered forces which the ministers of the Crown who are responsible for the maintenance of law and order in their respective countries have certain powers to influence and control. In England and Wales the responsible minister is the Home Secretary; in Scotland, the Secretary of State for Scotland. In Northern Ireland the police force is controlled by an Inspector-General, who is responsible to the Minister of Home Affairs.

POLICE IN GREAT BRITAIN

Police Forces

There are 152 regular police forces in Great Britain: 121 in England and Wales[1] and 31 in Scotland. Each of these forces (between which there is close and constant co-operation) is responsible for a separate police area. In England and Wales the forces are defined according to area of responsibility as: county forces; county borough forces; combined forces, which are forces whose area of responsibility extends over two or more counties or boroughs; the Metropolitan Police Force, which is responsible for an area of approximately fifteen miles radius from Charing Cross, but excluding the City of London; and the City of London force. In Scotland there are county forces, burgh forces and combined forces.

In England and Wales and Scotland police forces vary considerably in size according to the area and population which they serve. Thus the Metropolitan Police Force has a strength of approximately 18,000, while that of the smallest force in Scotland is 20.

The actual strength of the regular police force in Great Britain is approximately 80,000, including women. This is below the desirable figure, but the improvement in recruitment shown in recent years has been maintained.

In addition to the regular police forces, there are the River Tyne police, the police forces maintained by certain public services, such as the statutory transport authorities, the Service and departmental constabularies, and the special constabularies attached to each regular police force.

Police Authorities and Chief Constables

For each of the regular police forces there is a police authority with the duty of securing the maintenance of an adequate and efficient force. In the counties of England and Wales the authority is a police committee and in the county boroughs a watch committee. Both are committees of the local council and consist of councillors and justices in a proportion of two to one.

[1] The Home Secretary has certain powers, which have recently been strengthened, to amalgamate existing police areas in England and Wales, and establish a combined police force.

The police authority for the Metropolitan Police Force is the Home Secretary. In the City of London the Court of Common Council is the police authority, although it usually appoints a standing committee to deal with all police matters on its behalf.

In Scotland the police authority for the counties is the county council; in the large burghs it is the town council; and where there are combined forces there is a joint police committee.

Police authorities provide the buildings and equipment needed by their forces and, subject to the approval of the Home Secretary or the Secretary of State for Scotland, fix the authorised establishment. They also appoint the chief constable in their area, subject to ministerial approval, and may retire him in the interests of efficiency, if the Home Secretary or the Secretary of State for Scotland agrees. Police authorities must also keep themselves informed of the way in which chief constables deal with complaints from the public against police officers. In the Metropolitan Police District the chief officer of police and his immediate subordinates are appointed by the Crown on the recommendation of the Home Secretary.

Chief constables are responsible for the direction and control of police forces, but are answerable to the police authorities for the efficiency with which they are used.

Central Authority

The Home Secretary and the Secretary of State for Scotland have a general duty to exercise their powers to promote the efficiency of the police. They are empowered to retire a chief constable in the interests of efficiency, to call for a report from a chief constable on any matters relating to the policing of his area, and to require co-operation between forces on any police matter.

Uniformity in the conditions of service and in the administration of the police is achieved through detailed police regulations which are made by the Home Secretary and the Secretary of State for Scotland under statutory powers. The police regulations cover such matters as organisation, discipline, pay, allowances, pensions, clothing and conditions of service of the members of all the regular police forces and of the River Tyne police. Some of these are first negotiable on the Police Council for Great Britain; the others are discussed on representative advisory bodies along with any general questions affecting the police service.

In his supervisory responsibilities the Home Secretary is assisted by Her Majesty's Chief Inspector of Constabulary and eight inspectors. Each inspector is responsible for a certain number of forces, and satisfies himself of their continuing efficiency by annual inspection, *ad hoc* visits and consultations when particular problems arise. The inspectors report to the Home Secretary on the condition of all the forces, with the exception of the Metropolitan Police Force. The Secretary of State for Scotland is similarly assisted by Her Majesty's Chief Inspector of Constabulary in Scotland and one other inspector.

All police authorities receive a government grant equal to half their net expenditure except the Common Council of the City of London, which receives only one-third. The Home Secretary and the Secretary of State for Scotland are empowered to withhold the grant, in whole or in part, permanently or for such time as they may determine, if they are not satisfied that a police area is efficiently policed, that a force is properly maintained and administered, or that the rates of pay or allowances are as prescribed or approved by them.

Police Officers

There are in Great Britain regular police officers, who usually serve for 25 years or more and thereafter retire on pension, and special constables, who

are volunteers who perform short periods of duty without pay in their spare time from their normal occupations.[1]

In general, entry to the regular police force is open to men between the ages of 19 and 30. Women entrants in England and Wales must be between the ages of 20 and 35, and in Scotland between 20 and 30 years old. Men over 30 years old, and women of 19, may however be appointed, on the recommendation of the appointing authority, in special circumstances approved by the Home Secretary in England and Wales. In Scotland the Secretary of State may approve appointments of both men and women over 30 years old. The standard police ranks in Great Britain, except in the Metropolitan Police District, are: chief constable, superintendent, inspector, sergeant and constable. Intermediate ranks may also be adopted in areas where varying degrees of responsibility make them necessary. In the Metropolitan Police District the chief officer is the Commissioner of Police of the Metropolis. He is assisted by a deputy commissioner and four assistant commissioners. Next in rank are commanders, then deputy commanders; the other ranks are the same as in the rest of the country. In the City of London the ranks are the same as in the provinces, except that the chief officer is the Commissioner of Police and the second in command is an assistant commissioner.

No member of the police service may belong to a trade union, since it is a basic principle of the service that its members must not only be free from political bias, but must also be seen to be free of it. All ranks, however, have their own representative associations which can make representations to ministers or to police authorities on matters of interest or concern to their members.

Police Cadets

Police cadets are recruited by most forces from among youths between 16 and 18 years of age. They have no police powers but are given some training in police work, partly as useful preparation for subsequent appointment as constables and partly to give them sufficient insight into police duties to enable them to decide whether or not they wish to make a career in the police service. Some forces also recruit girl cadets.

Civil Staff

A number of police authorities employ civilians as shorthand-typists, switchboard operators, mechanics, canteen staff and cleaners, in order to release uniformed personnel for police duties.

Traffic Wardens

Traffic wardens are employed in London and several other areas to assist the police in dealing with the problems created by parked vehicles. In specially designated areas traffic wardens have power to give motorists who have committed certain parking offences an option to pay a fixed penalty to the clerk of the appropriate court instead of having their cases tried.

Police Duties

Every police officer in Great Britain is an independent holder of a public office. His powers as a constable, whether conferred by statute or by common law, are exercised by virtue of his office; he is not a servant of the police authority. Chief officers of police in England and Wales have a vicarious liability for any wrongful act committed by their subordinates in the performance of their functions as constables.

The many and varied functions of a police officer as a constable range from the protection of persons and property, road or street patrolling and traffic control to criminal investigation and the apprehension of offenders.

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[1] In Scotland the employment of special constables, other than in emergencies, is subject to strict limitations.

All police forces have their own criminal investigation departments, and many have other specialised departments, including motor patrols, river police (in districts which include long stretches of navigable waterway), a mounted branch (for maintaining order and safety in large crowds), and police dogs.

Co-ordination between Police Forces

During recent years a number of common services have been provided by the central government departments for the benefit of all forces; they supplement those provided by the police authorities for their own use and by communal arrangements made between the forces themselves. The most important of these services are: research and planning, undertaken by the police research and planning branch of the Home Office, which works in close co-operation with, and makes its findings available to, all police forces in Great Britain; training services, which in England and Wales provide ten residential training centres and a central police college and in Scotland a central police college with courses of recruit training and higher training; a forensic science service in England and Wales which provides laboratories for the use of regional groups of forces; wireless depots, which in England and Wales supply and maintain wireless equipment for the police; and central and provincial criminal records which are available to all forces; a recent example of co-operation between forces is the formation of regional crime squads, consisting of teams of experienced detectives from several forces, which assist, on request, neighbouring police forces in investigating major crimes involving inquiries in more than one police area. Arrangements are also made for mutual aid between forces, providing everyday assistance by one force to another.

Services provided by the Metropolitan Police Force for other forces include (1) the publication of the *Police Gazette*,[1] which contains particulars of people wanted for crime and details of stolen property, and is supplied without charge to the police forces of the United Kingdom and to certain other Commonwealth and foreign forces; (2) the organisation and control of the special branch of the criminal investigation department at New Scotland Yard, whose duties include the physical protection of royalty, some ministers, and distinguished foreign visitors; and (3) the carrying out of extradition orders made by the courts. The Metropolitan Police Force is also available, on request, to assist any other police force in England and Wales in criminal investigations. Similarly, the services of the Fraud Squad, run jointly by the Metropolitan Police Force and the City of London Police, are available throughout Great Britain for the investigation of serious company frauds. The National Central Bureau, which handles the business of the International Criminal Police Organisation (Interpol) on behalf of Great Britain and the British dependencies, is part of the Metropolitan Police Force. For certain of these services, the Metropolitan Police Force receives an additional Exchequer grant.

POLICE IN NORTHERN IRELAND

The Royal Ulster Constabulary comes under the direction of the Inspector General, who is responsible to the Minister of Home Affairs. It undertakes the policing of the whole of Northern Ireland, its cost being borne by the Northern Ireland Exchequer.

The strength of the Royal Ulster Constabulary is approximately 3,000. The Inspector General has, under his immediate command, a deputy inspector

[1] The Scottish Criminal Record Office in Glasgow is responsible for the publication of the *Scottish Police Gazette*.

general, a commissioner for the City of Belfast, and a county inspector for each of the six counties. The area is further sub-divided into districts, each district coming under a district inspector and each sub-district under a head constable or a sergeant. Conditions of service and pay follow closely on the lines of the police service in Great Britain, and the general duties pertaining to the various ranks are much the same. Although the more senior ranks bear different titles, the ranks of head constable, sergeant and constable are broadly equivalent to the three junior ranks in the police service of Great Britain.

The Ulster Special Constabulary also comes under the direction of the Inspector General. In the main, this force is a part-time body with a small nucleus of full-time personnel for organisation and training purposes. In normal times the Special Constabulary has only a training liability, although it may assist the Royal Ulster Constabulary on special occasions. Part-time personnel may also be mobilised for full-time duty. The force consists of about 11,000 part-time members, of whom about 200 are mobilised, and some 110 full-time personnel.

4
DEFENCE

Britain's defence policy has two purposes: to guarantee the nation's security and to contribute towards peace and stability in the world as a whole. These purposes are inseparable. Neither can be achieved by armed force alone.

In the long run the security of Britain, like that of every other country, can be assured only by general and comprehensive disarmament under the United Nations; even in the short run it will be difficult to maintain unless countries of different political ideologies reach greater understanding on the limitation and control of armaments. Meanwhile Britain's security will depend on alliances with its friends in many parts of the world. Interdependence is the only basis for national security in the nuclear age.

Similarly, world peace and stability can best be assured by strengthening the peace-keeping powers of the United Nations, and this must remain the principal objective. But until the United Nations is able to exercise the responsibility for maintaining world peace, Britain must, to meet its obligations to Commonwealth and allied countries, maintain a capacity for providing military assistance in many parts of the world.

Information about defence policy and the armed forces is given annually in a *Statement on the Defence Estimates*.[1] The arrangements provide for closely integrated well-trained, highly mobile, all-regular forces equipped with the most modern weapons and organised on up-to-date lines; and for a central strategic reserve maintained in Britain, with means of transport, including airlift, to take it rapidly to the scene of any trouble.

Collective Defence

The national defence policy has been increasingly based on the realisation that no country can protect itself in isolation and the defence of Britain is possible only as part of a system of collective defence. Britain maintains forces in three areas of the world as contributions to the collective security alliances of which it is a member—the North Atlantic Treaty Organisation (NATO) and the Western European Union (WEU), the Central Treaty Organisation (CENTO) and the SEATO defence system in South-East Asia. Close liaison is maintained with other Commonwealth countries, facilitating considerable standardisation of equipment and training and interchange of personnel.

Britain's contribution to NATO includes over three-quarters of the operational and reserve fleets, a considerable proportion of the Royal Air Force front-line aircraft including the whole of Fighter Command and the V-bomber force, RAF Germany, nearly all Coastal Command, and the British Army of the Rhine. The British *Polaris* submarines now under construction will be assigned to a NATO Commander. A further contribution is the provision of facilities for a depot ship in the Holy Loch (Firth of Clyde, Scotland) for the United States *Polaris* submarines.

Under an agreement between the British and United States Governments signed in 1960, a joint Ballistic Missile Early Warning Station has been built at Fylingdales Moor, Yorkshire. The United States has provided equipment

[1] The defence programme is being reviewed; this chapter describes the position in June 1965.

for this station. The Fylingdales station completes the chain of three early warning stations that would supply information about missile attacks to western defence headquarters. The others are in Thule, Greenland, and Clear, Alaska.

Britain makes annual contributions towards the defence 'infra-structure' of the CENTO region, keeps a Royal Air Force nuclear bomber force in Cyprus expressly for the defence of the region and provides various military training facilities.

Singapore is a base for all three Services. Britain has a combined commitment to SEATO and to Malaysia (which is not a member of SEATO). Here, also, Britain provides training facilities for military personnel and, in particular, has built a strategic airfield in Thailand with the help of Australia and New Zealand. Britain maintains forces in Malaysia, including those in the Commonwealth Far East Strategic Reserve which comprises the Commonwealth Brigade and associated naval and air units, all of which are drawn from Britain, Australia and New Zealand.

Nuclear Policy

The object of nuclear defence policy is the deterrence of an aggressor by the fear of devastating retaliation. Britain's principal nuclear weapon is at present the *Blue Steel* propelled stand-off bomb, carried by the V-bombers of the Royal Air Force; these bombs greatly reduce the vulnerability of the bomber as they can be released a long distance from the target. Long-term nuclear strategy is based on the nuclear-powered submarine, equipped with *Polaris* missiles (see p. 122).

The Government's nuclear policy rests on the belief that the increased understanding of the consequences of nuclear warfare has greatly reduced its likelihood between the alliances of east and west. This stability might, however, be jeopardised by the spread of nuclear weapons to countries which do not now possess them. An urgent aim of the Government's foreign policy is to bring about international agreement to prevent their dissemination and defence policy is directed towards encouraging such agreements. In the meantime, nuclear policy is intended to provide some reassurance to non-nuclear powers. The Government has proposed the formation of an Atlantic Nuclear Force in which the strategic nuclear power of NATO would be concentrated and controlled under conditions which would both meet the legitimate requirements of the non-nuclear members to play their part and remove any incentive for the dissemination of nuclear weapons.

THE MACHINERY OF DEFENCE PLANNING

Supreme responsibility for national defence rests with the Prime Minister and the Cabinet, under the ultimate control of Parliament. Defence problems and their implications for foreign and economic policy are dealt with on the Cabinet's behalf by the Committee on Defence and Oversea Policy, under the chairmanship of the Prime Minister.

In 1964 major changes were made in the government departments responsible for defence. A unified Ministry of Defence, under a Secretary of State, was set up, absorbing what were formerly four separate departments—the Ministry of Defence, the Admiralty, the War Office and the Air Ministry. The Secretary of State for Defence is assisted by three Ministers of Defence for the Royal Navy, Army and Royal Air Force respectively, who have a particular responsibility for the management of the individual Services but who also assist the Secretary of State in any general defence matters which he delegates to them. The Minister of Defence for the Army also acts as Deputy to the Secretary of State for Defence, with particular responsibility

for the co-ordination of politico-strategic policy other than day to day operations; the Minister for the Royal Navy co-ordinates personnel matters and logistics and deals with problems of administrative rationalisation; and the Minister for the Royal Air Force co-ordinates research, development and production, and the defence budget as a whole.

Command and administration of the armed forces is vested in the Defence Council, under the chairmanship of the Secretary of State. The members of the Defence Council are the three Ministers of Defence, the Chief of the Defence Staff and the Chiefs of Staff, the Chief Scientific Adviser and the Permanent Under-Secretary of State. The Defence Council deals mainly with major defence policy.

The principal military advisers to the Government are the members of the Chiefs of Staff Committee, which comprises the Chief of the Defence Staff as chairman and the Chiefs of Staff of the three Services. The Committee is responsible to the Government for professional advice on strategy and military operations and on the military implications of defence policy.

The Minister of Defence and the Chiefs of Staff are advised by the Defence Research Policy Committee on all scientific and technical matters which may affect the formulation and direction of defence policy. The Committee also keeps under review the defence research and development programme. Its members are government officials responsible for the operational and scientific aspects of research and their development for defence purposes.

Service Management

The management of the three Services is delegated to Admiralty, Army and Air Force Boards of the Defence Council, of each of which the Secretary of State is chairman, although the appropriate Minister of Defence normally acts for him. The Boards each have three additional civilian members from their respective Departments (the Parliamentary Under-Secretary of State for Defence, a junior minister, the Second Permanent Under-Secretary of State, a civil servant who is secretary of the Board, and the Chief Scientist) and six (Admiralty and Army Boards) or five (Air Force Board) Service members, each in charge of a separate branch of administration.

Unified control of policy and management has made possible further rationalisation of Service administration and operation. Rationalisation of air power is under consideration and the whole structure of defence organisation, both in the Commands and in the Ministry of Defence, is being re-examined.

Service Organisation

The Royal Navy has nine specialist branches: Seaman, Communications, Engineering, Fleet Air Arm, Electrical, Supply and Secretariat, Medical, Artificers and the Regulating Branch.

The *Corps of the Royal Marines*, which is part of the Royal Navy, is a body of men trained for service on sea or land. Its official existence dates from 1664. The present-day functions of the corps are: to provide personnel for Commandos; to provide crews for minor landing craft and certain other parties required for amphibious assault; and to supply for H.M. ships detachments which take part in the routine duties, including guard duty, and provide emergency landing parties.

The Army is organised into some 30 arms and services[1] which include the Household Cavalry, the Royal Armoured Corps (the historic Cavalry Regiments and the Royal Tank Regiment), the Royal Regiment of Artillery, the

[1] These arms and services include the women's corps.

Corps of Royal Engineers, the Royal Corps of Signals (which provides land and wireless communications), the five regiments of Foot Guards (the Brigade of Guards), the regiments of the Infantry of the Line (grouped into brigades and the Parachute Regiment), the Army Air Corps (which operates light aircraft on reconnaissance and undertakes aerial observation and liaison work), the Royal Corps of Transport (which operates all types of logistic vehicles from locomotives to aircraft), the Royal Army Medical Corps, the Royal Army Ordnance Corps (responsible for most equipment and stores), and the Royal Electrical and Mechanical Engineers (responsible for most repairs).

The specialist branches of the Royal Air Force are the eight Home Commands (see p. 115).

THE DEFENCE BUDGET

In recent years defence has accounted for about a quarter of all central government ordinary expenditure. The cost of the defence programme for 1965–66 was estimated at £2,120·5 million, or 6·8 per cent of the gross national product. Britain's contribution to the Western nuclear deterrent is less than 10 per cent of this total.

Britain's contribution to the NATO forces involves a deployment of forces overseas and a consequent heavy burden on the country's balance of payments. The German Federal Republic relieved this burden to the extent of about £54 million in each of the two years 1962–63 and 1963–64, mainly by placing in Britain contracts for military (and some civil) goods, and in 1965 agreed to make further purchases, totalling £171 million, in the three years ending 31st March, 1967. In 1963 the expenditure in foreign currency for the maintenance of British forces abroad and other military purposes amounted to some £247 million and in 1964 to some £275 million.

The allocation of finance between government departments is shown in Table 5.

TABLE 5
DEFENCE ESTIMATES 1965–66

	£ million
Ministry of Defence (Central)	28·46
Ministry of Defence (Navy)	544·19
Ministry of Defence (Army)	555·60
Ministry of Defence (Air)	561·77
Ministry of Aviation	254·76
Ministry of Public Building and Works	170·22
Atomic Energy Authority	5·50
	2,120·50

The Ministry of Defence (Central) Estimates consist mainly of contributions to NATO and other international defence organisations. The Ministry of Public Building and Works Estimates cover works services for the three Services and the Ministry of Aviation.

Home defence expenditure by civil departments in 1965–66 is estimated at £22·7 million.

The long-term financial planning and control of the defence programme and the allocation of resources to the three Services is the responsibility of the Permanent Under-Secretary of State, who co-ordinates the views of military, scientific and civil administrative staffs.

COMMANDS

The home and overseas commands of the Services are:

Royal Navy

Portsmouth, Plymouth, Scotland (Rosyth), and the Commander-in-Chief, Home Fleet.

British naval forces in the North Atlantic and Mediterranean area are assigned to NATO. Naval command in the Middle East rests with the Flag Officer, Middle East, and in the Far East with the Commander, Far East Fleet. Smaller naval forces operate under the Commander-in-Chief, South Atlantic and South America Station, and the Senior Naval Officer, West Indies Station.

Army

Eastern, Northern, Northern Ireland, Scottish, Southern and Western Commands.

The British Army of the Rhine (assigned to NATO), Middle East Land Forces (Arabian Peninsula), and Far East Land Forces; Gibraltar, Malta and Cyprus Districts.

Royal Air Force

Bomber, Fighter, Coastal, Transport, Flying Training, Technical Training, Maintenance and Signals Commands.[1]

Royal Air Force, Germany (Second Tactical Air Force, assigned to NATO); Near East Air Force; Air Forces, Middle East; Far East Air Force.

Operational control of the Forces in the Middle and Far East is exercised through Unified Command Headquarters in Aden and Singapore respectively. Responsibility for the command of British forces allocated to the area and the planning and conduct of all operations is vested in a single commander, who may belong to any of the three Services; he is supported by an inter-Service staff co-ordinated by a Chief of Staff. These arrangements are one of the most important features of the increasing unity of the Services.

DEPLOYMENT OF THE FORCES

The basic principle of Britain's deployment is to retain in overseas theatres the minimum forces consistent with commitments, and to hold ready in the United Kingdom a Strategic Reserve, together with the air transport necessary to reinforce at maximum speed to anywhere in the world. Of a total force of 393,000, the broad division between men based in Britain and based overseas (including Germany) is as follows:

United Kingdom, 241,000; Germany (including Berlin), 62,000;
Mediterranean, 23,000; East of Suez, 58,000 (plus 14,000 Gurkhas);
elsewhere, 9,000.

Britain

The Strategic Reserve is a highly mobile force, transportable by air and capable of undertaking operations in any part of the world. Royal Air Force (RAF) Transport Command can provide airlift for men and equipment on behalf of all three Services and reinforce tactical transport aircraft overseas.

Bomber, Fighter and Coastal Commands of the RAF have NATO commitments, like the naval forces, but are also available for overseas reinforcement. Bomber Command can carry conventional or nuclear weapons.

Naval forces based on Britain include an aircraft carrier, cruisers, guided missile destroyers, escorts, submarines and smaller craft.

The principal administrative, training, technical and support facilities for all three Services are also maintained in Britain.

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[1] Flying Training and Technical Training Commands are to be amalgamated into a single Training Command from 1st June, 1968.

Germany

Britain has a commitment to keep 55,000 soldiers and a Tactical Air Force on the continent of Europe. In the event of an acute emergency overseas Britain can withdraw forces temporarily.

The British Army of the Rhine (BAOR) is not quite at full strength, but the commitment of 55,000 is recognised. There are in Germany *Canberra* strike and reconnaissance squadrons, *Hunter* fighter-reconnaissance aircraft, *Javelin* fighters (being replaced by *Lightnings*) and *Wessex 2* helicopters.

Mediterranean

In the Mediterranean, Britain has escort vessels and some minesweepers; small Army garrisons at Gibraltar and Malta; and two maritime and one reconnaissance squadron. The naval and air forces are mainly deployed in support of NATO.

In Cyprus, Britain maintains an Army garrison with supporting troops in addition to the RAF base at Akrotiri and an RAF contingent at Nicosia. RAF units include a *Javelin* all-weather fighter squadron and *Canberra* bomber squadrons for the support of CENTO; the latter have a nuclear as well as a conventional capacity.

Middle East

Aden is the base for a Royal Marine Commando, Army units and RAF ground attack and air defence, reconnaissance and transport squadrons. At Bahrein in the Persian Gulf there is an Army detachment. The RAF is also represented in the Gulf. Naval units on the Middle East station, with base facilities at Aden and Bahrein, include escorts, the amphibious warfare squadron and minesweepers. Carriers and Commando ships cover the whole area east of Suez.

Far East

Britain's largest forces outside Europe are in the Far East. The deployment of aircraft carriers and Commando ships is flexible between the Middle East and Far East and Britain expects to maintain a total of three in the area east of Suez. In the Far East there are, in addition, guided missile destroyers and a large number of escorts, submarines and coastal minesweepers. Among the Army units there is the Commonwealth Brigade Group which has units from Britain, Australia and New Zealand and integrated supporting arms and services. RAF units permanently deployed in the Far East include *Canberra* bombers and reconnaissance aircraft, *Hunter* ground attack aircraft, *Shackleton* maritime patrol aircraft, *Hastings*, *Beverley* and *Argosy* transport aircraft, *Whirlwind* and *Belvedere* helicopters and *Javelin* fighters.

Britain also maintains a military force in Hong Kong.

TABLE 6
ACTIVE STRENGTH OF THE ARMED FORCES, 1965–66

Thousands

	1st April, 1965				1st April, 1966 (estimate)			
	Royal Navy[a]	Army	RAF	Total	Royal Navy[a]	Army	RAF	Total
Regular (male) ..	92·3	177·2	123·4	392·9	93·5	181·1	124·1	398·7
Women (including nurses)	3·6	6·7	5·6	15·9	3·8	7·0	5·6	16·4
Boys	4·5	10·4	3·0	17·9	4·5	10·6	2·4	17·5
TOTALS ..	100·4	194·3	132·0	426·7	101·8	198·7	132·1	432·6

[a] Figures for the Royal Navy include the Royal Marines.

Other Areas

Forces in other areas include escort vessels and small ground forces in the Caribbean, and small naval forces in the South Atlantic and on loan to Australia and Canada.

MANPOWER

Defence policy provides for a force of about 400,000 professional servicemen, with the highest possible proportion in effective combat units, backed by an equal number of civilians. The forces consist entirely of regular volunteers.

An analysis of the strength of the forces in April 1965, with estimates for 1966, is given in Table 6. In addition, there were nearly 202,000 reserve and auxiliary forces with training liability on 1st January, 1965.

Commissioned Ranks

The following are the main commissioned ranks in the three fighting Services; each rank is shown parallel to its equivalent in the other Services.

Royal Navy	*Army*	*Royal Air Force*
Admiral of the Fleet	Field-Marshal	Marshal of the RAF
Admiral	General	Air Chief Marshal
Vice-Admiral	Lieutenant-General	Air Marshal
Rear-Admiral	Major-General	Air Vice-Marshal
Commodore	Brigadier	Air Commodore
Captain	Colonel	Group Captain
Commander	Lieutenant-Colonel	Wing Commander
Lieutenant-Commander	Major	Squadron Leader
Lieutenant	Captain	Flight Lieutenant
Sub-Lieutenant	Lieutenant	Flying Officer
	Second Lieutenant	Pilot Officer

TRAINING

Non-Commissioned Ranks

Entrants to the non-commissioned ranks of the three Services are given a basic training, and further training is given during the course of their careers. Young servicemen may have the opportunity to read for the General Certificate of Education 'O' level (see p. 161). Technical training, though primarily designed for Service purposes, leads in most cases to nationally recognised qualifications and experience which will be valuable later in civilian life. Completion of many Service technical courses, followed by experience in the trade, is recognised by trade unions as a qualification for membership by men who have left the Services.

Officers

Men may qualify for the rank of commissioned officer in several ways, with some differences between the three Services. Commissions may be granted for short, medium or long terms.

Promotion from the non-commissioned ranks is possible in all three Services. In the Royal Navy and the Army the normal method of entry is through cadetship in the Britannia Royal Naval College, Dartmouth, or the Royal Military Academy Sandhurst. This is followed by specialist training which may include degree courses. The RAF trains cadets for long-term commissions at the RAF College, Cranwell, Lincolnshire, but the majority of entrants to the flying and executive branches take Direct Entry Commissions (of medium length). There is special provision in the three Services for the entry of men with appropriate qualifications including doctors, dentists and other graduates.

Joint Service Training

Selected officers of all three Services who have had previous staff training or have been to the Royal Naval Staff College, Greenwich (London), the Army

Staff College at Camberley (Surrey), or the Royal Air Force Staff Colleges at Bracknell (Berkshire) or Andover (Hampshire) go to the Joint Services Staff College at Chesham (Buckinghamshire), where particular attention is paid to the inter-Service aspects of staff work. This college caters for about 150 students a year from the Navy, Army and Air Force, the Civil Service, and from other Commonwealth countries. A few specially selected and more senior officers from the Services, the Civil Service, and from other Commonwealth countries are sent to the Imperial Defence College in London.

Considerable training is done through joint-Service and inter-allied exercises, on which increasing emphasis is being placed. Joint-Service exercises are held both in Britain and in many overseas countries. Inter-allied exercises take place under the auspices of the three regional alliances.

Women's Services

The three women's services, *Women's Royal Naval Service* (WRNS), the *Women's Royal Army Corps* (WRAC) and the *Women's Royal Air Force* (WRAF) are integral parts of the Navy, Army and RAF respectively. The WRNS has its own disciplinary code, but the WRAC and WRAF are subject to the law of the respective men's Service. Service women serve alongside servicemen in Britain and overseas. Nursing services are provided by *Queen Alexandra's Royal Naval Nursing Service, Queen Alexandra's Royal Army Nursing Corps* and *Princess Mary's Royal Air Force Nursing Service.*

Resettlement

A Regular Forces Resettlement Service, set up by the Minister of Labour in 1957, assists regular officers and other ranks to find civilian employment on leaving the forces (see Chapter 16, Labour).

Reserve and Auxiliary Forces

The structure and functions of the reserve forces are under review (see p. 111).

Royal Navy

The *Royal Naval Reserve* (RNR) consists of volunteer reserves—serving at sea in the Merchant Navy or the fishing fleets or in civilian employment ashore—who carry out training in time of peace to meet the Navy's mobilisation requirements. Other reserves include the *Royal Fleet Reserve* (RFR), composed of certain ex-regulars; the *Royal Marine Forces Volunteer Reserve* (RMFVR); and the *Women's Royal Naval Reserve* (WRNR).

The *Royal Naval Auxiliary Service*, a civilian organisation composed of men and women volunteers, is responsible in time of war for minewatching duties around the coast and the waterways, and other duties.

Army

Britain's main reserve forces are the Regular Reserve, the Territorial Army, the Army Emergency Reserve and the Long Term Reserve; in July 1965 the Government announced plans for reconstituting the Territorial Army and Army Emergency Reserve as a single reserve, with effect from 1967.

The *Regular Reserve* consists of men who have completed the Colour portion of their service with the Regular Army but who are retained on a Reserve to complete a total engagement of 12 years: as such they are liable to recall to the Colours and for this they are paid a small daily retainer.

The *Territorial Army* is a voluntary force raised as local units in nearly all corps of the Army. After mobilisation they can be used to reinforce the Regular Army overseas (particularly BAOR), to support the civil authorities in the United Kingdom or to provide a framework on which general preparation for war can be made. Volunteers can undertake a further liability to join the *Territorial Army Emergency Reserve* (The Ever-Readies) which makes them available for six months' service with the Regular Army in times of tension.

The *Army Emergency Reserve* (AER) is a voluntary force, the majority of the volunteers being specialists. It is recruited countrywide and organised into communications units, administrative units and pools of individuals. The AER is used to supplement either the Regular or the Territorial Army.

The *Long Term Reserve* (LTR) was created by the Navy, Army and Air Forces Reserves Act 1964. As a result of this Act all men who join the Regular Army after February 1964 will be transferred to the LTR on completion of their Regular and Regular Reserve service. They will remain in the LTR until the age of 45 and will be liable to recall in an emergency. They are unpaid.

Royal Air Force

The *Royal Auxiliary Air Force* consists of two maritime headquarters units and a maritime support unit. The units are raised and maintained by local Territorial and Auxiliary Forces Associations and functionally controlled by Coastal Command. In addition the Royal Auxiliary Air Force General List comprises officers specially selected for service in war appointments.

The *Royal Air Force Reserve* consists mainly of officers and airmen who have served in the Air Force. It includes the *Royal Air Force Volunteer Reserve*, whose members, like the officers, airmen and airwomen of the Royal Auxiliary Air Force, have a liability to carry out training on a part-time basis. University air squadrons (established at 17 universities) form part of the Royal Air Force Volunteer Reserve.

The *Royal Observer Corps* is a predominantly civilian and voluntary organisation, administered by Fighter Command. Its present strength is over 15,000 men and women whose principal task would be the measuring and reporting of radioactivity in the event of nuclear attack. Some 1,500 underground operations centres have been built for the corps.

Cadet Forces

Cadet Forces provide pre-Service training for boys and, in addition, aim to teach good citizenship.

The *Combined Cadet Force* (CCF) contingents are based on schools in which education is continued to the age of 17 or over, and normally take boys for three years between the ages of 14 and 18. During this time they receive training in the Royal Navy, Army, or Royal Air Force sections of their choice.

There are also the *Sea Cadet Corps* (for boys between 12 and 18), the *Army Cadet Force* (14 to 18¾) which has 'open' detachments in towns and villages and 'closed' detachments in schools that do not have CCF contingents (boys who have left school may join 'open' detachments), and the *Air Training Corps* (14 to 20).

WEAPONS AND EQUIPMENT

The Ministry of Aviation is responsible for the supply to the Services of aircraft, guided weapons (including ballistic missiles), nuclear weapons and certain radar and other electronic equipment. The Ministry of Defence is responsible for the procurement of other weapons, stores and equipment. Under the new organisation, requirements for weapons and equipment are, where possible, formulated on a Defence, rather than a single Service, basis by the Defence Operational Requirements staff of the Ministry.

Production

A substantial part of the equipment used by the Services is developed and produced in Britain, some by private industry on a contract basis and some by the Royal Ordnance Factories, the Royal Dockyards and other establishments operated by the Ministry of Aviation and the Ministry of Defence. Production of nuclear warheads is undertaken by the Atomic Energy Authority (see p. 215) under contract with the Ministry of Aviation. In some cases—particularly where development costs would be disproportionately

high—aircraft, weapons and other equipment are bought from overseas. Conversely, British defence equipment has been adopted by allied and friendly nations: for example, the United States, the German Federal Republic, Denmark and Sweden are using the British 105 mm. tank gun, and British early warning radar equipment has been adopted by several countries and by NATO.

Britain also undertakes manufacture in collaboration with other countries. One example is the United States *Bullpup* short-range air-to-surface guided weapon which has been adopted by the Royal Navy and is being manufactured in Europe under a NATO international agency.

Research and Development

Establishments

Research and development are undertaken at a number of specialised establishments. Among the most important of those belonging to the Ministry of Aviation are: the Royal Aircraft Establishments, Farnborough and Bedford; the Royal Radar Establishment, Malvern, and the Aeroplane and Armament Experimental Establishment, Boscombe Down, Wiltshire. The Navy Department's two research establishments carry out research on ships, maritime equipment and weapons and also on certain kinds of electronic equipment on behalf of all three Services. They are at Portsdown (near Portsmouth), where the design and development of ship-borne gunnery and guided missile systems are carried out, and at Portland (Dorset), where all aspects of work on underwater detection are co-ordinated with work on underwater weapons. Research establishments controlled by the Army Department include the Royal Armament Research and Development Establishment, Sevenoaks, Kent; and the Fighting Vehicles Research and Development Establishment, Chobham, Surrey.

Nuclear-Powered Submarines

Much experimental work has been carried out by the Navy, with the Atomic Energy Authority, on nuclear propelled submarines and a nuclear submarine power unit prototype is in operation at Dounreay (see p. 217). The hunter-killer nuclear submarines, with new detection equipment of advanced design and an armament of homing torpedoes, are specially effective anti-submarine weapons. The Royal Naval College, Greenwich, has a low-power training reactor which provides facilities for basic education in nuclear engineering and research.

Missile Testing

Guided missiles are tested at the Ministry of Aviation's research establishments, and guided and ballistic missiles at the Woomera range set up in Australia under the Joint United Kingdom/Australia Guided Weapon Project. Service firing trials of air-to-air and surface-to-air missiles are carried out at Aberporth and at the Army gunnery range in Anglesey; a range for testing surface-to-surface missiles has been set up on South Uist in the Hebrides. There is close collaboration with the United States in the exchange of information and visits by technical personnel and units.

Nuclear Weapons

Research into nuclear weapons began in Britain during the second world war. It was continued, as an allied project, in the United States where the first atomic bomb was produced. After a subsequent period of independent development in both countries, collaboration was resumed in 1958, when an agreement was concluded which made possible the exchange of information on the design and manufacture of nuclear weapons. This was supplemented by a further agreement in May 1959, which contained provisions to enable Britain to buy from the United States component parts of atomic weapons and weapons systems, other than actual warheads, and to make possible the exchange of nuclear materials between the two countries.

Britain's present nuclear programme is based on an agreement of 1963 under which Britain buys from the United States a number of *Polaris* missiles, to be fitted with British nuclear warheads, for submarines to be built largely by Britain. Four submarines are to be constructed (see p. 122), each to be equipped with 16 missiles.

In 1963 Britain, with the United States, the Soviet Union and many other countries, signed a treaty prohibiting testing of nuclear weapons in the atmosphere, outer space and under water.

Other International Collaboration

Military research work and development of new military equipment are extremely expensive and complex and Britain is pursuing a policy of interdependence in this field with its NATO and Commonwealth partners and with other friendly nations.

The Royal Navy

The new navy that is coming into being is smaller than that of the past but highly mobile and flexible. The aircraft carrier will continue to be the core, and grouped round the carriers will be supporting ships carrying the latest weapons for dealing with air, surface and underwater attacks and capable of acting by themselves on detached service. Seaborne task forces will include commando ships and assault ships designed to carry a striking force of troops with their tanks, guns and logistic backing.

During 1965 there were 143 ships in the operational Fleet (including 4 aircraft carriers, 2 commando ships, 2 cruisers, 4 guided missile destroyers, 7 other destroyers, 41 frigates and 35 submarines), together with 45 engaged on trials and training and 98 support ships and auxiliaries.

The modern carriers are equipped with the angled flight deck, the steam catapult, the automatic aircraft positioning device, and the mirror and 'Audio' landing aids (all British inventions).

The carrier H.M.S. *Eagle* will be the first ship fitted with the revolutionary Action Data Automation system, giving command and control facilities in advance of any system at present known. For the 1970s a force of three aircraft carriers is contemplated, two now in the Fleet and a third which is being designed. Two former aircraft carriers, the *Bulwark* and the *Albion*, have been converted into commando carriers, designed to carry a Royal Marine commando (some 750 men), together with helicopters, landing craft and vehicles. Two assault ships of entirely new design have been launched, the *Fearless* and the *Intrepid*. They will greatly increase the Navy's facilities for amphibian operations by their speed, improved communications and larger troop-carrying capacity and their ability to land tanks, heavy vehicles and equipment.

Three Tiger class cruisers, with fully automatic armament and the latest control equipment, have been completed. Of six County class guided missile destroyers planned for the Navy, four have joined the active fleet. Their armament includes the *Seaslug* missile, a most effective weapon for the interception of attacking aircraft, and the shorter range *Seacat* missile for close air defence. The escort fleet also includes nine Leander class frigates, with a further seven under construction.

The seven Type 81 Tribal class frigates, embodying the new gas turbine boost machinery pioneered by the Royal Navy, are now operational. Eight fast long-range conventional submarines of the Porpoise class are now in service, as well as eleven of the highly manoeuvrable Oberon class. The Navy's first nuclear-propelled submarine, the *Dreadnought*, was commissioned in 1963. It incorporates a United States nuclear propulsion unit. The second nuclear submarine, *Valiant*, of British design, was launched later in 1963.

Afloat support to the Fleet for replenishment at sea, or in harbours or anchorages, is provided by the Royal Fleet Auxiliary Service, comprising tankers, store-issuing ships, tugs and salvage vessels. These ships fly the Blue Ensign and are manned by Merchant Navy officers and seamen.

The dockyards at Portsmouth, Devonport, Chatham and Rosyth provide the Navy with major supplies and repair facilities at home. Singapore and Gibraltar are the main dockyards overseas.

The Polaris Programme

It is intended that the first *Polaris* submarine should be ready for patrol in mid-1968, and three by the end of the decade. Work is in hand on the construction on the Gareloch (north of the Clyde Estuary) of a Polaris base, part of which will be a training school for crews; until the school is ready, in 1966, crews will be trained in the United States.

Fleet Air Arm

The *Buccaneer*, *Sea Vixen* and *Scimitar* provide the main strike and fighter strength of the Fleet Air Arm. The United States air-to-surface guided missile, *Bullpup*, is fitted to all three aircraft, improving the accuracy of high-explosive delivery. The *Buccaneer II* is a long-range low-level strike aircraft now in squadron service; ultimately all *Scimitar* aircraft will be replaced by the *Buccaneer*. The Mark I version of the *Sea Vixen* fighter carries the air-to-air missile *Firestreak* but this is being replaced by a Mark II version, which has an improved weapon system incorporating the new *Red Top* air-to-air missile, giving increased effectiveness against high-flying and supersonic targets. The United States *Phantom* aircraft, powered by Rolls-Royce *Spey* engines, will eventually replace the *Sea Vixen*.

Helicopters are being increasingly employed by the Navy. Reinforcing the *Whirlwind*, a more powerful all-weather helicopter, the *Wessex 5*, is in front line service as the Navy's main anti-submarine aircraft. It carries both homing torpedoes and dipping sonar (sound navigation and ranging) submarine detection equipment. It is in service with carriers and the guided missile-carrying destroyers, and a commando troop-carrying version armed with the *SSII*, a French anti-tank guided missile, is serving with the commando ships. The *Wasp* helicopter forms part of an advanced anti-submarine weapon system for the Leander and Tribal classes of frigates. With the latest detection equipment and a new lightweight homing torpedo it greatly increases the effectiveness of the Navy's escort forces against high-speed submarines. United States *Sioux* helicopters, built under licence in Britain, are being used by the Royal Marines.

The Army

A new range of weapons, vehicles and other equipment is coming into service with the Army. To achieve strategic mobility much of the Army's new equipment is, or is planned to be, transportable by air. Many items of equipment, such as tanks and self-propelled guns designed for use in BAOR, can be deployed in war overseas only if they are stockpiled in the area of operation or are transported there by sea. Equipment transportable by air includes, or will include, all the infantry battalion weapons, the 105 mm. pack howitzer for close artillery support, medium-level surface-to-air guided weapons, armoured scout and reconnaissance vehicles, and certain engineer equipment including bridging.

Increased emphasis is being laid on the provision of suitable equipment to improve the ability of our forces to undertake counter-insurgency operations such as that currently taking place in Borneo. A new lightweight rifle will be issued in quantity to Far East Land Force (FARELF) this year for trials, as part of a plan to lighten the load of the fighting soldier.

To improve tactical mobility within a theatre of operations, new engineer equipment for rapid construction and repair work and new bridging equipment are now coming into service or are planned. The introduction into service in BAOR of the new tracked armoured personnel carrier and the *Stalwart* high mobility load carrier will improve immeasurably the mobility of the battle group. Increased mobility and firepower for the battle group will also result from the introduction into service, shortly, of the *Chieftain* main battle tank, the *Abbot* self-propelled close support gun, the 175 mm. (M107) self-propelled heavy gun (of United States origin) and a new M109 self-propelled medium gun. The *Centurion* tank has meantime been equipped with more powerful armament. The fire-power of infantry battalions is being improved by the introduction into service of the *Wombat*, *Carl Gustav*, and *Vigilant* anti-tank weapons, the 81 mm. mortar and the general purpose machine gun, replacing both the *Vickers* and the *Bren*. The *Swingfire* (anti-tank guided weapon), mounted on the armoured personnel carrier and *Ferret* scout car, is being developed and will be issued to armoured units.

Surface-to-surface guided weapon regiments in service with BAOR are equipped with the *Corporal*, and composite regiments with the American *Honest John* missiles and the eight-inch howitzer. The medium-level air defence surface-to-air guided weapon system, *Thunderbird I*, is in service and will be replaced by an improved, more mobile version of the same system. A low-level surface-to-air guided weapon is being developed.

Weapons with longer ranges, greater dispersal of forces on the battlefield, increased mobility and the heightened tempo of war will necessitate improved surveillance and reconnaissance by day and night. Improved weapon locators, tactical radars, airborne devices for use in aircraft and drones and night vision aids are all coming into service. Automatic data-processing and display systems are planned to assist in the collation and dissemination of intelligence. Radio communications are being greatly improved with new equipment.

There is also a requirement to provide surveillance and listening devices for use in counter-insurgency operations. A number of these devices are currently on trial in FARELF.

The *Sioux* helicopter is to be integrated into Royal Armoured Corps, Royal Artillery, Royal Engineers and infantry units and, together with the *Scout* helicopter and the Canadian *Beaver* fixed-wing light liaison aircraft, comprise the future group of Army aircraft.

Royal Air Force

The spearhead of the RAF is the force of *Vulcan* and *Victor* four-engined jet bombers. They can carry the *Blue Steel* propelled stand-off bomb, which has a warhead in the megaton range, and they are capable of being refuelled in flight, giving them an increased range. *Victors* are also employed as flying tankers. The V-bombers will thus contribute an effective deterrent force for some years to come. The present reconnaissance force is composed of *Victors* and *Canberras*.

The tactical strike forces, made up of *Canberras* and *Hunters*, can be brought quickly into action. The *Canberra* light bomber and reconnaissance aircraft continues to give good service in Germany and the Near East; it can carry the French AS30 guided bomb.

Squadrons are being equipped with *Bloodhound 2*, an advanced air defence missile which is transportable by air for overseas reinforcement. Manned fighters continue to be needed to deal with manned aircraft, the stand-off bomber and radar-jamming aircraft, to prevent reconnaissance and to investigate unidentified intrusions. Fighter Command is equipped with

Lightning and *Javelin* aircraft. Both carry the air-to-air guided missile *Firestreak*. The *Lightning*, the RAF's first supersonic fighter, is fitted with an electronic computer to aid bomber interception; *Lightning 3* carries the more sophisticated *Red Top* air-to-air missile.

The future replacements of the *Hunter* will be the *Phantom*, which has a high capacity both as a fighter and as a ground strike aircraft, and *Kestrel* (P.1127) vertical take-off and landing aircraft.

Coastal Command's long-range maritime reconnaissance force, which is committed to NATO, is wholly equipped with *Shackleton* aircraft. An improved version—the *Shackleton* Mark 3—is in service, and an adaptation of the *Comet* is being ordered as a replacement.

Transport Command is being re-equipped to provide increased mobility for the strategic reserves of both land and air forces. A *Comet 2* squadron formed in 1956—the first all-jet transport squadron in any air force—has proved very successful, and *Comet 4Cs* are also in service. Two squadrons of *Britannia* aircraft are in service for long-range transport and fourteen *VC10* troop carriers are on order. The *Beverley* and *Hastings* freighters and the Armstrong Whitworth *Argosy*, a tactical freighter also used for trooping and the dropping of parachutists, will all be replaced by the United States *C.130E*. The *Belfast* aircraft is now in production as a strategic freighter able to carry large military loads quickly over long distances. *Twin Pioneer* short-range aircraft are in service and the *Andover* has been ordered as a medium-range tactical transport. The *Basset* has been ordered for light communications work.

Increasing use is being made of helicopters for [illegible] part of the Army [illegible] for the Search and Rescue Organisation of Coastal Command, which in peace time also operates for the rescue of civilians involved in shipping accidents or other difficulties in coastal waters. The twin-rotor *Belvedere* and the gas-turbine engined *Whirlwind* are both in service and so is the *Wessex 2*, which has a greatly improved load capacity, particularly in tropical conditions and at high altitudes.

Basic flying training schools have been equipped with the *Jet Provost* and *Gnat* trainers. The *Dominie* is replacing the *Varsity* for advanced navigational training.

The system of control and reporting, which has been built into a highly efficient organisation, is closely linked with the radar systems of Continental allies. A reconstructed radar chain now covers the whole of the United Kingdom. A new high-performance radar system, which includes computers and data-handling equipment for the interception of supersonic aircraft, is being introduced. The Royal Air Force commands and operates the joint UK-US ballistic missile early warning station at Fylingdales, Yorkshire (see p. 111).

Hovercraft

Two Hovercraft are now in operation with a Joint Service Hovercraft Unit. Evaluation of Hovercraft is carried out by the Inter-Service Hovercraft Trials Unit at Lee-on-Solent.

HOME DEFENCE

The second world war showed the importance of having trained and organised bodies of men and women ready to mitigate the effects of enemy air attacks on the civil population; and the Civil Defence Act 1948 recognised that a permanent system of civil defence was an integral part of the country's defence plan. At the same time, the main defence objective, made imperative

by the development of nuclear weapons, is not to prepare for war but to prevent it.

Expenditure and other information on home defence is given annually in the *Statement on the Defence Estimates* (see p. 114).

The Civil Defence Programme

Following a nuclear attack there would be enormous and immediate devastation: there would also be millions of survivors in need of help. The civil defence programme is designed to ensure as many survivors as possible and to safeguard their well-being by making the best use of essential supplies and services after an attack.

Warning of Attack

A national warning and monitoring organisation has been set up to warn the public of the threat of air attack. The organisation would also provide civil and military authorities in Britain (and neighbouring NATO countries) with a scientific appreciation of the path and probable intensity of fall-out. Warning would be given by siren from 15,000 points throughout the United Kingdom and by BBC broadcasts.

Information about nuclear bursts and radioactive fall-out would be collected by the Royal Observer Corps (see p. 119).

Dispersal and Shelter

A scheme has been drawn up for the voluntary dispersal from the larger towns of people who would be at a special disadvantage in times of enemy attack—some 43 per cent of the population of the dispersal areas. These are mainly children and their mothers, expectant mothers and those disabled, aged and infirm people who are dependent on others taking part in the dispersal scheme.

It would be impossible to provide protection by shelter within any area of complete devastation caused by nuclear explosion, and beyond the country's resources to provide specially constructed underground shelters all over the country as a protection against blast, heat and fall-out. Nevertheless, protective shelter against some of the effects of nuclear explosions could be provided relatively simply for most households and advice on this is given in civil defence publications.

Supplies and Communications

Plans have been made for safeguarding essential supplies of food, electricity, gas and water and for maintaining the functioning of ports, shipping and railways. Provision is also being made for stockpiling, storing and distributing oil and emergency medical supplies. Special attention is being given to safeguarding telephone communications and broadcasting.

Organisation of Civil Defence

Civil defence planning in Britain is the responsibility of a number of ministers each of whom undertakes the duties which, in war time, would represent a natural extension of his peace-time functions. The central Government has enlisted the assistance of local government authorities, of industry and commerce and of public bodies of many kinds, including voluntary organisations such as the Voluntary Aid Societies and the Women's Voluntary Service, for the local execution of the plans.

In England and Wales the Home Secretary co-ordinates the work of government departments in home defence planning and supervises the civil defence activities of the police and fire services, the Civil Defence Corps and the Industrial Civil Defence Service. Other government departments have direct responsibility for the civil defence applications of the services which they control; for example, the Ministry of Health is responsible for the hospital and first-aid services, and the Post Office for telecommunications.

In Scotland the Scottish Home and Health Department deals with questions corresponding to those dealt with by the Home Office in England and Wales,

and is responsible for such matters as the hospital and first-aid services.

In Northern Ireland the Civil Defence Act (Northern Ireland) 1950 places responsibility for civil defence matters on the Ministry of Home Affairs, which may arrange for other departments to undertake some functions on its behalf.

Regional Organisation

Co-ordination of government activity in war time would be undertaken in the nine civil defence regions in England by Regional Commissioners, who would assume full responsibility if control by the central Government were disrupted. Similar arrangements would apply in Scotland and Wales. Northern Ireland would be under one central control.

In England and Wales the regions are divided into two or more sub-regions in each of which the main government departments, the police, fire service and public utilities would be represented, so that effective government would continue if communications with the regional headquarters were cut off. Below sub-regional level, control is based on administrative counties and county boroughs and within counties, on county districts. In these areas the warden organisation would operate through sector and wardens' posts.

The Civil Defence Services

Civilian volunteers in Great Britain who undertake regular training provide in times of peace the following part-time services:

1. The Civil Defence Corps (193,400 members in March 1965), which helps authorities to carry out their civil defence functions. The Corps is the nucleus of an organisation which would be greatly expanded in war.
2. The Industrial Civil Defence Service (129,400 members in October 1964), formed in the larger industrial and commercial establishments.
3. The Auxiliary Fire Service (13,400 members in March 1965), which in war time would reinforce the fire brigades trained by local authorities in peace time. The Fire Service would become a national organisation in time of war.
4. The National Hospital Service Reserve (64,500 members in 1965), limited at present to trained nurses and people willing to be trained as nursing auxiliaries, reinforces the National Hospital Service in England and Wales. In Scotland there is also an Ambulance Section of the Reserve.

In Northern Ireland there are three main services: the Civil Defence Corps, the Auxiliary Fire and Rescue Service, and the Hospital Service Reserve.

The Civil Defence Corps is recruited and organised by certain local authorities (the councils of counties and county boroughs in England and Wales, or counties and large burghs in Scotland) in local divisions. The local divisions are subdivided into five sections:

Headquarters:	control of civil defence operations, communications, reconnaissance (including scientific matters).
Wardens:	public guidance and control, reporting of damage and radioactive fall-out, organisation of immediate self-help measures, and the local control of life-saving operations.
Rescue:	rescue of trapped persons and rendering first aid to them.
Ambulance and First Aid:	first aid, conveyance of casualties to Forward Medical Aid Units and to hospital, and the organisation of stretcher-bearers.

Welfare: assistance with dispersal, care of the homeless, rest centres, billeting, emergency cooking and feeding, public information centres.

In Scotland there is a First Aid Section; the ambulance services are organised by the Scottish Ambulance Service.

In Northern Ireland the Civil Defence Corps, which is organised directly by the Ministry of Home Affairs and not by the local authorities, consists of three sections—Headquarters, Wardens and Welfare; the Ambulance Service forms part of the Hospital Service, and the Rescue Section has been integrated with the Auxiliary Fire Service to form the Auxiliary Fire and Rescue Service.

Training

Members of the Civil Defence Corps must undertake a standard training in the section in which they enrol, and have two years in which to complete this. Those who pass the standard training test may take advanced training (Class A) and if they undertake to perform a total of 45 hours' approved duty, including advanced training, may qualify for a bounty of £10 to £15, according to rank. Others may perform less onerous training (Class B) or pass to the Civil Defence Corps Reserve.

Units of the Industrial Civil Defence Service are trained and organised in much the same way as the Civil Defence Corps and in war would operate closely with it.

Civil defence instructors are trained either at one of the three Home Office Civil Defence Schools or locally under arrangements made by local authorities. Courses and studies for senior officials are held at the Civil Defence Staff College at Sunningdale, Berkshire, and in Scotland, at the Civil Defence School at Taymouth Castle, Perthshire.

Auxiliary firemen are trained by officers and men of the regular brigades. In addition, both regular and auxiliary firemen receive special training in emergency fire-fighting at the Home Office Fire Service Training Centre at Moreton-in-Marsh, Gloucestershire. Auxiliary firemen are encouraged to gain practical experience of fire-fighting by performing stand-by duty at fire stations to enable them to respond, with regular members of the brigade, to calls to fires. Exercises are also held, involving the control and operation of large numbers of pumping and other fire-fighting appliances. Training regulations are similar to those for the Civil Defence Corps; auxiliaries are expected to do 50 hours' standard training before they go on to advanced training to qualify for a bounty of £10 to £15. Those who do not wish to qualify may pass into the Auxiliary Fire Service Reserve, in which they are required to attend a minimum of one annual exercise or parade.

The Police

In time of war the police would continue to be responsible for the prevention of crime, for the maintenance of law and order and for the control of essential service routes. They are also likely to have duties in connection with dispersal, care of the homeless and other specialised civil defence tasks. In all these duties they would have the aid of the Special Constabulary.

Role of the Armed Forces

The Secretary of State for Defence plans the part to be played by the armed forces in home defence and co-ordinates the plans of the military and civil authorities. The main ways in which the armed forces can render assistance are: by helping the civil authorities to maintain control and by giving assistance to the police and the fire services; helping in the reception and care of the

homeless; in the treatment and evacuation of casualties and in the clearance of radioactive fall-out zones; providing guards, helping to maintain road, rail and water communications and undertaking light rescue, reconnaissance and the provision and running of camps.

A number of men of the Royal Air Force have been trained in emergency fire-fighting operations at Home Office training centres to enable them to serve as firemen in a National Fire Service, while certain units of the Territorial Army are trained each year in emergency fire-fighting techniques.

5
SOCIAL WELFARE

STATE AND VOLUNTARY SERVICES

In Britain the State is now responsible, through either central or local government, for a range of services covering family allowances, social insurance, help for war victims, financial assistance when required, health and welfare services for mothers and young children, the sick, mentally disordered, elderly and handicapped and for families in difficulties of various kinds, and the care of children lacking a normal home life (all described in this chapter); and for education (see Chapter 6), housing (see Chapter 7) and employment services (see Chapter 16). Public authorities in the United Kingdom are spending about £5,230 million a year on this range of services; that is, over £97 a year per head of the population.

Voluntary organisations, especially the Churches, were the pioneers of nearly all the social services. They provided schools, hospitals, clinics, dispensaries, and social and recreational clubs before these were provided by the State. They made themselves responsible for the welfare of the very young and the very old, the homeless and the handicapped. Gradually the State accepted the primary responsibility for the major services, supplementing the voluntary services and developing a comprehensive structure that ensured a minimum standard of living and wellbeing for all citizens.

State and voluntary social services are now complementary and co-operative. The State often works through voluntary agencies specially adapted to serve particular needs and ensures that necessary standards are maintained. The officers of central and local government, in carrying out their duties, co-operate with the workers of many voluntary social service societies, while the residential provision made by the State and by local authorities for the care of the chronic sick and the aged is supplemented by voluntary homes of various types for the care of the sick and elderly, most of whom receive State pensions or benefits.

The Charity Commission, a government department, gives free advice to trustees of charities, making schemes to modify their trusts and purposes when necessary; it maintains a Central Register of Charities in which information about all the charities in England and Wales is being gathered together; and it works to promote co-operation between charities and State services.

Voluntary Organisations

The number of voluntary charitable societies and institutions in Britain runs into thousands; they range from national organisations to small individual local groups. Most organisations, however, are members of larger associations or are represented on local or national co-ordinating councils or committees. Some are chiefly concerned with giving personal service, others in the formation of public opinion and exchange of information.

Organisations concerned with personal and family problems and misfortunes include the voluntary family casework agencies, of which the Family Welfare Association, working mainly in London, is the best known; marriage guidance centres affiliated to the National Marriage Guidance Council; and the Family Service Units.

Voluntary service to the sick and disabled in general is given by the British Red Cross, the St. John Ambulance Brigade and the St. Andrew's Ambulance Association, but a number of societies exist to help sufferers from particular disabilities, such as the Royal National Institute for the Blind, the Royal National Institute for the Deaf, the National Association for Mental Health, the constituent members of the Central Council for the Disabled and their Scottish equivalents.

Bodies working on a national scale whose work is specifically religious in inspiration include the Salvation Army, the Church Army, Toc H, the Committee on Social Service of the Church of Scotland, the Church of England Children's Society, the Church of England Council for Social Work, the Young Men's Christian Association, the Young Women's Christian Association, the Society of Friends, the Crusade of Rescue, the Society of St. Vincent de Paul, the Catholic Marriage Advisory Council and the Jewish Board of Guardians.

A wide range of voluntary personal service is given by the Women's Voluntary Service, which 'lends a hand' in every kind of practical difficulty, brings 'meals on wheels' to housebound invalids and old people, minds children, and visits the sick in hospital, as well as doing relief work in emergencies.

A central link between different voluntary organisations and official bodies concerned with social welfare is provided in England and Wales by the National Council of Social Service, which brings together most of the principal voluntary agencies for consultation and joint action, either as a whole or in groups of those concerned with particular aspects, such as youth work or old people's welfare. There are also the Scottish Council of Social Service and the Northern Ireland Council of Social Service, which perform similar co-ordinating functions in the voluntary sphere. It was the National Council of Social Service which set up the Citizens' Advice Bureaux, of which there are now about 430 in Great Britain. The primary role of the bureaux is to give explanation and advice to the citizen who is in doubt about his rights or who does not know about the State or voluntary service which could help him.

Social Workers

While the voluntary worker giving full-time or part-time service has done pioneer work in many of Britain's social services and continues to play an essential part, social services of all kinds increasingly depend for their operation chiefly on the professional social worker, that is, the full-time salaried worker trained in the principles and technique of social work. Training for many forms of social work consists of a basic university degree, diploma or certificate course in social science followed by a university course in applied social studies or specialised training for a particular service. The latter is sometimes organised by the profession concerned. Under the Health Visiting and Social Work (Training) Act 1962 a Council for Training in Social Work was set up to promote the training, in the first instance, of workers in the local authority health and welfare services and similar services run by voluntary bodies. Full-time courses lasting two years, now being provided by eleven colleges of further education, lead to the Council's Certificate in Social Work. More courses are being arranged, including two starting in October 1965 in Scotland.

Voluntary organisations were the pioneers in the employment and training of social workers, but government departments and local authorities now employ a considerable number of trained social workers, for example, in

child care, youth work, medical-social work, psychiatric social work, and the probation service.

Immigration and Welfare

In recent years many people from Commonwealth countries in Asia, Africa and the West Indies have entered Britain to take up employment, some with their families but many alone, their families coming later. Often they concentrate in large industrial areas where they add to the demand for housing and increase the pressures on educational facilities and other social services.

In 1965, because the Government was not satisfied with progress in integrating Commonwealth immigrants into the community, the Prime Minister appointed one of the Parliamentary Under-Secretaries of State in the Department of Economic Affairs to be personally responsible for co-ordinating government action and promoting the efforts of local authorities and voluntary bodies to deal with the various social and economic problems.

The Commonwealth Immigrants Advisory Council, which was set up in 1962, has published three reports on these problems. On its recommendation a non-official National Committee was set up in 1964. The Government intends to replace these two organisations by a new National Committee for Commonwealth Immigrants which will promote integration efforts on a national basis.

The Race Relations Bill 1965, of which the main object is the introduction of legal sanctions against discriminatory behaviour, provides for local conciliation committees to inquire into complaints of racial discrimination in places of public resort and a Race Relations Board to look into cases where conciliation is not achieved. If necessary, the Attorney-General would take proceedings in the civil courts.

SOCIAL SECURITY

National Insurance, Industrial Injuries Insurance, Family Allowances and National Assistance together with (in a special category) War Pensions, constitute a comprehensive system of social security in the United Kingdom which ensures that in no circumstances need any one fall below a certain minimum standard of living.

The Ministry of Pensions and National Insurance administers the first three of these services in Great Britain; in Northern Ireland they are administered by the Ministry of Health and Social Services. National Assistance is administered by the National Assistance Board in Great Britain, and in Northern Ireland by the National Assistance Board for Northern Ireland. Pensions and welfare services for war pensioners and their dependants are the responsibility of the Ministry of Pensions and National Insurance throughout the United Kingdom. Appeals relating to claims for insurance benefits, family allowances or war pensions, or to applications for assistance, are not decided by the Ministries or the Boards but by independent authorities appointed under relevant legislation.

Although the development of public provision for social security in Britain can be traced back for several centuries (the Poor Relief Act of 1601 may be regarded as specially important in England and Wales), the modern system of comprehensive provision is a creation of the twentieth century. Non-contributory old age pensions were introduced in 1908, and the first contributory pensions for old people, widows and orphans in 1926. A contributory National Health Insurance Scheme was begun in 1912, and in the same year a scheme of unemployment insurance was introduced which in 1920 was extended to cover the great majority of employees. By the beginning of

the second world war social security provision in Britain was among the best in the world, but lacked co-ordination by the very fact of its piecemeal development, and not everyone came within its scope. In the immediate post-war years a series of Acts introduced the present comprehensive system, which became fully operative on 5th July, 1948. Adjustments have been made by a number of subsequent Acts. Statutory provision for the war disabled goes back to the end of the sixteenth century, but the main lines of the present war pension provisions were laid down during the first world war.

Family allowances and national insurance benefits or allowances, other than maternity, unemployment or sickness benefit, are included in the taxable income on which income tax is assessed. On the other hand, various income tax reliefs and exemptions are allowed on account of age or liability for the support of dependants. War disablement pensions are not taxable.

Reciprocity

The national insurance, industrial injuries and family allowances schemes of Great Britain and those of Northern Ireland and the Isle of Man operate as a single system. Reciprocal agreements on industrial injuries, family allowances and all, or most, national insurance benefits are in operation with Belgium, Denmark, Finland, the German Federal Republic, Guernsey, Jersey, Norway and Yugoslavia. Agreements with France, Israel, Italy, Luxembourg, Malta, the Netherlands, Sweden, Switzerland and Turkey cover industrial injuries and most national insurance benefits. With Australia, Canada and New Zealand there are agreements on family allowances and some, or most, national insurance benefits. There is an agreement with Cyprus on national insurance, and one with the Irish Republic which covers some national insurance benefits; it also contains some industrial injuries provisions relating to seafarers. Northern Ireland and the Isle of Man, as well as Great Britain, are party to most of the agreements with other countries.

FAMILY ALLOWANCES

Family allowances are provided in Great Britain under the Family Allowances Act 1945, and in Northern Ireland under the Family Allowances Act (Northern Ireland) 1945. Nearly 6 million allowances are being paid in Great Britain to about $3\frac{3}{4}$ million families with two or more children and over a quarter of a million in Northern Ireland to 118,000 families. An allowance is paid for each child other than the first child below the age limits. The age limits are 15 years for children who leave school at that age, 16 years for certain incapacitated children, and 19 for children who remain at school or are apprentices. The rate of the allowance is 8s. a week for the second child below the age limits and 10s. a week for the third and each subsequent child.

Family allowances are paid from the Exchequer and their object is to benefit the family as a whole; they belong to the mother, but may be paid either to the mother or to the father. There is no insurance qualification for title to the allowances, but there are certain residence conditions.

NATIONAL INSURANCE

The National Insurance Acts 1946–64 apply, in general, to everyone over minimum school-leaving age (15 years) living in Great Britain. There are similar schemes in Northern Ireland and the Isle of Man.

The National Insurance scheme provides benefits in specified contingencies to insured persons who have paid the required contributions. The benefits are paid for partly by insured persons' contributions, partly by contributions of employers in respect of their employees, and partly by a contribution made by the Exchequer out of general taxation. The rates of contributions (except for retirement pensions) and benefits are standard amounts varying

only with the sex and insurance class of the insured person (with lower rates for those under 18). For retirement, graduated contributions and pensions were introduced in 1961; the scheme applies to all adult employed persons earning over £9 a week and not 'contracted out' of it and provides for them to earn additions to flat-rate retirement pension (but not to any other benefit) in return for graduated contributions, related to earnings between £9 and £18 a week and normally paid in addition to the flat-rate contribution. Employees whose job provides them with an occupational pension, at least equivalent to the maximum State graduated pension, may be 'contracted out' of the scheme. About 4½ million employees are contracted out in Great Britain and over 39,000 in Northern Ireland.

Contributors

Contributors under the National Insurance scheme are divided into three classes:

Class 1. *Employed persons.* Those who work for an employer under a contract of service or are paid apprentices—over 23 million. This class falls into two groups: those who are, and those who are not, participating in the graduated part of the scheme.

Class 2. *Self-employed persons.* Those in business on their own account and others who are working for gain but do not work under the control of an employer—nearly 1½ million.

Class 3. *Non-employed persons.* All persons insured who are not in class 1 or 2—over a quarter of a million.

This general classification is subject to certain modifications, made by regulations, to meet special circumstances. Married women engaged only in their own household duties are, in general, provided for by their husbands' insurance and need not pay contributions. They can choose to pay contributions provided they were insured persons when they married. (Those who were already married when the scheme began to operate on 5th July, 1948, cannot be insured in their own right unless they were then insured under the old scheme and continued to pay contributions as non-employed persons, or unless they have since taken up paid work.) Employed married women may choose whether to pay separate contributions themselves or to rely on the cover provided by their husbands' contributions, which make them eligible for maternity grant, retirement pension at lower rate, widow's benefit and death grant, but they must pay graduated contributions if they are employed in a participating employment and their earnings are over £9 a week. Students receiving full-time education and unpaid apprentices need not pay contributions. Up to the age of 18, contributions are credited to them. Over that age they may, if they wish, pay as non-employed persons (class 3) and thus safeguard their title to widow's benefit and to retirement pension at full rate. Self-employed and non-employed persons whose income is not more than £260 a year can apply to be excepted from liability to pay contributions. They too may pay as non-employed persons to safeguard entitlement to pension.

An insured person ceases to be liable for national insurance contributions at the age of 70 for men, 65 for women, or when he retires, or is deemed to have retired, from regular employment after reaching minimum pension age (65 for men, 60 for women), whichever is the earlier. If such a person does any work as an employed person thereafter, he must pay an industrial injuries contribution; the employer still has to pay his full share of the flat-rate contribution.

Contributions

All three classes pay flat-rate contributions. Table 7 shows the main weekly rates of these contributions (including the National Health Service contribution, which for convenience is paid with it though the two services are separately administered). The table also shows the range of graduated contributions which are payable by employed persons aged 18 or over (unless they have been 'contracted out') who earn more than £9 a week, at the rate of approximately 4¼ per cent of that part of their weekly pay between £9 and £18. The employer pays the same amount.

Flat rate contributions are normally paid on a single contribution card by national insurance stamps bought from a post office. It is the employer's responsibility in the first place to see that the class 1 contributions are paid, but he can deduct the employees' share from their wages. Graduated contributions are collected through the same machinery as is used to collect Pay As You Earn (deduction at source) income tax. The self-employed and non-employed must stamp their own cards. Contributions are usually credited for weeks of unemployment, sickness or injury, or if widow's benefit is being paid.

TABLE 7
WEEKLY NATIONAL INSURANCE AND NATIONAL HEALTH SERVICE CONTRIBUTIONS[a]

	National Insurance flat rate[b]	Graduated Contribution		Health Service	Totals	
		from	to		from	to
CLASS 1[c]	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Employed persons taking part in the graduated pension scheme:						
Paid by employee..	10 11½	1	7 8	2 8½	13 9	21 4
Paid by employer..	12 3½	1	7 8	7½	13 0	20 7
TOTALS ..	23 3	2	15 4	3 4	26 9	41 11
Employed persons contracted out:						
Paid by employee..	13 4½			2 8½	16 1	
Paid by employer..	14 8½			7½	15 4	
TOTALS ..	28 1			3 4	31 5	
CLASS 2 Self-employed persons	15 10			2 10	18 8	
CLASS 3 Non-employed persons	12 1			2 10	14 11	

[a] The rates given are those paid by men. Women and boys and girls under 18 years of age contribute at various lower rates.

[b] Including, for class 1, the industrial injuries insurance contribution of 9d. from employee and 10d. from employer.

[c] Employed persons earning less than £9 a week and their employers pay only the National Insurance flat rate and Health Service contributions.

Benefits

The scheme provides payments to contributors in case of unemployment (if normally working for an employer), sickness (if normally working for an

employer or self-employed), and confinement and the weeks immediately before and after (for women normally working for an employer or self-employed and paying national insurance contributions at the full rate). Retirement pensions are paid to people who have reached 65 (60 for women) and who, if under 70 (65 for women), have retired from regular work; widows receive benefit in the first 13 weeks after bereavement and subsequently while they have young children or if they have reached the age of 50 when widowed or when their children have grown up; and there are two kinds of allowance in respect of orphan children where a widow's pension is not payable. The scheme also provides lump-sum cash grants for two expensive contingencies—the birth of a child and a death (though not for the death of someone already over minimum pension age when the scheme started).

For most of the benefits there are two contribution conditions. First, before benefit can be paid at all, a minimum number of contributions must actually have been paid since entry into insurance; secondly, the full rate of benefit cannot be paid unless a specified number of contributions have been paid or credited over a specified period. There are special rules to help a widow who does not become entitled to a widow's pension at widowhood or when her children have grown up, to qualify for sickness or unemployment benefit in the period before she can have established or re-established herself in insurance through her own contributions; there are also provisions to help divorced women who were not paying contributions during their marriage.

Amounts

The basic standard rate of the majority of benefits is now £4 a week which may be reduced if insufficient contributions have been paid, but is not affected by other unearned income or the previous level of earnings. Earnings made while the benefit is in payment, however, may cause its reduction or withdrawal: unemployment benefit cannot be paid to a person earning more than a specified amount from a subsidiary occupation; retirement pensioners under the age of 70 (65 for women) have their pensions reduced in step with earnings over certain specified amounts; sickness benefit, though not affected by continued payment of wages during illness, is not normally payable to a person doing any actual work. Exceptions to the basic standard rate are the higher rate of £5 12s. 6d. a week payable to widows during the first 13 weeks after bereavement, the increased retirement pension earned by someone who has continued at work and paid contributions beyond minimum pension age, and the lower rate of £2 15s. a week unemployment or sickness benefit payable to a married woman who is not either separated from her husband and receiving maintenance of less than £1 1s. 6d. a week from him or else maintaining an invalid husband. The standard rate of retirement pension for a woman on her husband's insurance is £2 10s. a week.

Standard increases are payable for dependants at the rate of £2 10s. for an adult (generally a wife), £1 2s. 6d. for the first or only child under the family allowances age limits and 14s. 6d., over and above any family allowances payable, for other children. However, the amounts payable to widows for their children are appreciably larger: £2 for the first child, £1 12s. for the second child and £1 10s. for each other child, inclusive of any family allowance payable.

The allowance provided for a child who has lost both parents (one of whom must have been insured under the National Insurance Acts) is a guardian's allowance of £2 a week. It is paid to the person in whose family a child is, for the time being, included. For certain fatherless children there is a child's special allowance also at £2 a week inclusive of family allowances;

this is payable to a woman whose marriage has been dissolved or annulled and who has not remarried, if her former husband dies and she has a child to whose support he was contributing before he died.

Graduated contributions add 6d. a week to retirement pension for each £7 10s. of graduated contributions paid by a man, with the matching £7 10s. paid by his employer, and for each £9 paid by a woman, with the matching £9 paid by her employer.

The rates of grants are varied: £22 maternity grant is payable for a confinement and a further £22 grant for each additional child born at the same confinement living 12 hours after its birth; and £25 death grant on the death of an adult (less for a child, or for an adult who was within 10 years of minimum pension age when the scheme started).

Duration

In general, national insurance payments are paid as long as the situation requiring them lasts. However, sickness benefit cannot be paid for more than a year if less than 156 contributions have been paid (possible within three years for a contributor continuously at work) and unemployment benefit is payable in the first instance for 30 weeks, after which it may be continued up to a maximum total of 19 months in all, according to the person's record of contributions paid as against unemployment benefit drawn in recent years. Maternity allowance begins eleven weeks before the expected week of confinement and ends after the sixth week following the expected week or the actual confinement if this is later.

Similarly, widowed mothers' allowances at the full rate cease when the children reach family allowance age limits, though a mother can continue to receive £4 a week for herself while she has living with her a son or daughter above the age limits but under 19. The widow's pension payable to the childless widow, provided she is over 50 (and had been married at least three years when her husband died), and the similar pension normally paid to the widowed mother who has reached 50 when her widowed mother's allowance ends, continues until she has reached minimum pension age and retired, or at most till age 65. If she has satisfied the conditions she then becomes entitled to a retirement pension.

NATIONAL INSURANCE (INDUSTRIAL INJURIES)

The Industrial Injuries Insurance scheme, which, in July 1948, replaced the Workmen's Compensation scheme (first introduced by the Workmen's Compensation Act of 1897), provides benefits for personal injuries caused by accidents arising out of, and in the course of, employment, and for prescribed diseases due to the nature of employment. It covers practically everyone in class 1 of the National Insurance scheme and certain others. Like the National Insurance scheme, the Industrial Injuries scheme is financed partly from contributions (see Table 7) and partly from taxation. The relevant acts are the National Insurance (Industrial Injuries) Acts 1946 to 1964. Similar cover against industrial injuries and diseases in Northern Ireland is provided by the National Insurance (Industrial Injuries) Acts (Northern Ireland) 1946 to 1964.

Benefits

Injury Benefit

Injury benefit for an adult is £6 15s. a week plus £2 10s. for an adult dependant, £1 2s. 6d. for the first or only child under the family allowances age limits and 14s. 6d. for each other eligible child, in addition to any family allowance payable. It is paid when the insured person is incapable of work as a result of an industrial accident or prescribed disease, and payment can continue for a maximum of 26 weeks beginning on the date of the accident or development of the disease.

Disablement Benefit

Disablement benefit may be paid (but not at the same time as injury benefit) when, as the result of industrial accident or prescribed disease, there is a loss of physical or mental faculty. The amount depends on the extent of the disablement as assessed by a medical board; it varies from £6 15s. for 100 per cent disablement to £1 7s. a week for 20 per cent disablement, but for disablement of less than 20 per cent a gratuity is normally paid, ranging up to £450.

In certain circumstances disablement benefit may be supplemented as follows: unemployability supplement, at the weekly rate of £4; constant attendance allowance of up to £2 15s. weekly, or at a special rate of £5 10s. a week in exceptionally severe cases; a special hardship allowance of up to £2 14s. for a person who is unfit to return to his regular job or work of an equivalent standard; and hospital treatment allowances which raise the benefit to that for a 100 per cent assessment during hospital treatment for the industrial disability. Increases of benefit for dependants are payable with unemployability supplement and hospital treatment allowance.

Death Benefit

If the accident or disease results in the insured person's death, death benefit may be paid to the dependants.

For a widow a pension of £5 12s. 6d. a week is payable for the first thirteen weeks of widowhood. Thereafter, the widow can receive a pension of £4 10s. a week if (1) entitled to a child's allowance or over the age of 40 on ceasing to be so entitled, or (2) over 50 years of age or permanently incapable of self-support at the time of her husband's death, or (3) not entitled to child's allowance, but having residing with her a young person under the age of 19 who was or could be treated as being in her late husband's family, or (4) over 40 years of age when (3) ceases to apply, or (5) pregnant by her late husband. If none of these conditions is satisfied, the widow may receive a pension of £1 a week. If she had been living apart from her husband, the pension is limited to the weekly rate of maintenance he was paying, if less than the rate otherwise appropriate.

In addition, allowances are paid for children under the family allowances age limits. For widows, these allowances together with any family allowance payable amount to £1 10s. a week for each child. For other beneficiaries, the rate is £1 2s. 6d. for the first child and 14s. 6d. a week for each later child.

Certain other dependants, such as parents and other relatives, may be entitled to pensions (of up to £1 a week), allowances or gratuities.

WAR PENSIONS AND RELATED SERVICES

Pensions and allowances for people disabled or bereaved through the wars or subsequent military service are paid under Royal Warrants and other instruments administered by the Ministry of Pensions and National Insurance.

The current basic pension for 100 per cent disablement for a private soldier is £6 15s. a week, but the amount varies according to rank and the degree of disablement. The latter is assessed by comparing the general condition of the disabled person as affected by service with that of a normal healthy person of the same age and sex. Allowances for a wife and children are paid in addition to the basic pension. There is a wide range of supplementary allowances, the main ones being for unemployability (£4 7s. 6d. a week), constant attendance (up to £2 15s. and, exceptionally, £5 10s. a week), comforts (10s. or £1 a week), and lowered standard of occupation (up to £2 14s. a week). An age allowance (at rates varying between 5s. and 15s. a week) is payable to disablement pensioners who are aged 65 or over and whose assessment is 40 per cent or more.

Both the basic disablement pension and the supplementary allowances are

free of income tax, and children's allowances are paid in addition to any allowance payable under the Family Allowances Acts.

Pensions are also paid to war widows and war orphans. The standard rate of pension for widows of private soldiers is £5 5s. a week, with additional allowances for their children (£2 4s. for each child), and, in certain cases, an allowance for rent (up to £2 a week). There is an additional allowance of 10s. a week for widows aged 70 or over. Parents or other relatives who were dependent on a person whose death resulted from military service may receive pensions if they are in financial need.

The Ministry of Pensions and National Insurance maintains a welfare service for war pensioners, with a special branch for war orphans, which is available to help any pensioner who requires advice and assistance. War pensioners have priority (except over more urgent cases) for treatment of their war disabilities in National Health Service hospitals.

Many voluntary associations, such as the British Legion and other ex-Service organisations, give financial aid and personal service to disabled ex-Service men and women and their families. The Ministry's welfare officers work in close co-operation with these voluntary bodies and with the specialist government welfare agencies.

NATIONAL ASSISTANCE

The National Assistance Act 1948 abolished the existing Poor Law in Great Britain and, in place of the various services for the relief of need previously provided from both central and local government funds, established for the first time a comprehensive State service of financial assistance according to need which is administered by the National Assistance Board. The parallel legislation in Northern Ireland made similar provision.

Application to the Board for financial assistance can be made, with certain exceptions relating to people in full-time work or involved in a trade dispute, by anyone over the age of 16 who is in need. The need for assistance is decided by reference to general standards (which are amended from time to time) laid down in regulations approved by Parliament. These regulations contain rules for ascertaining the requirements of the person or family group for whom assistance is to be provided and rules for the treatment of their resources, whether of income or capital (for instance, sickness benefit and family allowances are taken fully into account, while some part of other specified resources may be disregarded). The regulations make special provision for higher rates for blind people and certain tuberculous ones, and also allow the Board's officer to adjust the amount payable to suit the particular circumstances of every case. The help given is in this way related directly to the needs of the individual or family. There is a right of appeal if the person is dissatisfied with the officer's decision.

There are few conditions attached to the grant of assistance, but help given to able-bodied men or women of working age is normally conditional on their registering for work at an employment exchange of the Ministry of Labour; the assistance is then paid at the exchange. Otherwise assistance is normally received as a weekly cash payment at a post office.

WELFARE SERVICES

Services for the Blind, the Deaf and the Disabled

All local welfare authorities have schemes, made under the National Assistance Act and approved by ministers, under which they provide welfare services for people who are blind, deaf or dumb, or otherwise severely and permanently handicapped. These services are provided either by the local authorities themselves or through the agency of a voluntary body; voluntary bodies also give important help outside formal agency arrangements. The schemes require

local authorities to maintain registers of all the handicapped people in their areas who seek the help of their services.

Services for the blind and partially sighted include a home visiting and teaching service, employing qualified home teachers to assist the blind to adjust themselves to their blindness; instruction in craft work and in the use of embossed symbols for reading and writing; social clubs, holiday and other recreational facilities; the supply or loan of apparatus, such as wireless sets, embossed and recorded books, adapted tools and games; and residential social rehabilitation. Other benefits available include financial aid, preventive and medical treatment, special education, training for employment and placement in suitable occupations. Voluntary organisations for blind welfare include local blind societies and also national bodies.

The emphasis in services for the deaf, including the hard-of-hearing, is on achieving communication and promoting social welfare, help with personal problems, assistance in obtaining and keeping employment, encouragement and help to improve lip-reading and speech; and generally on relieving the isolation which deafness can bring. Local voluntary associations play a large part in providing welfare services for the deaf.

The welfare services for people with handicaps other than blindness or deafness are run on similar lines and include, in particular: help with personal and family problems arising from disability; assistance in overcoming the effect of disability, including adaptations in the home and the provision of aids to meet individual needs; teaching of handicrafts and help in disposing of any saleable articles produced; provision of occupation and social centres, recreational facilities, outings and holidays; and hostels for those for whom training is being provided by the Ministry of Labour under the Disabled Persons (Employment) Acts. (Training is provided in Northern Ireland by the Ministry of Health and Social Services.)

Old People's Welfare

A number of home services for old people are provided by statutory and voluntary bodies to help them to continue living in their own homes for as long as possible. Local health authorities supply, under the National Health Service, home nursing and domestic help (see p. 149); over half the district nurses' time is spent on the aged or the chronic sick and the same group makes the heaviest demands on the home help service.

Local authorities are enabled by the National Assistance Act to provide meals and recreation for old people either directly or through the agency of voluntary organisations. They also have power to assist voluntary organisations by contributing to the cost of the services, giving or lending furniture, vehicles or equipment, permitting organisations to use premises belonging to the local authority and making available the services of local authority staff.

Local Old People's Welfare Committees have been formed and are aided by the National Old People's Welfare Council, an associated group of the National Council of Social Service widely representative of voluntary and statutory bodies having direct contact with old people, or by the Scottish Old People's Welfare Committee, a committee of the Scottish Council of Social Service, or by the corresponding committee in Northern Ireland. The National Corporation for the Care of Old People was started by the trustees of the Nuffield Foundation (see p. 210); its function is to stimulate and to give financial support to schemes for the welfare of the aged, to maintain an expert technical advisory service, and to encourage and undertake research and experiment for the welfare of old people. It is now concentrating its main effort on home services.

Residential Accommodation

Local authorities provide residential accommodation, under the National Assistance Act, for the aged, infirm and others, and temporary accommodation for people who lose their homes, for example, in some disaster such as fire or floods. The newer homes provided by local authorities for aged and other infirm people usually have accommodation for 40 to 60 residents. These smaller homes are gradually replacing the larger institutions inherited from the past. As well as over 1,800 local authority homes in Great Britain, there are over 2,500 homes for old and disabled people run by voluntary bodies or by private individuals.

The National Assistance Board, which is responsible for influencing 'persons without a settled way of living' to lead a more normal life, provides temporary accommodation for them in reception centres, sometimes through the agency of local authorities. For men who have been unemployed for long periods and who are in receipt of national assistance grants or are using reception centres, it runs two non-residential and two residential re-establishment centres where they are given help to fit them again for work.

Welfare Services in Northern Ireland

In Northern Ireland the services provided under the Welfare Services Acts (Northern Ireland) 1949 to 1961 are broadly similar in scope to those provided in Great Britain under the National Assistance Act, the only notable exception being the inclusion in the welfare code of domestic help services, which in Great Britain are provided under the National Health Service Act. Local welfare services are provided by the six county and two county borough councils. Welfare authorities have provided 36 homes for the aged and infirm, which have completely replaced the old 'workhouse' institutions, and other specially designed homes are under construction. The cost of the services is shared, as in Great Britain, between local taxation and the Exchequer.

CHILD WELFARE

Local Authority Services

Local authorities in Great Britain have a duty under the Children and Young Persons Act 1963 to make available such advice, guidance and assistance as may promote the welfare of children by diminishing the need to receive or keep them in the authority's care or to bring them before a juvenile court. This help may include assistance in kind or, exceptionally, financial help, and may be given through a voluntary organisation or directly. However, if a child seems to be in need of care, protection or control because of adverse circumstances in which it is not receiving the standard of care to be expected from a good parent or because it is beyond the control of parent or guardian, the local authority may initiate court proceedings and the child may be committed by the juvenile court to the care of a 'fit person', usually the local authority, till he or she reaches the age of 18. Local authorities have a further duty, under the Children Act 1948, to receive into their care any child under the age of 17 who has no parent or guardian, or who has been abandoned or whose parents are unable to provide for him temporarily or permanently. A child so received remains in the care of the local authority until he is 18 years old unless the authority finds it to his advantage to return him sooner to his parents or guardian or to entrust him to friends. Both categories of children are to be treated so as to further their best interests and afford them opportunity for the proper development of their character and interests.

When practicable, children in care are boarded out with foster parents, who receive an allowance to cover the cost of maintenance. If a foster home cannot be found for a child, or he is not suitable for boarding out, he may be placed in a children's home provided by a local authority or a voluntary

organisation. Many children's homes are now provided in small houses, on housing estates or in ordinary streets, where a group of twelve or fewer children live in the care of a housemother or houseparents, the husband following his normal employment. Other children may be placed in hostels or lodgings or in other accommodation specially suited to their needs. The desirability of returning a child to his family circle as soon as possible is fully appreciated, and work is carried out to rehabilitate the family where this is necessary.

To carry out its functions under the Children Act 1948 each local authority (county, county borough and London borough council or, in Scotland, council of a large burgh) is required to appoint a children's committee and a children's officer to be responsible for the care and upbringing of children in the authority's care. Children's officers are assisted by a staff of child-care officers who undertake inquiries and who supervise children placed in foster homes. Regulations for England and Wales safeguarding the boarding out of children by local authorities and voluntary organisations and the conduct of children's homes have been made by the Home Secretary, and, for Scotland, by the Secretary of State for Scotland. The cost of the local authorities' child-care service, including the provision of training for houseparents and child-care officers, is shared between the local authorities and the Exchequer.

In Northern Ireland the Children and Young Persons Act (Northern Ireland) 1950 gave to the welfare authorities of each county and county borough (under the general direction of the Ministry of Home Affairs) the duty of caring for homeless and neglected children. Legislation relating to children and arrangements for their care follow the same general principles as in Great Britain.

War orphans are the responsibility of the Ministry of Pensions and National Insurance (see p. 137).

Voluntary Organisations

Voluntary organisations, many of which were pioneers in child care, continue to play a valuable part in this work. The larger societies, such as Dr. Barnardo's, the Church of England Children's Society and the Catholic Child Welfare Council, are constituent societies of the National Council of Associated Children's Homes, to which a large number of smaller voluntary homes are also affiliated. In Scotland a valuable contribution is also made by the Children's Homes and Hostels under the auspices of the Church of Scotland Committee on Social Service, and by other voluntary organisations. Children's homes provided by voluntary organisations (of which there are about 650 in Britain) are required to be registered under the Children Act (in Northern Ireland under the Children and Young Persons Act). The boarding out of children and all children's homes, whether local authority or voluntary homes, are subject to inspection by the Child Care Inspectorate of the Home Office, of the Scottish Office or of the Northern Ireland Ministry of Home Affairs.

Voluntary bodies concerned with the welfare of children in their own homes include local family casework agencies and the Family Service Units, which undertake prolonged and intensive casework with families. The old-established National Society for the Prevention of Cruelty to Children and its Scottish counterpart between them maintain inspectors and visitors throughout the United Kingdom for the investigation of cases of reported cruelty to, or neglect of, children in their own homes; when necessary, they resort to law after consultation with the local authority, but they prefer to achieve their purpose by warning and advice.

Adoption

Provision for legal adoption was first made in England and Wales in 1926, in Northern Ireland in 1929 and in Scotland in 1930. About 18,500 adoption orders are made annually by the courts in Great Britain and some 300 in Northern Ireland; there are always more would-be adopters than children available for adoption. Adoption is now regulated by the Adoption Act 1958 in Great Britain and by the Adoption of Children Act (Northern Ireland) 1950 in Northern Ireland. The Registrars General keep registers of adopted children; adoption societies (there are over 80 societies which arrange adoptions) must be registered with the local authority (in Northern Ireland with the Ministry of Home Affairs).

HEALTH

The concern of the State with the nation's health is chiefly a development of the years since the passing of the Public Health Act of 1848. The second half of the nineteenth century was notable for the growth of the environmental or public health services, such as provision of pure water, sewerage, disposal of refuse and cleaning of streets, and the first half of the twentieth century for the development of publicly provided personal health services, as distinct from environmental services, culminating in the introduction in 1948 of a comprehensive National Health Service available to every citizen. Scientific discoveries of importance to medicine and health, including the development of new drugs, and the improved services of the last fifty years, particularly in maternity and child welfare, school health services and school meals, are reflected in declining mortality rates (see p. 9) and improved physique. Diseases now in the forefront of research programmes include cancer and diseases of the central nervous system, such as muscular dystrophy. Efforts are also being made to combat some of the most prevalent diseases which include, besides the common cold and influenza, heart diseases, rheumatism and bronchitis.

PUBLIC HEALTH

The Public Health Act of 1936 brought up to date and consolidated preceding Acts; it constitutes the present basic public health code in England and Wales. Local authorities are mainly responsible for its implementation and they have extensive powers for the making and administration of by-laws relating to matters of public health. The local authorities chiefly concerned are the councils of county and non-county boroughs, London boroughs and the City of London, urban and rural district councils and, to a limited extent, parish councils.

Public health services in Scotland and in Northern Ireland have developed on much the same lines as in England and Wales, although they are based on separate Acts and there is a different allocation of services between the various types of local authority. The Public Health (Scotland) Act 1897 and the Burgh Police (Scotland) Act 1892 constitute the basic legislation for Scotland. The local authorities concerned are the councils of counties and burghs. In Northern Ireland the councils of county and non-county boroughs and urban and rural districts are mainly responsible for administering the Public Health Acts (Northern Ireland) 1878–1962.

Control of Infectious Diseases

Local authorities are responsible for the investigation by their Medical Officers of Health of outbreaks of infectious diseases and for disinfection and other measures advised by them for preventing the spread of infectious diseases in the area. They are also responsible to the Ministry of Health (or

the Welsh Board of Health or the Secretary of State for Scotland or the Ministry of Health and Social Services for Northern Ireland) for recording notifications of the prescribed infectious diseases.

Port health authorities have a general responsibility for supervising the operation of health control at seaports and airports, the primary object of which is to prevent the introduction of infectious disease into the country. This health control is undertaken by health authorities using the services of medical officers, public health inspectors, rodent inspectors and others.

Pure Food

The purity, hygiene and description of food are controlled by legislation consolidated for England and Wales in the Food and Drugs Act 1955, for Scotland in the Food and Drugs (Scotland) Act 1956, and for Northern Ireland in the Food and Drugs Act (Northern Ireland) 1958. In England and Wales the Act and regulations made under it are, in general, carried out and enforced by food and drugs authorities (county, county borough, London borough and City of London councils and, generally, the larger borough and urban district councils) in relation to composition, adulteration and description, and by local authorities (county borough, London borough, City of London, borough, urban district and rural district councils) in relation to soundness, purity and hygiene; the Ministry of Health and the Ministry of Agriculture, Fisheries and Food are the central departments responsible for advising and for making regulations under the Act. Places where food for sale for human consumption is prepared, sold or stored must conform to certain hygienic standards. Authorised officers of the councils concerned may take for analysis or for bacteriological or other examination samples of any food for sale for human consumption. Special regulations are in force for certain foods such as milk, meat and ice-cream.

In Scotland the local authorities chiefly concerned are the councils of counties and large burghs; the central department is the Scottish Home and Health Department.

In Northern Ireland administration is in the hands of the county and county borough health authorities, the central department being the Ministry of Health and Social Services.

Other Public Health Duties

Local authorities are also responsible for the public health aspects of water supply, sewerage and drainage; street paving and housing; and the abatement of noise nuisance. They have power to establish smoke-controlled areas to secure cleaner air.

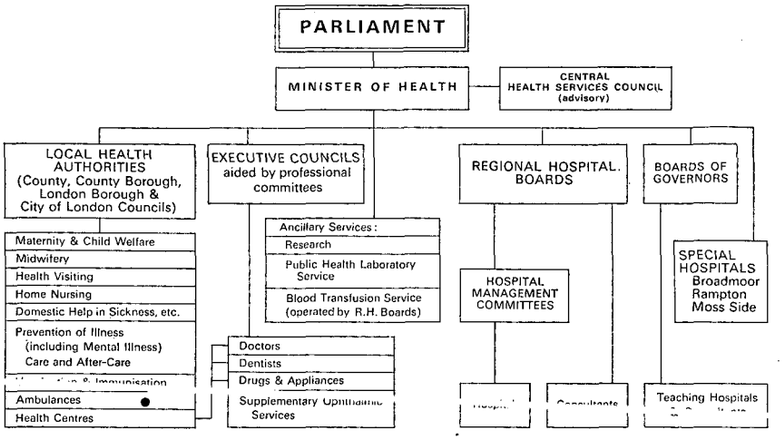
THE NATIONAL HEALTH SERVICE

The Acts setting up the National Health Service—the National Health Service Act 1946, the National Health Service (Scotland) Act 1947, and the Health Services Act (Northern Ireland) 1948—came into force simultaneously on 5th July, 1948.

The object of the National Health Service Act 1946 is 'to promote the establishment in England and Wales of a comprehensive health service designed to secure improvement in the physical and mental health of the people of England and Wales and the prevention, diagnosis and treatment of illness, and for that purpose to provide or secure the effective provision of services'. The service was originally free to users but certain small charges were introduced under subsequent legislation. The present Government has announced its intention of abolishing all charges. The service is available to all according to medical need without regard to any insurance qualification. National insurance contributors are required to pay a separate weekly national

health contribution under the National Health Service Contribution Acts 1957 to 1961 (see Table 7) but contributors and non-contributors are entitled to the same full range of services. Visitors from other countries who come to Britain for treatment are expected to pay for it, but treatment can be given under the emergency provisions of the National Health Service to any who have the misfortune to fall ill during a visit to Britain.

ORGANISATION OF THE NATIONAL HEALTH SERVICE IN ENGLAND AND WALES*



*The services in Scotland and Northern Ireland are somewhat differently organised. In Scotland the responsible Minister is the Secretary of State for Scotland, and in Northern Ireland the Minister of Health and Social Services

Health Service Administration in Great Britain

In England and Wales the Minister of Health has direct responsibility for the provision on a national basis of all hospital and specialist services, including those for mental disorder. He has power to conduct, or assist others to conduct, research into the causes, prevention, diagnosis or treatment of illness or mental disorder, and he provides a public health laboratory service and a blood transfusion service. He has indirect responsibility for the general practitioner services and local health authority services. He is advised by the Central Health Services Council and by standing advisory committees on various aspects of the service.

The hospital and specialist services are administered through regional hospital boards and hospital management committees and, in the case of teaching hospitals, by boards of governors. The hospitals are administered in groups, of which there are about 350 under the control of hospital management committees, which are in turn under the control of 15 regional hospital boards. The regions are arranged so that the hospital and specialist services can conveniently be associated with a university school of medicine.

The members of a hospital management committee are appointed by the appropriate regional hospital board. The committees, by their constitution, reflect the communities concerned, for they usually include not only medical practitioners but members of local authorities, trade unionists and others.

The regional hospital boards are appointed by the Minister of Health and are similarly constituted. The boards of governors of teaching hospitals are appointed by the Minister, a proportion of the members being nominated by the teaching faculty of the university, the regional hospital board and the medical and dental teaching staff. All appointments to hospital management committees, regional hospital boards and boards of governors are honorary. Medical and dental schools are not under the control of the Minister; but it is his responsibility to provide clinical facilities for the training of medical students. The universities are responsible for the provision of teaching.

The general medical, dental, pharmaceutical and supplementary ophthalmic services are administered by 134 executive councils, most of which cover the area of a county or county borough; in some cases two areas are combined under one council. Doctors, dentists and pharmacists are represented on the executive councils and each profession also forms a local committee. Each council has an ophthalmic services committee responsible for administering the supplementary ophthalmic service. Councils of counties, county boroughs, the London boroughs and the City of London are the 174 local health authorities in charge of local health services.

In Scotland the Secretary of State for Scotland is the responsible minister; 31 county councils and 24 town councils of large burghs are the local health authorities; hospital and specialist services are administered by five regional hospital boards appointed by the Secretary of State, assisted by 79 boards of management (the equivalent of hospital management committees in England); and there are 25 executive councils, each serving the area of one or more local health authorities. The teaching hospitals in Scotland come under the control of the regional hospital boards, but special medical education committees consider matters relating to medical teaching. The Scottish Health Services Council and the standing advisory committees advise the Secretary of State and keep closely in touch with the Central Health Services Council on common issues.

The Northern Ireland Health Services are described separately on page 152.

Health Service Finance

Annual expenditure on the National Health Service in the United Kingdom amounts to nearly 5 per cent of the total national income. The greater part of the cost falls on the Exchequer, to be met from general taxation, and a small part is met from local rates. Other income is derived from the national health service contribution paid with the national insurance contribution.

There are charges for treatment in the dental service (but not for examination only or for treatment given to people under 21 years or to nursing or expectant mothers), for dentures (except for children under 16 or still at school, and expectant and nursing mothers) and spectacles (except children's spectacles in standard frames), and for some local health authority services. Certain exemptions or refunds are made and anyone may apply to the National Assistance Board for help in meeting any of these charges. Under the 1946 Act, a limited number of beds may be made available for hospital patients wishing for privacy, provided that this accommodation is not needed on medical grounds for non-paying patients. Charges for these 'amenity' beds are fixed by statutory regulations. Provision is also made at certain hospitals for patients who wish to occupy private patients' accommodation on payment of the whole cost of this accommodation and treatment. Such patients may make private arrangements for treatment by doctors of their own choice.

Hospital medical staffs are either full-time and salaried, or part-time; part-time medical officers are usually paid on a sessional basis and are free to accept

private patients. General medical practitioners in public service are remunerated mainly by capitation fees according to the number of people on their lists. (This system is, however, under review.)

Dentists providing treatment in their own surgeries are paid on a prescribed scale of fees according to the treatment they have carried out. Pharmacists dispensing on their own premises are paid on the basis of the prescriptions they dispense. Doctors and ophthalmic opticians taking part in the supplementary ophthalmic service are paid prescribed fees for each sight test made; opticians who dispense spectacles are paid according to the number and type of pairs supplied.

Practitioner Services

The general practitioner services cover the medical attention given to individuals by doctors and dentists of their own choice, from among those enrolled in the service. Doctors and dentists normally work at their own surgeries; in a few places they practise in health centres established under the National Health Service Acts. About 23,000, or almost all, general medical practitioners (principals and assistants) in Great Britain take some part in the service.

Doctors previously in practice were entitled to join the service at its start in the place where they were practising. Those now wishing to enter practice have to apply through their executive councils to the central Medical Practices Committee, so that a better distribution of doctors throughout the country may be facilitated. The maximum number of patients' names permitted to be on a family doctor's list is normally 3,500; the average number in England and Wales is about 2,300. It is normally through the patient's own doctor that access to most other parts of the health service is obtained.

There are over 10,400 dentists in England and Wales and over 1,000 in Scotland in the general dental service.

Over 850 ophthalmic medical practitioners and nearly 7,000 ophthalmic and dispensing opticians in England and Wales, and over 70 ophthalmic medical practitioners and 700 ophthalmic and dispensing opticians in Scotland, are engaged in the supplementary ophthalmic service. These services provide for the testing of sight and provision of spectacles. Cases requiring treatment are dealt with through the hospital eye service.

Nearly all retail pharmacists (numbering some 16,500 in Great Britain) take part in the National Health Service. They are responsible for the dispensing of all prescriptions except for the small number dispensed by certain general practitioners.

Hospital and Specialist Services

The hospital and specialist services provide hospital accommodation of all kinds, including district general hospitals with treatment and diagnostic facilities both for in-patients and out-patients, hospital maternity departments, infectious disease units, psychiatric hospitals and units, convalescent homes, and rehabilitation centres; all forms of specialised treatment; and the services of specialist and other staff required for the hospitals.

Hospitals

A large proportion of the hospitals in the National Health Service in Great Britain were built in the nineteenth century; some trace their origins to much earlier charitable foundations, such as the famous St. Thomas's and St. Bartholomew's Hospitals in London. Much has been done in recent years to improve and extend existing hospitals and a start has been made on the building of new hospitals. In 1962 ten-year plans for hospital development were published by the Government, setting out the probable future pattern of the hospital services. The plans are kept under review and revisions are published

from time to time. Revisions published in 1964 assumed that £750 million might be spent in England and Wales and £105 million in Scotland on hospital building in the ten years to 1973–74. Further revisions are likely to be published in 1966, covering the ten years to 1975–76.

Over 2,500 of the existing hospitals in the National Health Service are in England and Wales, including the 26 teaching hospitals in London (actually groups of hospitals comprising about 100 hospitals, convalescent homes, branches, annexes, or treatment centres) and the 10 teaching hospitals elsewhere in England and Wales (comprising some 70 hospitals and other establishments). They have nearly 464,000 beds available for use and a nursing and midwifery staff of 173,000 full-time and about 61,000 part-time nurses and midwives. There are 375 hospitals in Scotland with over 25,000 full-time and over 8,000 part-time nurses and midwives.

A small number of hospitals remain outside the service for special reasons. Most of these are run by religious orders. Some, such as the Italian and French Hospitals, serve a special group of patients; others are maintained for the chronic sick or for convalescents by charitable organisations. There are also private nursing homes, which must be registered.

Rehabilitation

Rehabilitation is an important aspect of medical care and today hospital treatment is not limited to the relief of pain or cure of pathological conditions, but aims at helping people to resume normal living as soon as possible. Specialised rehabilitation facilities are provided at the main hospitals and in a few special centres. The work is carried out under the guidance of the appropriate medical specialist by physiotherapists, remedial gymnasts, occupational therapists and social workers, working as a team. Experience has shown that efficient medical rehabilitation reduces the stay in hospital, the incidence of permanent disability and the period of incapacity for full work. The hospital departments work in close association with the Disablement Resettlement Service of the Ministry of Labour. Rehabilitation methods have been applied with advantage in the care of the chronic sick, the mentally disabled, the aged and the handicapped and have enabled many patients to become self-sufficient or to be discharged from hospital and to resume an independent life in their own homes.

Medical and Psychiatric Social Work

Most hospitals have social work departments staffed by workers trained to apply the principles of social casework to the problems of the hospital patient. Medical and psychiatric social workers co-operate with clinical and other staff in the patient's treatment by making social investigations as an aid to diagnosis, taking social action to alleviate problems and anxieties surrounding admission to hospital, and arranging when necessary after-care which will ensure that the patient is helped to readjust to life, whatever his continuing disability.

Blood Transfusion

The National Blood Transfusion Service in England and Wales is administered by the regional hospital boards under the National Health Service. Donors give their blood voluntarily without payment. In 1963 there were, for the first time, a million individual active donors in England and Wales. The blood is kept in the regional blood bank, or issued to area blood banks maintained at general hospitals in each region. Each regional transfusion centre acts as a reference centre for all transfusion problems arising in the region. There are two central laboratories administered by the Medical Research Council on behalf of the Ministry of Health: the Blood Group Reference Laboratory, which prepares grouping serum and investigates blood grouping problems referred to it, and the Blood Products Laboratory, which

prepares dried plasma and plasma fractions. In Scotland the Blood Transfusion Service is under the direction of the Scottish National Blood Transfusion Association, which is an independent voluntary body but is supported in the main by a grant from the Scottish Home and Health Department. In Northern Ireland the Blood Transfusion Service is operated by the Northern Ireland Hospitals Authority.

Chest Radiological Service

A Chest Radiological Service, which is freely available, is provided by mass radiography units, chest clinics and the radiological departments of general hospitals. The mass radiography units alone X-ray about 3½ million people each year, concentrating increasingly on specially susceptible groups in the population.

Bacteriological and Virological Laboratory Services

The Public Health Laboratory Service provides a network of bacteriological and virological laboratories throughout England and Wales which conduct research and assist in the diagnosis, prevention and control of epidemic diseases. Its largest establishment is the Central Public Health Laboratory at Colindale, in north-west London, which includes the National Collection of Type Cultures, the Food Hygiene Laboratory, and reference laboratories specialising in the identification of infective micro-organisms.

In Scotland and Northern Ireland, where there is no separate public health laboratory service, bacteriological work is done mainly in hospital laboratories.

Drug Safety

Since 1964 the Committee on Safety of Drugs, set up by the health ministers, has been responsible for considering reports of toxicity testing and clinical trials of new drugs and for studying reports of adverse reactions to drugs in use. Members of the manufacturers' organisations have undertaken not to start clinical trials or to market a new drug without or against the advice of the Committee.

Mental Health Services

Treatment for mental disorder is provided as part of the National Health Service. Patients can consult the family doctor and receive specialist advice at hospital out-patient clinics as they would for any other kind of illness and can enter hospital for in-patient treatment without formalities.

Under the Mental Health Act 1959, and in Scotland the Mental Health (Scotland) Act 1960, mentally disordered patients can, where necessary in the interests of their health or safety or for the protection of other people, be compelled to enter hospital for treatment. There are procedural safeguards to protect patients from unnecessary detention in hospital and in England and Wales patients may apply to a Mental Health Review Tribunal for discharge; in Scotland they may apply to the sheriff.

Local health authorities have a duty to make arrangements for helping the mentally disordered in the community, for their care and after-care. Recent developments in treatment of mental illness, enabling patients to be discharged from hospital more quickly provided support is available in the community, are adding to the demands for these services. Arrangements may include facilities for training or occupation, and residential accommodation. If necessary, the local health authority can place a mentally disordered person under guardianship within the community. In Scotland education authorities share the responsibility for providing training or occupation.

Welfare Foods Service

Under the welfare foods service expectant and nursing mothers, children under five and certain handicapped children can obtain a pint of milk a day at a reduced price from their usual milk supplier by means of tokens supplied

by the Ministry of Pensions and National Insurance. Other welfare foods are distributed by local health authorities. These foods are dried milk, as an alternative to liquid milk and at an equivalent price; orange juice, cod liver oil and vitamen A and D tablets at cost price. Families who cannot afford to pay for any welfare food can apply to the National Assistance Board for special tokens to enable them to obtain supplies free of charge.

Local Health Services

The Local Health Services administered by the county, county borough, London borough and City of London councils (county and large burgh councils in Scotland) consist of the maternity and child welfare services (including welfare centres, maternity care, dental care and day nurseries), the services for the prevention of illness, for care and after-care, including vaccination and immunisation, health visiting, home nursing and domestic help, and care in some cases of mental disorder, the ambulance services in England and Wales (for Scotland and Northern Ireland see p. 150) and the provision, equipment and maintenance of local health centres. The development of the health and welfare service of local authorities in England and Wales over the decade 1964–74 is following the plans published in *Health and Welfare* (*The Development of Community Care*), HMSO, 1964. In Scotland fundamental studies of services are being carried out as a guide to authorities in their plans for expansion.

Welfare Centres

Maternity and child welfare centres are part of the advisory and preventive services of the local health authority; they offer regular supervision by doctors and nurses to expectant and nursing mothers and young children. Special sessions are held for vaccination and inoculation and for early testing of babies for deafness and other defects, and a feature of the service is the education of mothers by means of talks, discussion groups, demonstrations and classes. About 73 per cent of all babies born in 1963 were taken to the centres.

Maternal Care

The expectant mother may arrange to have her baby at home or in hospital according to the advice given by the doctor or midwife, or according to her own preference if sufficient hospital beds are available over and above those required for priority cases, that is, those for whom domiciliary confinement is inadvisable for medical or obstetric reasons or because of adverse home conditions. The proportion of confinements taking place in hospital varies considerably between different areas; the national average has increased over the past 25 years and is now 68 per cent for England and Wales and 82 per cent for Scotland.

For a home confinement a mother may have the services of either a general practitioner obstetrician or her own family doctor, if he is willing to undertake her maternity care, besides those of a trained midwife in the domiciliary service of the local health authority. The doctor carries out ante-natal and post-natal examinations, attends at the confinement and gives any other medical care required. The services of a consultant obstetrician are also available if the doctor wishes to ask for his advice. Routine supervision and advice is given by the midwife, who visits regularly before the confinement to examine the mother and give her advice and help generally. In addition, the expectant mother may attend the ante-natal clinic for instruction in preparation for motherhood and in some cases for interim ante-natal supervision. Frequently it is the midwife who undertakes the actual delivery. Both she and the doctor attend during the ten days after confinement. Midwives work in close touch with the welfare centres in the care of the mother both before and after the birth of the child.

Other Maternity and Child Welfare Services

Many local health authorities make special arrangements for premature babies remaining in their own homes, by lending equipment and appointing experienced nursing staff to supervise their care.

There are about 500 day nurseries for children under five in Great Britain provided by local health authorities or voluntary associations working with them. The National Health Service Act 1952 gave local authorities power to make charges for the use of day nurseries. Private or factory nurseries (of which there are about 1,300 in Great Britain) must be registered with the local health authorities; this regulation applies also to persons paid for looking after more than two children who are not all of the same family.

Most local authorities contribute to the cost of the work done by voluntary denominational and other bodies which care for unmarried mothers and their babies; a few authorities make direct provision for their special needs through their health departments. The voluntary associations employ specially trained workers to help the unmarried mother in making plans for herself and her child. Most homes and hostels for the ante-natal and post-natal care (and, in some cases, the confinement) of these mothers are provided by such organisations.

Health Visiting

Health visitors (see p. 153) are employed by local health authorities to visit people in their own homes to give advice on the care of young children, expectant and nursing mothers, people of all ages (with increasing attention to the elderly) suffering from illness, including mental illness, and any injury or disability requiring medical or dental treatment, and on measures necessary to prevent the spread of infection. Their duties include health education and attendance at ante-natal and child welfare clinics. They may also undertake tuberculosis visiting and school nursing.

Home Nursing

The employment of nurses to attend patients who require nursing in their own homes is the responsibility of the local health authorities. Most authorities employ nurses directly for this purpose, although some have arranged for voluntary district nursing associations to provide a service on their behalf.

Domestic Help

Local health authorities (welfare authorities in Northern Ireland) have the power to make arrangements for domestic help (commonly called 'home help') in households where it is needed owing to illness, confinement, or the presence of children or old people. This service is mainly used in the care of old or chronically sick people, in maternity cases and, to a lesser extent but increasingly, for families where such help is needed to prevent children having to be cared for away from home, for example, during the absence of the mother. The authorities may recover from those assisted such charges as it is considered they can afford to pay, but the service may be provided without charge to people with very small incomes.

Ambulance Services

Free conveyance by ambulance in England and Wales between home and hospital or clinic is provided, where needed, by local authorities[1] either directly or by arrangement with voluntary organisations. The Hospital Car Service (organised by the St. John Ambulance Brigade, the British Red Cross Society, and the Women's Voluntary Service) augments the ambulance service in many areas for the conveyance of sitting patients. In Scotland ambulances are run by the Scottish Ambulance Service (St. Andrew's Ambulance Association and the Scottish branch of the British Red Cross Society) on behalf of the Secretary of State. In Northern Ireland they are run by the Northern Ireland Hospitals Authority.

[1] County and county borough councils and the Greater London Council.

Prevention of Illness: Care and After-care

Local health authorities are responsible for prevention, care and after-care arrangements for mental disorder, which is becoming an increasingly important task (see p. 148), and for tuberculosis. They are responsible for BCG vaccination and other preventive measures against tuberculosis and also for rehabilitation. Diagnosis and treatment, however, are the responsibility of the hospital service and are provided through hospitals and chest clinics, in which the work is closely co-ordinated with that of local authorities.

Care and after-care arrangements are made to varying extents for other types of illness; in particular there are certain services for people being nursed at home, such as the loan of special equipment or the laundering of bed linen. A chiropody service is provided in nearly all areas. A charge may be made for some of these services if the person wishing to make use of them can reasonably be expected to contribute towards their cost.

As part of their preventive work, local health authorities may give help and advice to families, particularly those in difficulties and in danger of breaking up, where there is a danger to the physical or mental health of the children. Medical and psychiatric social workers are to an increasing extent employed in the health and welfare services of local authorities, where their training enables them to help people living in their own homes who are handicapped by mental or physical disability or illness.

Local health authorities may make arrangements with statutory water undertakings for fluoride to be added to water supplies to help in preventing dental decay.

Since the publication in 1962 of the report of the Royal College of Physicians on smoking and health, emphasis in health education programmes has been placed on the dangers of smoking.

Vaccination and Immunisation

All local health authorities have arrangements for vaccination, without charge and as part of the National Health Service, against diphtheria, poliomyelitis, smallpox, tetanus, tuberculosis and whooping cough.

Vaccination against poliomyelitis by local health authorities is normally restricted to people under 40 years of age (apart from people liable to special risk who are eligible for vaccination at any age); those over 40 may be vaccinated, free of charge under the National Health Service, by their general practitioner. BCG vaccination against tuberculosis by local health authorities is available to children of ten years and upwards and to others particularly exposed to risk of tuberculous infection.

Health Centres

Twenty-one health centres which provide primarily for the association of general medical practice with maternity and child welfare services and the school health service have been set up by local health authorities in England and Wales. This is one form of co-operation between the different elements in the health service. Other forms of co-operation are growing, such as the siting of group practices adjacent to local health authority clinics, the attendance of midwives for ante-natal sessions at general practitioners' surgeries and the attachment of health visitors to particular practices for the whole or part of their time. The provision of the three health centres and a diagnostic centre in Scotland is the responsibility of the Secretary of State for Scotland and not of local health authorities.

Problems of the National Health Service

The National Health Service is not without its difficulties and shortcomings. The total cost of the Service has continued to rise, because of such factors as increases in prices and in staff salaries, the high cost of many new drugs and of modern equipment, the increased use made by the public of the services

provided, and extensions and improvements of the Service. Despite a high rate of capital expenditure on hospital buildings and equipment, more is required to improve the general standard. More doctors, dentists, midwives and nurses are needed by an expanding service. There is also some disparity between different parts of the country; some areas have more family doctors than others, more hospital beds for confinements of mothers who would prefer to have their babies in hospital though they do not need specialist medical care, and more extensive local authority services.

Against these shortcomings may be set the steady improvement in the country's vital statistics to which the National Health Service has largely contributed, the decrease in ill health from neglected ailments, and the removal of anxiety about the cost of treatment, from which many of those who now use the Service previously suffered.

HEALTH SERVICES IN NORTHERN IRELAND

The health services established under the Health Services Act (Northern Ireland) 1948 correspond fairly closely to the medical care system established under the National Health Service in Great Britain and they are financed in the same way as in the rest of the United Kingdom.

The hospital and specialist services are administered by the Northern Ireland Hospitals Authority (which corresponds approximately to a regional hospital board in Great Britain) through hospital management committees. In hospital administration the role of the central Government is not quite so immediate and direct as in Great Britain[1]: hospital property, for example, is vested not in the Minister of Health and Social Services but in the Northern Ireland Hospitals Authority, which has under its control 75 hospitals containing in all about 17,000 beds. The administration of the general medical, dental, pharmaceutical and supplementary eye services is in the hands of the Northern Ireland Health Services Board, which takes the place of the executive councils in Great Britain. Local health services are administered by the six county councils and the two county borough councils in Northern Ireland. The range of local authority services and the arrangements made by the Northern Ireland General Health Services Board for the provision of services, and for the remuneration of the people providing them, are similar to those already described for the rest of the United Kingdom.

VOLUNTARY AID FOR THE SICK AND HANDICAPPED

A number of voluntary organisations provide extensive welfare services for sick and handicapped people in co-operation with, or supplementary to, the provision made by central and local authorities. Many convalescent homes and homes for the infirm and for people with specific handicaps are, or were originally, provided by voluntary effort. In many areas invalid children and others needing care in their own homes are visited and helped by voluntary organisations. Though the need for material aid from private sources becomes less as public provision extends, many forms of help to meet individual needs that would not otherwise be met are given by voluntary agencies. Their most valuable role is probably in providing small personal services and the continued personal interest that can mean so much to a sick or handicapped person. These voluntary agencies usually depend largely on the work of part-time or full-time unpaid volunteers.

A great deal of help is given to hospitals by voluntary bodies and individual voluntary helpers. The majority of the hospitals in England and Wales have

[1] Legislation is under consideration which would bring the position in Northern Ireland more closely into line with Great Britain in this respect.

their own Leagues of Friends or similar bodies of voluntary workers who organise and undertake a variety of services. Many hospitals also have help from the British Red Cross Society, the St. John Ambulance Brigade, the Women's Voluntary Service, or a similar organisation. The operation of canteens for out-patients, and trolley-shops and book and picture library services for in-patients, visiting in the wards, receiving new patients, and mending linen are among the tasks commonly undertaken.

THE MEDICAL, DENTAL AND ALLIED PROFESSIONS

Only persons whose names are on the medical register can practise as doctors under the National Health Service. Apart from registered medical practitioners, only persons whose names are on the dentists' register can practise the full range of dentistry in Britain; dental auxiliaries who have undergone a two-year training course may do some simple work under supervision. The minimum qualification for registration as a doctor requires five to seven years' training in medical school and hospital, with an additional year's experience as a resident assistant doctor in a hospital; for a dentist, four or more years at a dental school are required. The governing body of the medical profession is the General Medical Council, first set up in 1858; that of the dentists is the General Dental Council, which succeeded the Dental Board in 1956. The British Medical Association is the main doctors' professional association; that of the dentists is the British Dental Association.

The minimum period of hospital training required to qualify for registration as a general trained nurse is three years. Training is available also in sick children's, mental, and mental subnormality nursing. An enrolled nurse takes a two-year course. The examining body of the nursing profession is the General Nursing Council. Midwives must have the certificate of the Central Midwives Board. Most pupil midwives are already state registered general nurses or sick children's nurses; for them the two-year midwifery training period is reduced to one year and, for state enrolled nurses, to 18 months. The Royal College of Nursing and the Royal College of Midwives are the professional bodies for nurses and midwives. Health visitors are state registered general or sick children's nurses who have undergone at least the first part of the midwifery course or obstetric nursing before taking a year's course in health visiting, promoted by the Council for the Training of Health Visitors.

In order to describe himself as a pharmacist, a pharmaceutical chemist must have his name entered in the register maintained by the Pharmaceutical Society of Great Britain, the governing body of the profession. Qualifications requiring four or five years' academic study and practical training are necessary for registration. Dispensing of medicines on National Health Service prescriptions and the sale of certain specified medicines can be carried out only by, or under the supervision of, a registered pharmaceutical chemist. Under the Opticians Act, 1958, a General Optical Council regulates the professions of ophthalmic optician and dispensing optician; only registered ophthalmic opticians (or registered medical practitioners) may test sight. Training of ophthalmic opticians takes three years followed by a year under supervision.

State registers have recently been established for chiropodists, dieticians, medical laboratory technicians, occupational therapists, physiotherapists, radiographers and remedial gymnasts. The governing bodies are seven boards (called, for example, the Chiropodists Board or the Dieticians Board) under the general supervision of the Councils for Professions Supplementary to Medicine. A professional training lasting two or three years or more is needed to qualify for registration. Only state registered members of these

professions may be employed in the National Health Service and some other public services.

Medical social workers must obtain the certificate of the Institute of Medical Social Workers, or have taken a recognised university course to qualify them for membership of the Institute. Psychiatric social workers are required to have a certificate showing they have attended the mental health course provided at certain universities. Speech therapists need a good general education and three years' professional training.

MEDICAL RESEARCH

Medical research in Britain receiving support from government funds is carried out by the Medical Research Council, the universities and their associated medical schools, and also in hospitals in the National Health Service. Further support for medical research is provided by private organisations, of which the British Empire Cancer Campaign and the Nuffield Foundation are among the largest. There is close co-operation between the Medical Research Council and these organisations to ensure the best allocation of their respective resources. Research is also undertaken by the pharmaceutical industry. (For fuller information on medical research see p. 213.)

6
EDUCATION

There are about nine million children and young people in full-time attendance at schools, universities, training colleges or technical colleges in Britain. The great majority of schools, attended by over 90 per cent of school children, are publicly provided or aided. Most technical colleges and other centres of further education are also publicly maintained. Universities are autonomous self-governing institutions but are aided from public funds, as are nearly 95 per cent of their students.

The bulk of expenditure on education in Britain comes from public funds although many of the older-established schools and colleges continue to benefit from private endowments. In 1964–65 total public expenditure on education, including university education (but excluding school meals and milk), was nearly £1,397 million.

In England and Wales the main development of publicly provided primary education dates from 1870, and that of secondary education from the beginning of the present century. In 1833 the Government began to make annual grants to the voluntary societies which were providing schools, and the Elementary Education Act of 1870 accepted the principle of compulsory education. By the end of the nineteenth century elementary education had become virtually both compulsory and free of charge. Public provision of secondary education (already begun in Wales) started in England under the Act of 1902. The Education Act of 1944 now governs public education in England and Wales. The Scottish and Northern Ireland educational systems both have long histories independent of that of education in England, but the same general policy is now being implemented throughout the United Kingdom, with some national variations. The governing acts are the Education (Scotland) Act 1962 (a consolidating measure) and the Education Act (Northern Ireland) 1947.

A rising birth rate, a decline in the numbers of early school leavers and a more widespread recognition of the value of higher education has increased the demand for educational facilities and stimulated expansion at all levels.

Educational Administration

All aspects of education in England and Wales, and of universities (and civil science and the arts, see p. 52) throughout Great Britain are the responsibility of the Secretary of State for Education and Science. (The Secretary of State for Wales is concerned with the supervision of the national educational policy in Wales.) The Secretary of State for Scotland and the Minister of Education for Northern Ireland have corresponding educational responsibilities, except that the Secretary of State for Scotland is consulted about Scottish universities but is not responsible for them.

Administration of publicly provided schools and further education is divided between the central government departments, local education authorities, and various voluntary organisations. The relation between these three groups is based on consultation and co-operation, both by direct contact between the parties and through Her Majesty's Inspectors of Education who act as liaison officers, particularly between local education authorities and the

departments. The Schools Council for the Curriculum and Examinations, which was set up in 1964 to act as an advisory body on all aspects of the school system is representative of all educational interests.

The local education authorities are responsible for ensuring that adequate provision is made in their areas for the two stages of school education (primary and secondary), and that those pupils who would profit by proceeding to a university are not deterred by lack of financial means. They are also responsible for the provision of all forms of further education (see p. 162).

The planning of the curriculum is largely in the hands of the head teacher of each school and the individual teachers.

In England and Wales colleges of education (formerly known as teacher training colleges) are under the financial and administrative control of local education authorities or voluntary organisations, but the organisation of courses is based on university institutes of education. The Scottish colleges of education are under the control of specially appointed governing bodies; in Northern Ireland they are under the control of the Government or voluntary agencies.

The universities are administratively independent of the Department of Education and Science (and in Northern Ireland the Ministry of Education); their relations with the departments concerned are conducted through the University Grants Committee (see p. 167). Their governing bodies are appointed according to the terms of their individual charters.

SCHOOLS

Parents in Britain are required by law to see that their children receive efficient full-time education, at school or elsewhere, between the ages of 5 and 15. (The school-leaving age is to be raised to 16 in 1970–71; it is estimated that this will increase the school population by 425,000.)

At present there are over $8\frac{3}{4}$ million school children at about 40,000 schools. In England and Wales there were over 7 million children in publicly maintained schools in 1964, besides some 124,000 others at schools receiving direct grants from the Department of Education; there were also about 470,000 children of all ages at about 3,750 independent schools. In Scotland 893,000 children were attending publicly maintained or aided schools and nearly 18,000 were at independent schools. In Northern Ireland 300,000 children were attending publicly maintained or aided schools; there were very few at independent schools. The number of school children in Britain is increasing mainly because the birth rate has continued to rise steadily since 1955, so that primary school numbers are very high. Each year, too, more children stay on at school beyond the minimum leaving age and the school population is expected to rise by 2 million by 1975. There is, therefore, a continuing need for more teachers and more school buildings.

In England and Northern Ireland it is usual for boys and girls to be taught together in primary schools. In England and Wales over half and in Northern Ireland less than half the secondary schools are for boys or girls only. Mixed schools are more common in Wales and in Scotland, where all but a few city schools take both boys and girls. There are a few co-educational independent schools, including those with classes for small children, but the majority are for either boys or girls.

Management

Schools supported from public funds are of three kinds in England and Wales: *county schools* (the largest group) which are provided and maintained by local education authorities wholly out of public funds; *voluntary schools* (mostly 'aided' or 'controlled' schools) which have been provided by a

voluntary body, usually of a religious denomination[1], and *direct grant schools* which are completely independent of local education authorities but receive a grant-in-aid from the Department of Education and Science. These last (the smallest group) mostly provide education of the grammar school type; they include some schools of ancient foundation. In Scotland most of the schools supported from public funds are provided by education authorities and are known as *public schools* (in England this term is used for a type of independent school, see p. 160). There are also a few *grant-aided schools* (some of ancient foundation) conducted by voluntary managers and receiving grants direct from the Scottish Education Department. In Northern Ireland county schools, managed by local education authorities, and voluntary schools, under voluntary management, are both grant-aided by the Government.

Fees

In England and Wales no fees are charged to parents of children attending schools maintained by local education authorities (i.e. over 90 per cent of the school population) and books and equipment are supplied free. Direct grant schools charge fees, but must offer 25 per cent of their places free to pupils who have attended maintained or grant-aided primary schools for at least two years; these places are usually offered through, and paid for by, local education authorities. The direct grant schools must also put a further 25 per cent of their places at the disposal of local education authorities, if required, for candidates who have not necessarily attended grant-aided primary schools. Tuition fees for the remaining places are payable, but relief may be claimed in accordance with an income scale approved by the Department of Education and Science; the Department pays the governors of the school the amount of the fees so remitted. (For independent schools, see p. 160.) In Scotland education authorities may charge fees in a limited number of schools provided that this does not prejudice the provision of free education for all who are entitled to it. In Northern Ireland no fees are charged to parents of children attending grant-aided schools, with the exception of grammar schools, where qualified pupils receive from the local education authorities scholarships which cover the whole or most of the fees charged by the school.

Curricula

Local education authorities in England and Wales must ensure that there are sufficient schools available for their area; teachers are not subject to direction from the central department on curricula or teaching methods. Her Majesty's Inspectors, who are responsible for the inspection of all schools including independent schools, review and report on the content and value of the education provided and, during their visits, are available as advisers. Local education authorities also employ inspectors to advise on the schools which they maintain. Further advice is available to teachers as a result of research undertaken by the Schools Council. In Scotland the broad outline of schemes of work in primary and secondary schools is subject to the approval of one of Her Majesty's Inspectors. In Northern Ireland the curriculum of each grant-aided school is subject to the approval of the Ministry of Education.

[1] The local education authority is responsible for the running costs of all voluntary schools and for the cost of all building work at controlled schools. Aided schools have more independence than controlled schools and are responsible for part of the cost of external repairs and any building work. Over a third of the 30,000 schools maintained by local education authorities in England and Wales are voluntary schools and the majority of these are Church of England schools. There are some 2,000 Roman Catholic voluntary schools and smaller numbers belonging to other religious bodies.

In both countries considerable latitude is afforded in the scope both of the curriculum and the teaching methods employed.

Religion in Schools

In England and Wales by law all children in county or voluntary schools receive religious instruction and take part in a daily corporate act of worship unless their parents wish them to be withdrawn. In county schools, and in certain circumstances in voluntary schools, religious instruction of an undenominational Christian character is given. In all kinds of voluntary school there is opportunity for denominational instruction. In county schools in Northern Ireland clergy have a right of access to give religious instruction to children of their denomination for a limited period each week. In Scotland, subject to safeguards for the individual conscience, matters relating to religious instruction are in the hands of the school managers, but there are a number of denominational schools conducted by education authorities.

Services in the school chapel and religious teaching are an essential part of the life and education of the independent public schools and at most of these schools conform to the teaching of a particular church (in the majority of cases, Anglican).

Health and Welfare of School Children

Physical education, including organised games, is a part of the curriculum of all schools. Those receiving financial assistance from public funds must have the use of a playing field and most secondary schools have a gymnasium. Organised games include tennis, cricket, football, hockey, lacrosse and netball.

The School Health Service provides periodic medical inspection and arranges for free medical and dental treatment for all children attending schools maintained by local education authorities. Treatment facilities include dental clinics and child guidance centres. (There are also child guidance clinics in the National Health Service.) In Northern Ireland the School Health Service is operated by the health authorities.

Milk (normally one-third of a pint a day) is given free to all school children who wish to have it, and the Schools Meals Service provides a midday dinner at a subsidised price (remitted where there is need) to just over half the pupils in county and voluntary schools. Education authorities have power to provide free transport for children who live more than a certain distance from the schools they attend.

Primary Schools

There are some nursery schools which provide informal educational and play facilities for children between two and five years old. At five, the age at which education becomes compulsory, children in England and Wales go to *infant schools* or departments until they are seven and then on to *junior schools* until the age of about eleven (also in Northern Ireland; twelve in Scotland).

The controversial subject of the age of transfer from primary to secondary schooling is included in the terms of reference of the Central Advisory Council for Education (England) which, under the chairmanship of Lady Plowden, is considering primary education in all its aspects; the Council's report is expected in 1966. In the meantime, under the Education Act 1964, local education authorities and voluntary bodies in England and Wales may, subject to the approval of the Secretary of State for Education and Science, organise new schools so that the age of transfer is not necessarily at eleven. Primary departments in Scotland take all children between the ages of five and twelve.

In Scotland primary pupils must be taught reading, writing, arithmetic, English, music, art and handwork, nature study, physical training and, at

the appropriate stage, history, geography, and written composition; girls must learn needlework. Religious instruction is also given. In England, Wales and Northern Ireland, the curriculum is similar in scope with the addition, in Wales, of the teaching of Welsh. (Children who speak Welsh at home normally receive the early stages of their primary education in Welsh and are taught English as a second language.) Many interesting developments are taking place in the teaching of mathematics and foreign languages as well as in physical education, drama and art.

Secondary Schools

The public or state system of education aims to give all children an education suited to their particular abilities. A change in the means by which this should be achieved in England and Wales was announced by the Government in November 1964, when it was stated that, as a matter of national policy, all secondary education should be reorganised gradually on a comprehensive basis.

England and Wales

Comprehensive schools are not selective and provide all types of secondary education for all or most of the children of a district. This means that they provide a far wider range of courses than the schools that they will replace—mainly grammar and secondary modern schools. Comprehensive schools can be organised in a number of ways. Some take the full secondary school age-range from 11 to 19; others, such as those in parts of Leicestershire, are 'two-tier', with junior high schools for pupils between 11 and 14 and upper schools for pupils guaranteeing to stay there at least two years.

Grammar schools, for children who are successful in the selection procedures at the age of eleven (hence the term 'eleven-plus'), provide an academic education orientated towards university entrance; *secondary modern schools* were originally designed to give a general education with a practical bias; there are also a few *secondary technical schools* offering a general education related to industry, commerce and agriculture; and schools providing all three, or any two types of education, in separately organised streams and known as *multilateral* or *bilateral schools*. The system of allocating children to different types of school at the age of eleven and the selection methods used have provoked much public discussion and critical thought. Also, as it has become increasingly clear that many pupils want and benefit from a more academic type of course, many modern schools have been providing courses of the grammar and secondary technical type. When the Government announced in 1964 that it favoured a comprehensive policy, many local authorities, with more than two-thirds of all secondary school pupils in their areas, had already implemented or were planning to introduce comprehensive systems.

Most grammar school pupils remain at school until they are 16 and the rest leave between the ages of 17 and 19. Although the majority of secondary modern pupils leave during the year in which they are 15, nearly one-fifth (17·5 per cent in 1963–64) stay on for another year or longer. In comprehensive schools 16·7 per cent of all pupils were over statutory school leaving age in January 1964. Some 62 per cent of the 15 to 16 year old age group in England and Wales are in full-time education at maintained schools or colleges of further education and 29 per cent of the 16 to 17 year old age group.

Scotland

Scottish secondary schools fall into two main categories, those providing courses extending normally to three years, generally called *junior secondary schools*, and those providing courses of four, five or six years, known as *senior secondary schools*. In each type of school the courses are intended to provide a general education, but they are differentiated in character to suit the varying

needs and abilities of the pupils, and include literary, commercial, boys' technical, domestic and rural courses. About 45 per cent of the schools are junior secondary and 55 per cent senior secondary; of the latter about 75 per cent are comprehensive, a type traditional in Scotland. Over one-third of all pupils go on to senior secondary courses on reaching secondary school age. Pupils are transferred to the different types of secondary school on the basis of teachers' estimates of attainment, intelligence tests, and attainment tests, with due regard to the wishes of the parents. There is provision for an appeal to the Secretary of State for Scotland in the event of a dispute between the education authority and the parent and also for the reconsideration of original allocations later.

Northern Ireland

In Northern Ireland there are *grammar schools*, *secondary* (*intermediate*) *schools*, which are the equivalent of the secondary modern schools in England and Wales, and *technical intermediate schools*, which offer the same facilities as secondary technical schools in England and Wales. Some changes in organisation are likely as the result of the 1964 White Paper, *Educational Development in Northern Ireland*.

Special Educational Treatment

Special educational treatment, either in special schools or otherwise, is provided for children who require it because of any physical or mental handicap, including maladjustment. For children at special schools attendance is compulsory between the ages of 5 and 16, although a number of schools accept children outside this age range. There are about 970 special schools in Britain, including hospital schools, day and boarding schools. There are also boarding homes for handicapped children attending ordinary schools.

In England, Wales and Northern Ireland there are ten categories of handicapped pupils for whom local education authorities must provide special educational treatment: blind, partially sighted, deaf, partially hearing, delicate, educationally subnormal, epileptic, maladjusted, physically handicapped and children suffering from speech defects. (There is no separate category for the delicate in Scotland.)

Independent Schools

Independent schools in England and Wales must be registered with the Department of Education and Science, to show that they conform to certain minimum standards. Schools achieving certain higher standards may apply for recognition as 'efficient'; independent schools so recognised contain about two-thirds of the pupils. Similar registration arrangements exist in Scotland and Northern Ireland. Fees at independent schools (for tuition and boarding) range between £300 and £550 a year. A number of them offer scholarships. The largest and most important of the independent schools in Britain are known as public schools, although not all schools classed as public schools are independent (those which are not are mostly direct-grant schools) and public schools form only a minority of all independent schools. (These schools should not be confused with the State-supported public schools in Scotland.)

Public schools for boys have made a notable contribution to English education, many dating from at least the sixteenth century. The public school today is characterised by a high staffing ratio and a high proportion of pupils doing advanced work and is often, although not necessarily, a boarding school. The usual age of entry to the independent public schools for boys is 13 and the leaving age about 18. There are some girls' public schools modelled to a certain extent on the public schools for boys. The Government has stated

that it intends to consider how the independent schools may best be integrated into the state system of education.

Independent schools also include *preparatory schools*, many of them boarding schools, for boys aged from about 8 to 13 years, most of whom are intending to enter public schools; a few similar schools for girls; and a wide range of other day and boarding schools covering every age group and grade of education and many types of educational method. Some of these schools are owned and managed, often under a trust deed, by independent non-profit-making bodies. Others are privately owned by proprietors for whom the running of the school provides a living.

Secondary School Examinations

There is no national leaving examination in England or Wales, but secondary school pupils (and candidates not attending school) may take the General Certificate of Education (GCE) or the Certificate of Secondary Education (CSE). The GCE, which is on a single subject and not a grouped subject basis (i.e. no subject is obligatory and individual subjects may be taken at different times), is conducted at 'ordinary' and 'advanced' levels. Most candidates for the ordinary level are about 16 years of age, although many take it earlier, at the discretion of their head teacher. Most grammar, direct-grant and independent school pupils and an increasing number from other secondary schools take the ordinary examination, and passes in various subjects are widely accepted for entry to courses of vocational training. The advanced examination is at university entrance level (supplemented, since 1963, by special papers to help university authorities in selecting students) and is accepted also for purposes of entry to many forms of professional training. The CSE, instituted in 1965, is designed for pupils who have completed five years' secondary education but who are not taking GCE; it is also on a single subject basis and is controlled by teachers serving in the schools providing candidates. The highest grade of pass in the CSE is intended to be of the same standard as a pass in the GCE O-level.

In Scotland courses in senior secondary schools lead to examinations conducted by the Scottish Certificate of Education Examination Board. School pupils in the fourth year of secondary courses sit an examination at 16 years for the award of passes on the Ordinary grade of the Scottish Certificate of Education, and pupils in the fifth year can obtain passes on the Higher grade of the Scottish Certificate of Education. Examinations at both grades are open to candidates who have left school.

In Northern Ireland candidates may take the Junior Certificate Examination, at about the age of 14, and the Northern Ireland General Certificate of Education, at about the age of 17.

School Building

Local education authorities and voluntary bodies are responsible for providing the schools and other buildings needed for public education in their areas. The central departments exercise control by approving annual building programmes, put forward by local education authorities, framing regulations and fixing cost limits; they also offer guidance to authorities by means of building bulletins and in other ways.

An extensive school building programme has been carried out in recent years. This has resulted in the completion of over 8,000 new schools in Britain between 1947 and 1964; together with extensions, alterations and remodelling of existing schools, about $4\frac{1}{2}$ million new places have been provided, at a cost of about £1,090 million. In England and Wales new work to the value of £80 million has been authorised to start in each of the years

1965–66 and 1966–67. In Scotland the comparable authorisations are for £14 million and £17 million. In Northern Ireland expenditure is expected to be over £4 million a year.

Grants of up to 75 per cent of the approved cost are normally available from the Department of Education and Science for the building of new voluntary aided schools and for alterations and external repairs to existing aided schools. The Northern Ireland grants amount to 65 per cent of the total cost of the expenditure by voluntary bodies on both new schools and improvements.

The extensive school building programme has been accompanied by new ideas and methods in design and construction. Industrialised building techniques have been widely adopted. The new schools are light, airy and colourful, with a high standard of finish and generous provision of teaching area and outdoor games space.

FURTHER EDUCATION

The British system of further education is distinctive for its flexibility. Further education is available to all above school-leaving age and at all levels, full-time or part-time, and may be vocational or non-vocational. Most of the colleges of further education are conducted by local education authorities. The most advanced courses, which are of university standard, may qualify for the approval of the Council for National Academic Awards, which will then award degrees to students successfully completing them (see p. 170). This section mainly describes other forms of further education.

Institutions

In England and Wales local education authorities maintain about 500 colleges, which provide technical and commercial courses at every level and a number of GCE courses. There are also a number of agricultural colleges (see p. 348) and art colleges (see p. 228). The 25 regional colleges, of which nearly all the students work at or near degree level, are also maintained by local authorities. (The colleges of advanced technology (see p. 167), concentrating entirely on advanced work, were also part of the further education system before they obtained university status.)

Six national colleges linked to a particular technology are administered jointly by the industry and the Department of Education and Science. They are the colleges for rubber technology; food technology; heating, ventilating, refrigeration and fan engineering; agricultural engineering; the National Foundry College; the National Leathersellers College (and formerly the Royal College of Art, see p. 229). These receive grants from the Department of Education and Science.

In Scotland there are about 80 local further education colleges offering full and part-time day courses and a number of evening courses and 13 *Central Institutions* for further education doing advanced work.

In Northern Ireland there are 30 institutions of further education, of which six conduct advanced level courses.

Finance

Since most of the technical colleges and other further education establishments in Britain are either maintained or aided from public funds, tuition fees are moderate, and often nominal for young people under 18 years of age. Many full-time students are helped by awards from local education authorities. The awards are generally based on the results of the General Certificate of Education or a corresponding examination; they are assessed to cover tuition fees and a maintenance grant, but parents who can afford to contribute towards the cost are required to do so. There are also some scholarships

available from endowments, and others are awarded under schemes organised by particular industries or companies for the most promising of their young workers.

Capital expenditure for all further education institutions in Great Britain was over £206 million in the ten years 1955–65, of which £23·3 million was expenditure in Scotland. The Government increased the capital fund available for new projects at institutions of further education in England and Wales from £16 million in 1964–65 to £24 million in 1965–66 and have announced a 1966–67 programme of £27 million (although there is to be some revision of its timing). In Scotland £3·3 million was allocated for capital expenditure on institutions of further education in 1964–65. In Northern Ireland in the period 1955–65 capital expenditure amounted to over £4 million.

Students

In 1964 there were 215,700 full-time and sandwich course (see below) students and 1¾ million (including evening) part-time students in technological, technical, art and commercial colleges in Britain (1·6 million in England and Wales, 313,000 in Scotland and 46,500 in Northern Ireland). The total number of students on advanced courses in England and Wales was 158,000, in Scotland, 4,900 and in Northern Ireland, 1,150.

The courses provided are full-time, sandwich (three to five years in length, generally consisting of alternate periods of about six months of full-time study in technical college and supervised experience in industry), block release (on similar principles, but for shorter periods), day release (generally attendance at a technical college for one day a week during working hours), and evening classes.

Sandwich courses are popular at advanced levels. For lower level courses day release and block release courses are replacing evening courses to a large extent and are likely to become more widespread. The Industrial Training Boards being established under the Industrial Training Act 1964 will probably prescribe day and block release courses as the appropriate further education to be associated with the industrial training of various categories of young workers.

Technological and Technical Courses

There is a wide variety of craft courses for young people in various trades and occupations, leading to appropriate qualifications at the end of a course of three to five years. Some experiment is taking place with courses of a more professional character which are suitable for technicians or for those who aim ultimately at membership of a professional institution. There are many others leading to the National Certificates approved by joint committees representative of the education departments and the appropriate professional body (for example, the Institution of Mechanical Engineers). These courses are normally at two levels, ordinary and higher. The Ordinary Certificate courses last two years and students usually follow them between the ages of 16 and 19. The Higher Certificate (an advanced course) requires a further two years' part-time study and is generally considered to reach a level corresponding to a pass degree in the subject concerned. Similar in standard are the Higher Diploma courses, awarded by joint committees in the same way as the Higher National Certificate. These require three years' full-time or sandwich study. (For degree courses, see p. 170.)

Business Courses

A fair proportion of evening institutes and some independent colleges offer courses in shorthand, typing and bookkeeping. Most local technical colleges offer some lower level work; higher level work is generally concentrated in technical colleges with a department of commerce or in specialised colleges

of commerce. The Scottish Council for Commercial Education awards senior and advanced commercial certificates to students aiming at professional careers in commerce. In 1963 a Certificate in Office Studies for young entrants to clerical and other non-technical posts was introduced in England, Wales and Scotland.

Some business education is related to the specialised examination requirements of various professional bodies; large numbers of the candidates taking such courses do so through correspondence courses. In England, Wales and Northern Ireland there are part-time courses leading to the Ordinary National Certificate and Higher National Certificate in Business Studies. There are also more advanced full-time and sandwich courses leading to the Ordinary National Diploma and Higher National Diploma in Business Studies.

Adult Education

Adult education is generally taken to mean courses of non-vocational education for people over 18. In this context it comprises the courses provided by the residential colleges of adult education and courses of a mainly non-vocational character provided, either separately or in conjunction, by the extra-mural departments of universities, the Workers' Educational Association (WEA) and other voluntary bodies, and by local education authorities.

The residential colleges, the university departments and the voluntary bodies, such as the WEA, recognised by the education departments as competent to provide adult education, receive government grants. So too do various national bodies which promote educational activities of a non-political kind, such as the National Federation of Women's Institutes. Many of these bodies also receive grants from local education authorities for services rendered locally.

A major share in the provision of adult education is increasingly being assumed by local education authorities. Most of it is on a part-time basis, mainly in the 8,000 or so evening institutes, which have a total of over a million students, and also in schools of art, adult education centres, community centres, literary institutes and youth clubs. There are about 30 short-term residential colleges in Great Britain, maintained or aided by local education authorities, providing courses varying in length between a weekend and a fortnight. Many of the courses are practical, but there are widespread opportunities for academic study.

The village colleges of Cambridgeshire, Leicestershire, Peterborough, Huntingdonshire and Derbyshire, combining facilities for secondary and adult education, are another local education authority development. Community centres, though aided by the local education authority, are usually managed by community associations many of which are affiliated to the National Federation of Community Associations.

Eight residential colleges (seven in England and Wales, one in Scotland) provide courses of one or two years, some of which lead to a diploma. The colleges vary in character, although they all aim at providing a liberal education. Six of the colleges are grant-aided.

A number of voluntary bodies provide adult education as part of their services. The Women's Institutes and Townswomen's Guilds, for example, generally offer courses in social studies, arts, drama and handicrafts. These too are aided by local education authorities.

In general, courses at the highest levels in liberal studies are provided by the extra-mural departments of the universities, many of which have full-time staff appointed for this purpose and can call on the services of other members of the university staff; and by the Workers' Educational Association, which

also employs organising tutors and works closely with the university extra-mural departments. In 1964, 352,000 students in Britain attended such courses.

The National Institute of Adult Education provides in London a centre of information and research for adult education, as well as a channel for co-operation and consultation for the many organisations in England and Wales which are interested in this subject. It is assisted by a grant from the Department of Education and Science. The Scottish Institute of Adult Education is the corresponding body in Scotland.

Changes in the structure of education in Northern Ireland and increased government grants are resulting from acceptance of the main recommendations of the report, published in 1964, of the committee under Sir Charles Morris.

TEACHERS AND TEACHING

Teachers are appointed by local education authorities or school governing bodies or managers. In 1964 there were about 331,000 full-time and 30,000 part-time (equivalent to 14,000 full-time) teachers in publicly maintained primary and secondary schools in Britain, an average of one teacher to 24 pupils; but because of the shortage of teachers, particularly those for younger children, and their uneven distribution throughout the country, many classes have more than the statutory maxima of pupils (40 pupils for primary and 30 for secondary school classes in England and Wales; in Scotland 45 for primary, 40 for classes in the first three years and 30 for classes in subsequent years of secondary departments). The rise in school population has created a need for more and more teachers; although greater numbers are entering the colleges of education (see p. 169), more university graduates are turning to teaching, and many married women, formerly teachers, are returning to the profession, yet more are needed if the Government's aim of eliminating oversize classes is to be achieved. In 1964 there were over 36,000 full-time teachers in grant-aided establishments of further education in Britain, other than colleges of advanced technology and central institutions (see p. 167), and, because of the special conditions, many more part-time teachers. Most teachers in technical colleges have industrial and professional experience.

There are national salary scales for teachers in schools and other educational institutions maintained from public funds in England and Wales, in Scotland, and in Northern Ireland; and these scales influence the salaries paid to teachers in independent schools. There are also national superannuation schemes which are administered by the central departments.

Under the Remuneration of Teachers Act 1964, salaries in England and Wales are negotiated by three joint committees, each consisting of representatives of the teachers on the one hand and of local authorities and the Department of Education and Science on the other. They are concerned with salaries for teachers in maintained schools, institutes of further education and farm institutes. The machinery for salary negotiation in Scotland differs in that the Secretary of State for Scotland is not represented on the negotiating committee; he can, however, modify the committee's recommendations.

Many teachers serve overseas for a short period (see p. 174).

Teaching Aids and Educational Techniques

Radio broadcasts to schools and colleges of further education are well established. In 1964–65 the School Broadcasting Department of the BBC sent out 67 different radio series, many of which were repeated each week; they were used by about 75 per cent of schools (31,000) in Britain. The BBC also produced three different series for technical colleges. Television reaches

about 22 per cent of schools (some 9,000); 19 weekly programmes, all repeated the same week, were broadcast by the BBC and 14 weekly programmes, many of which were repeated, were produced by five of the independent companies (Rediffusion Limited, Granada, Associated Television, Scottish Television and Grampian Television) and broadcast by the Independent Television Authority (ITA).

Radio provides a great variety of educational programmes for adults, both vocational and non-vocational; most of them are grouped in the 'Study Session' hourly programmes on five nights a week. Television programmes for similar audiences have grown fast. The BBC provides them daily and ITA has a regular 'Sunday Session'. There have also been a number of experimental projects sponsored between the BBC, some of the independent television companies, universities, local education authorities and a voluntary body, the National Extension College (NEC). The NEC has been experimenting with television series, supported by correspondence courses and occasional contacts between students and tutors.

Both the BBC and ITV have educational advisory bodies and there is consultation between the two broadcasting services to prevent duplication of education programmes.

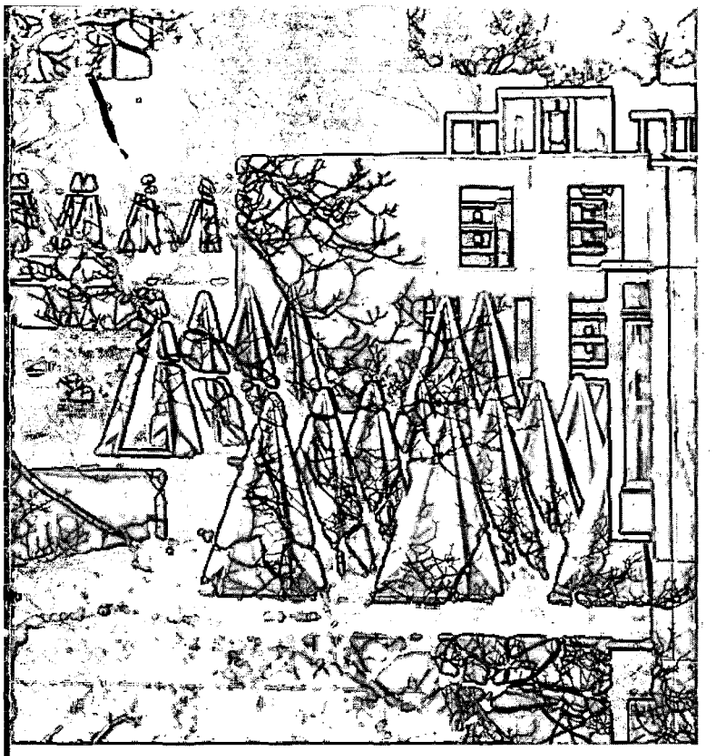
More recent developments include the use of aids which take over part of the repetitive teaching functions, allowing more of the teacher's time to be devoted to individual pupils. There has been a rapid development in the use of programmed learning for educational purposes and a National Research Documentation Centre has been established in the Department of Education at the University of Birmingham. The number of language laboratories (using tape recorders in individual sound-proof booths) being used at all levels of the educational system is increasing rapidly. Closed circuit television is in regular use at several universities, medical schools, colleges of education and schools.

There is a trend in schools and colleges towards co-ordinating different methods of audio-visual presentation, including films, colour slides, wall charts, maps, models and recording tape. For example, the BBC's 'Radiovision' programmes for schools on art and languages, introduced in 1964, used coloured film strip synchronised with sound programmes and extension to other subjects was planned for 1965–66. The National Committee for Audio-Visual Aids in Education is the main promotional body in England and Wales; it runs a national information and exhibition centre and an experimental development unit.

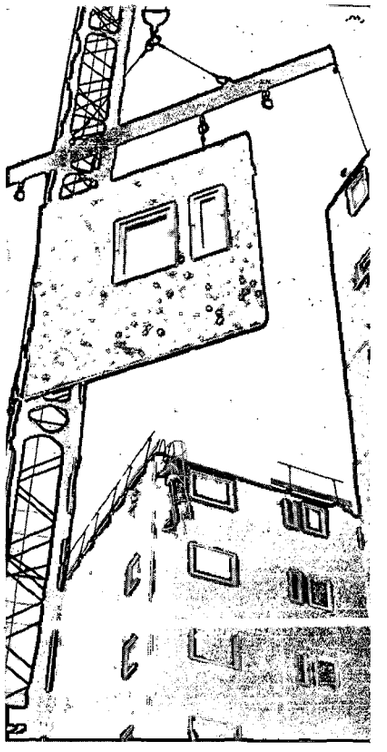
HIGHER EDUCATION

Higher education in Great Britain is being rapidly expanded in universities, colleges of education, and in technical colleges and certain other institutions where some courses are of advanced level. (For higher education in Northern Ireland, see p. 171). The expansion has been accelerated by the Government's acceptance of the target figures up to 1973–74 and the substance of certain other important recommendations of the Committee on Higher Education under Lord Robbins' chairmanship. The Committee's report, published in 1963, suggested that by 1973–74 there should be 390,000 places in higher education, of which 218,000 should be in university institutions. Early in 1965 the Government decided that 122,000 of the remaining places should be for training teachers, a move that will almost double the number of teachers in training.

The colleges of advanced technology and two Scottish central institutions are to have university status, and the Royal College of Art, London, and the

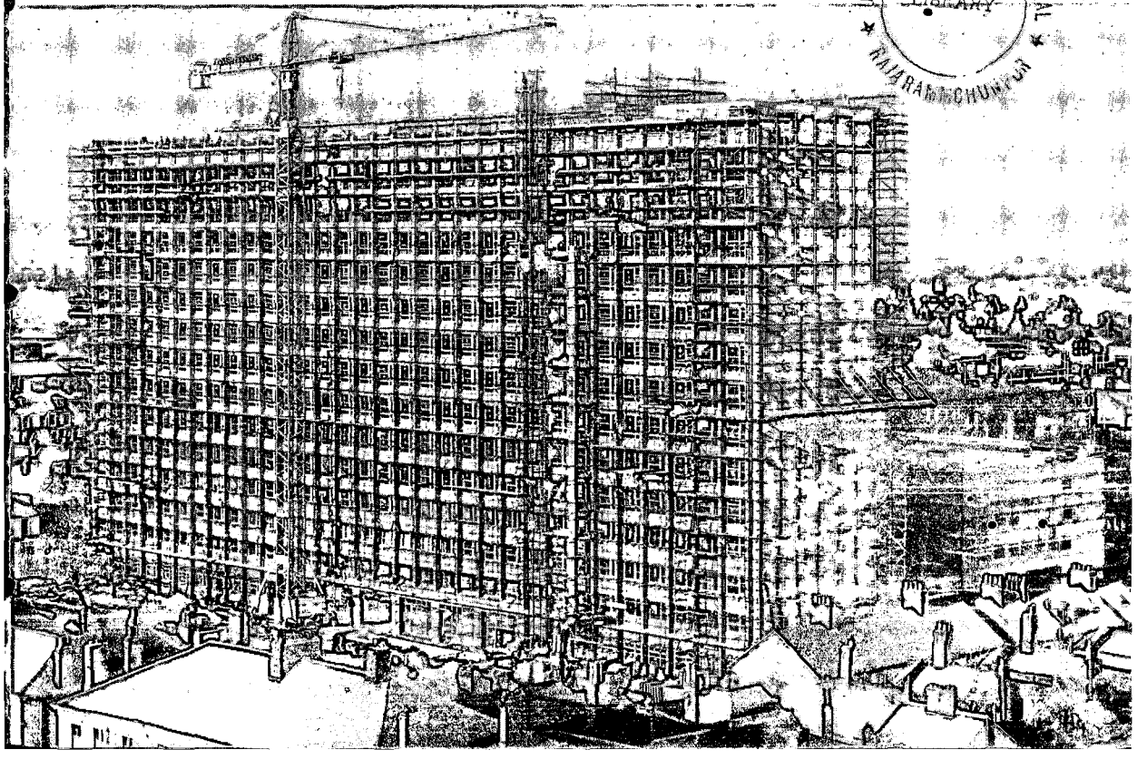


Unusual roof-lines of new buildings of the University of York.

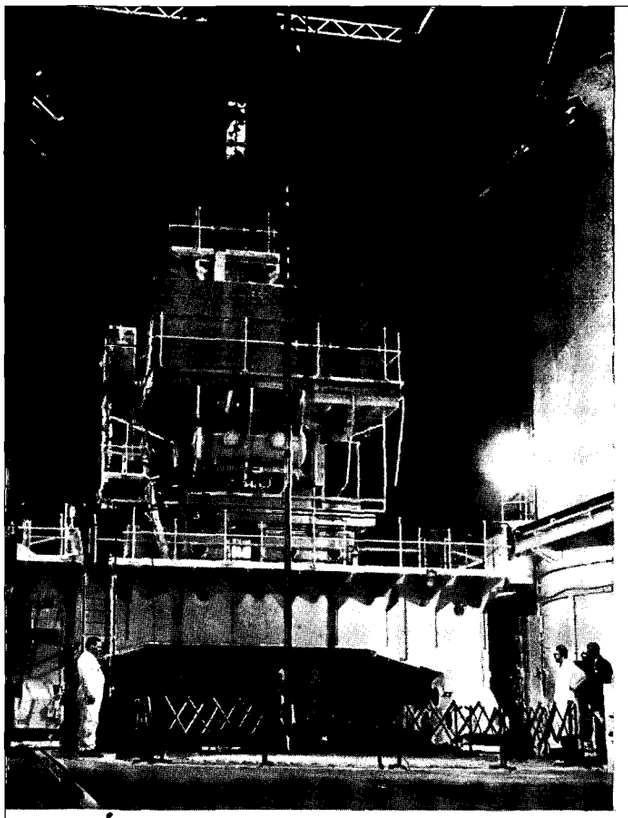


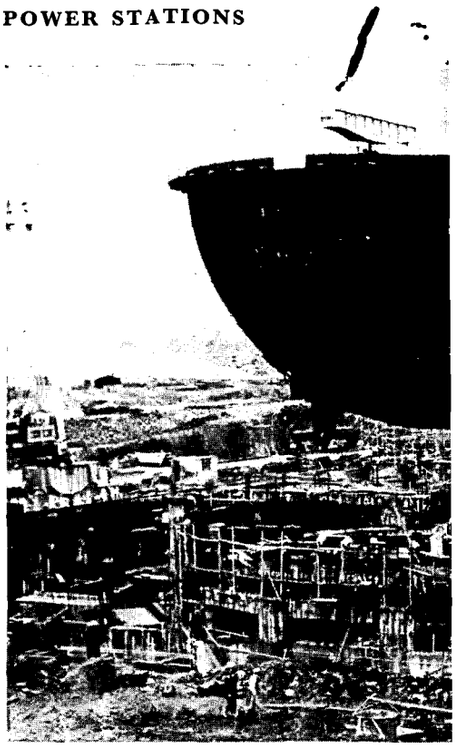
Prefabricated section being raised to the 10th floor of a block of flats.

Hull Royal Infirmary: a new 550-bed hospital.

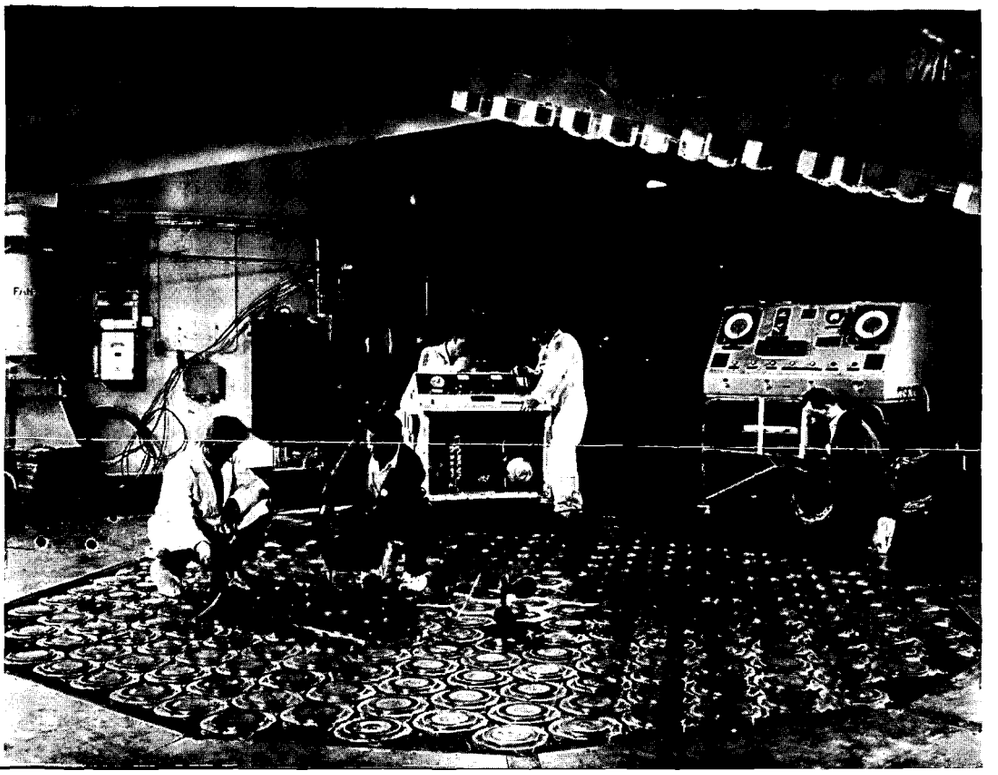


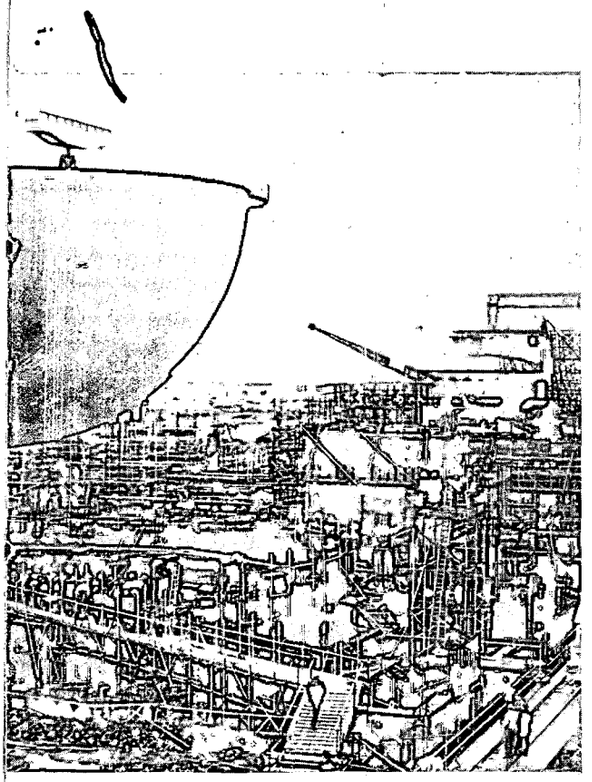
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LIBRARY
RAJARAMMOHUNPUR





Above and below: Advanced Gas-cooled Reactor at Windscale.

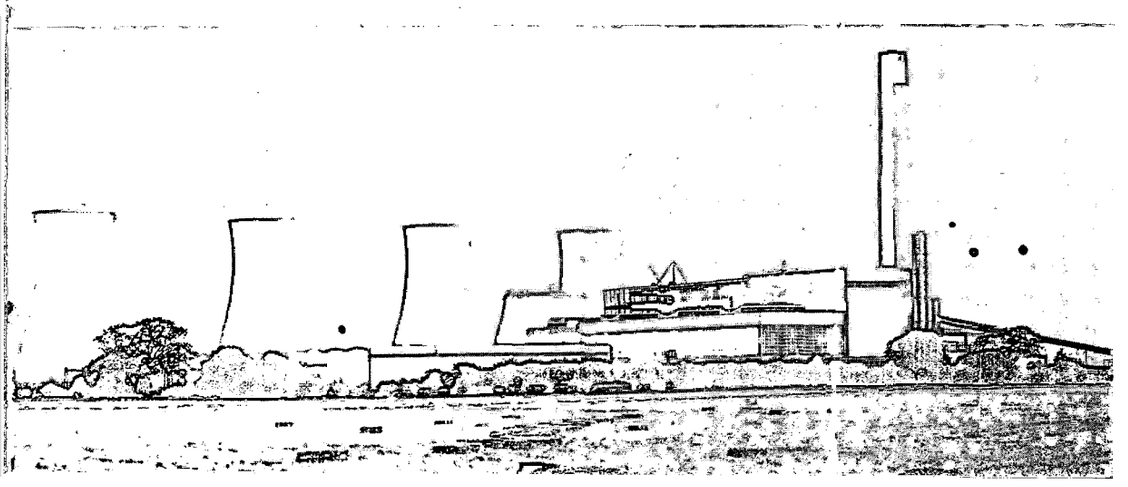


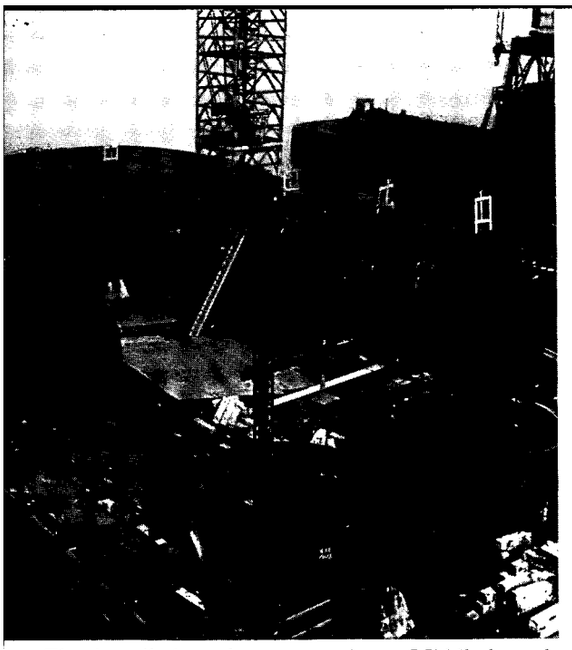


Lower half of two spherical reactor pressure vessel liners (weighing 450 tons) at the Wylfa nuclear power station.

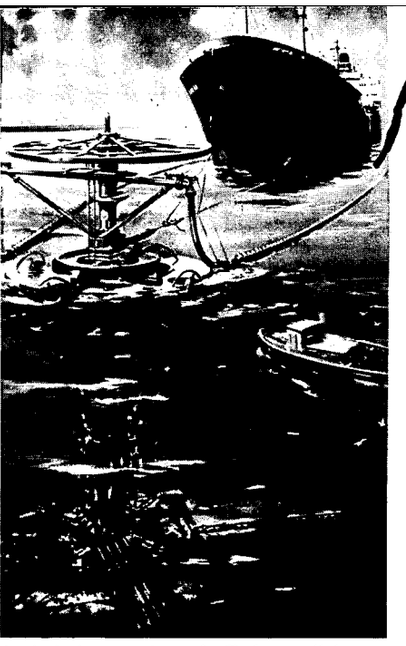


Top right and below: New 2,000 MW thermal power station at Eggborough, Yorkshire, due to be commissioned in 1966.

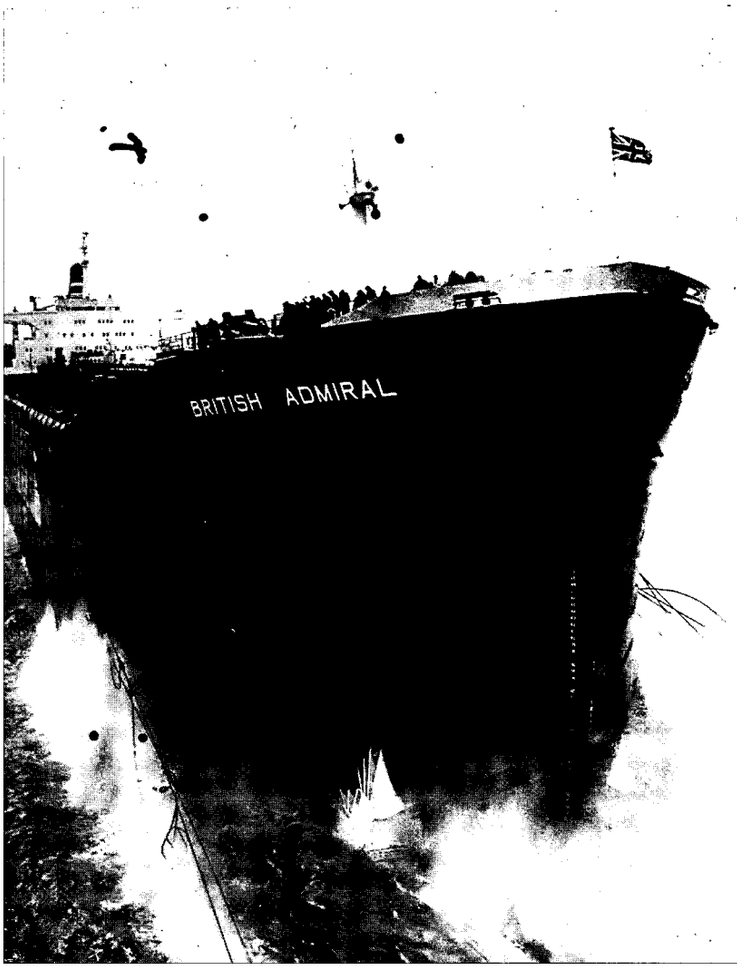




Floating oil-rig under construction at Middlesbrough.



Artist's impression of off-shore oil-buoy.



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British Admiral, Europe's first 100,000-ton tanker, launched at Barrow-in-Furness.

College of Aeronautics, Cranfield, are also to be brought within the ambit of the University Grants Committee (see below). Instead of establishing new universities (apart from Stirling, approved in 1964) or giving university status to other institutions, the Government has decided to provide the additional places required during the next ten years in existing universities. An exception which is being considered is the possible creation of a new technological university institution in north-east England.

Further expansion of technological education and the selective development of institutions is being encouraged. These include the Imperial College of Science and Technology (University of London) Manchester College of Science and Technology, Strathclyde University and, possibly, the new institution mentioned above.

Teacher training colleges in England and Wales are being renamed colleges of education (as they are already known in Scotland) and it will be possible for some of their students to take degrees. Two business schools for postgraduate students with business experience are being established (see p. 171). A Council for National Academic Awards has been set up (see p. 170) with the power to award degrees to students on suitable courses outside universities. (The Robbins Committee was particularly concerned that there should be the same awards for work of the same standard whatever institution the student attended.)

Universities and University Colleges

There are over 30 universities in Great Britain and the number will shortly reach about 45 as the colleges of advanced technology (CATs) attain university status and three new universities come into being in Scotland. Although the Department of Education and Science is responsible for providing nearly three-quarters of universities' income it does not control their work or teaching nor does it have direct dealings with the universities. It is advised, and its grants distributed, by the University Grants Committee, whose members are appointed for their personal academic or industrial experience.

The English universities are: Birmingham, Bristol, Cambridge, Durham, Exeter, Hull, Keele, Leeds, Leicester, Liverpool, London, Manchester, Newcastle upon Tyne, Nottingham, Oxford, Reading, Sheffield, Southampton, and the new Universities of Sussex, at Brighton (opened in October 1961), York (1963), East Anglia, at Norwich (1963), Essex, at Colchester (1964), Lancaster (1964), Kent, at Canterbury (1965) and Warwick, at Coventry (1965). The Scottish universities are: Aberdeen, Edinburgh, Glasgow, St. Andrews and Strathclyde. There is a University of Wales; and St. David's College, Lampeter, whose arts degree courses are aided by grants through the sponsorship of the University College of South Wales and Monmouthshire.

Many of the colleges of advanced technology are changing their names as they achieve university status and some are moving sites. Their new names, as proposed in their charters, are shown in brackets (where they are known). They are Battersea College of Technology, London (University of Surrey, at Guildford), Birmingham College of Advanced Technology (University of Aston in Birmingham), Bradford Institute of Technology (University of Bradford), Brunel College, Acton (Brunel University), Bristol College of Science and Technology (Bath University of Technology), Chelsea College of Science and Technology, Loughborough College of Technology (Loughborough University of Technology), Northampton College of Advanced Technology, London, Royal College of Advanced Technology, Salford, and the Welsh College of Advanced Technology, Cardiff.

The new Scottish universities are: Stirling, a completely new foundation; Queen's College, Dundee, which is preparing to become a university independent of St. Andrews; and Heriot-Watt College, Edinburgh, formerly a central institution. The second central institution which was promised university status, the Scottish College of Commerce, joined with the Royal College of Science and Technology in the new University of Strathclyde.

There are three other institutions where the work is predominantly of university standard: Manchester College of Science and Technology, the Royal College of Art, and the College of Aeronautics, Cranfield.

The Universities of Oxford and Cambridge date from the twelfth and thirteenth centuries, and the Scottish Universities of St. Andrews, Glasgow, Aberdeen and Edinburgh from the fifteenth and sixteenth centuries. All the other universities were founded in the nineteenth or twentieth centuries.

As universities administer themselves according to the terms of their individual charters, their forms of government vary. Oxford and Cambridge are each composed of a number of residential colleges which are corporate bodies governed by their own fellows and distinct from the university. Most of the fellows of the colleges, however, are university teachers or officers and the majority of university teachers are also fellows of colleges. Only the universities themselves have the right to confer degrees, and they provide central libraries and laboratories as well as much formal instruction. Government of these universities is entirely in their own hands. The Universities of London (with over 28,000 students, by far the largest in Britain) and Wales are federal; academic and financial matters concerning the whole university are controlled by the central authorities, which include lay representatives; the constituent colleges and institutions manage all other matters for themselves. At most of the other universities, especially those which owe their foundation to local initiative, the lay element has an important role in university administration. Oxford, Cambridge and Keele have high proportions of students in residence. At other universities the proportion is less than half. Nearly a third of all full-time students in Great Britain are in colleges or halls of residence, just over half are in lodgings and the remainder live at home.

University Finance

The Government contributes about 70 per cent towards the current income of universities and about 90 per cent towards their capital programmes. Money is given mainly in the form of block grants to the University Grants Committee, which then distributes the grants to individual universities. In addition to those for building work, grants are also made for purchasing sites and properties, for professional fees and equipment. Further sums are raised by the universities themselves.

Recurrent grants for 1964–65 amounted to over £99 million and will rise to over £125 million in 1966–67, compared with £23 million in 1954–55. Capital grants of £60 million were made in 1964–65, compared with nearly £6 million in 1954–55. In recent years about 70 per cent of capital expenditure in each year's programme has been for buildings to accommodate teaching and research in the various faculties; over half for science subjects and technology. The remaining 30 per cent has been for general service buildings, such as halls of residence, student unions, refectories and libraries.

Studies and Degrees

Courses in arts and science are offered by all universities. At nearly all universities courses are available in one or more applied sciences: Imperial College, London, Manchester College of Science and Technology, the University of Strathclyde and the Colleges of Advanced Technology con-

centrate on technology although the colleges of advanced technology and Strathclyde are now offering a number of courses in social studies and modern languages. At the beginning of the academic year 1964–65, 44 per cent of full-time university students (excluding those at CATs) in Great Britain were taking arts or social studies courses and 41 per cent were studying science or technology; a further 10 per cent were studying medicine and the remainder dentistry, agriculture, forestry and veterinary science.

University degree courses generally extend over three or four years, though in medicine five or six years are required. The first degree of Bachelor (Master in the older Scottish universities) is awarded on the completion of such a course, depending on satisfactory examination results. In most universities an ordinary (or pass) degree or an honours degree can be taken, although the majority of students in England and Wales take honours courses. A feature of the CATs is the four-year 'sandwich' course degree (see p. 163) and the highly specialised 'refresher' courses for senior industrial staff. Further study or research is required at the modern universities for the degree of Master and by all universities for that of Doctor. Actual degree titles vary according to the practice of each university; some differentiate between the arts and sciences and some do not. Diplomas and certificates are awarded after shorter courses in some subjects.

University teaching combines lectures, practical classes (in scientific subjects) and small group teaching in either seminars or tutorials, the last being a traditional feature of the Universities of Oxford and Cambridge.

Most members of the academic staffs devote time to research and at all universities there are postgraduate students engaged in research. There has been an expansion of research in science and technology, particularly in recent years (see p. 201).

Students

Admission to the universities (including the CATs) is by examination and selection; there is no religious test and no colour bar. Women are admitted on equal terms with men, but at Cambridge their numbers are limited by statute. The general proportion of men to women students is nearly three to one; at Oxford it is six to one, and at Cambridge ten to one.

Despite recent expansion programmes, applications for places at universities still exceed the number available. Prospective candidates for nearly all the universities apply for places through the Universities Central Council on Admissions (set up in 1963) instead of to individual universities and this clearing house automatically passes on rejected applications to the next university of the candidate's choice. The only students to apply directly are Scottish students for the Scottish universities except Edinburgh, which takes its students through the Council's machinery.

At the beginning of the academic year 1964–65 there were 150,000 full-time university students including 15,000 from the former CATs and Heriot-Watt College. Over 25,000 were postgraduate. There were also about 25,000 part-time students, about three-fifths of whom were working for university-level qualifications.

Staff

In 1964–65 there were nearly 19,000 full-time university teachers in Great Britain; about 11 per cent of them were professors. The ratio of staff to students was about 1 to 8.

Colleges of Education

Teachers in maintained schools must hold qualifications approved by the education departments. In England and Wales the majority qualify by obtaining an award after a three-year course of studies at a college of education.

Plans are being worked out to give wider opportunities for college students to obtain a degree as well as a professional qualification by means of a four-year course. University graduates and certain specialist teachers are qualified by their degree or specialist qualification although many do an additional one-year course at a university or college of education. There are special shortened courses for well qualified older students. In Scotland all qualified teachers must hold a Teachers' Certificate, awarded after a course at a college of education; moreover, all secondary school teachers and all men teachers of general subjects in primary schools must be graduates.

In England and Wales there are over 150 colleges of education (about a dozen of which are for day students only), 26 university departments of education, four colleges for training teachers for technical institutions and 16 art teacher training centres. In 1964–65 there were over 61,000 students in the colleges of education (including 3,000 in the day colleges), nearly 5,000 in the university departments of education, and 1,200 and 800 in the technical and art training establishments respectively: a total of some 68,000 students in all. In Scotland there are nine colleges of education, which in 1964–65 had 7,800 students.

Plans for raising the numbers in colleges of education in England and Wales to 80,000 by 1970–71 are already well advanced and will be extended to reach the target of 111,000 students (122,000 in Great Britain) announced for 1973–74. The Government has also announced a programme to supplement the long-term measures and to help provide enough teachers for the rising school population. The measures are mainly aimed at attracting back into teaching former teachers, now married, and increasing the numbers of part-time teachers. More day training colleges are to be opened, some training is to be organised on a part-time basis and there are to be more refresher courses, and more nursery classes for children of potential teachers.

The education departments, universities, local education authorities and other bodies provide a variety of short courses for practising teachers.

Other Higher Education

Many students in Great Britain (over 163,000 in 1964–65) take advanced courses outside universities in a wide variety of subjects including architecture, art and design (see p. 228), catering, engineering, natural sciences and business studies. In 1964 the Council for National Academic Awards (CNAA) was set up to administer degrees and other awards to students on courses of approved degree standard outside universities. The Council has taken over the responsibilities of the National Council for Technological Awards which between 1956 and 1964 approved four-year sandwich courses of honours degree standard leading to the Diploma in Technology and also instituted the postgraduate standard award of Membership of the College of Technologists. The CNAA degrees were awarded immediately for existing Diploma in Technology courses and in 1965 for new courses. The Council's powers extend to the whole of Great Britain.

Management studies are provided by universities and technical colleges, by individual companies and by trade and industrial federations. Certain independent colleges specialise in management training. Several universities have introduced management studies into the curriculum and courses for the postgraduate Diploma in Management Studies are run by certain technical colleges. In Scotland courses leading to the Certificate of Business Administration are provided for students in junior supervisory positions. In Great Britain, as a result of the recommendations of the Robbins report and the report of a private committee under Lord Franks, two postgraduate

business schools were set up in 1964 at the Universities of London and Manchester.

An Advisory Council on Management Education for the United Kingdom was established in 1961 to keep under review provision for management education outside the universities and to advise interested bodies.

Scholarships and Other Awards

Scholarships and other awards are now very widely available, for it is the national educational policy that no able boy or girl shall be prevented by lack of means from taking an advanced course at a university or elsewhere. About 90 per cent of university students in Great Britain are aided from public or private funds.

In England, Wales and Scotland all British students with certain qualifications are eligible for awards from public funds in order to attend full-time at a university, college of education or major further education establishment. The present awards system in England and Wales was established by the Education Act 1962 which made it the duty of local education authorities to provide awards. In Scotland students' allowances for advanced courses are awarded by the Scottish Education Department. An award depends upon the income of the student or his parents. Studentships for advanced postgraduate study are offered annually by the Department of Education and Science and by the Scottish Education Department. In 1965 over 2,500 studentships were offered in the sciences and 1,000 in arts and social sciences—an increase on previous years.

Northern Ireland

Higher education in Northern Ireland is also expanding. The Government accepted most of the recommendations put forward in 1965 by the committee, under Sir John Lockwood's chairmanship, on higher education in Northern Ireland. The Government agreed that there should be between 8,000 and 9,000 full-time university places by 1973–74 and that there should be a second university, at Coleraine.

Technological studies are to be concentrated at the existing university, Queen's, Belfast, and the new university will be expected to build up the study of biological sciences. The Government also accepted in principle the committee's proposals for teacher training. An education centre for non-graduate teachers is to be established within the new university and the general teacher training colleges are to be renamed colleges of education and brought into closer association with Queen's University. Higher education outside the universities is to be centred on the Ulster College, an association of the colleges of technology, catering, commerce, drama and music.

Queen's University, Belfast, and a recognised college, Magee University College, Londonderry, had a total of 4,500 students in 1964–65. Between 1957 and 1964 nearly £6½ million was spent on university building projects and further expansion over the next fifteen years, to cost about £1 million a year, is planned. Recurrent expenditure in 1964–65 was estimated at £1·8 million. Government grants are made by the Ministry of Education on the advice of the University Grants Committee. Teacher training takes places in one university department of education and six training colleges, with over 100 and nearly 200 full-time students respectively, in 1964–65. Technological education outside the university is given at the Belfast College of Technology, under the sponsorship of the Joint Authority for Higher Technological Studies. Under the proposed reorganisation technological studies will be transferred to Queen's University and the Joint Authority

will be wound up. University and further education scholarships are awarded by local authorities and postgraduate awards and teacher training scholarships by the Ministry of Education, the conditions of award being identical with those for Great Britain.

EDUCATIONAL RESEARCH

The bodies mainly concerned in carrying out research into both the theory and practice of education are the National Foundation for Educational Research, the Scottish Council for Research in Education, the Northern Ireland Council for Educational Research, the universities and teaching associations. Some research is carried out by the central government departments through Her Majesty's Inspectorate and in England and Wales by the Schools Council, an independent body which is currently considering the sixth form curriculum and its relationship to the requirements of higher education, the curricula preparations for the higher school-leaving age, and the way English is taught at all levels.

The National Foundation for Educational Research, an independent organisation, receives an annual grant from the Department of Education and Science. More than half of its total income is provided by local education authorities whose requests for guidance on, for example, classroom tests or methods of allocating children to secondary school courses, give rise to much of its work. The Foundation also undertakes research work commissioned by the Department of Education and Science: present projects include a study of primary school organisations and an investigation into the relative value of day and block release in further education.

Financial support is also provided by philanthropic bodies. The Nuffield Foundation (see p. 210), for example, is supporting a project for teaching languages in primary schools.

INTERNATIONAL RELATIONS

There are many opportunities for overseas students to study in Britain and for British students to study abroad and British teachers are encouraged to serve overseas for a period.

Overseas Students in Britain

Students come to Britain from countries throughout the world to study at universities or other educational institutions or for professional training. In 1964–65 there were over 64,000 overseas students in Britain, of whom about one-quarter were at universities, another quarter at technical colleges and the remainder training as teachers, doctors and nurses, for the law, or in industry. About two-thirds of all overseas students were from the Commonwealth.

A wide range of public and private fellowships and scholarships for advanced study in Britain are awarded annually to students and research workers from other Commonwealth countries. Under the Commonwealth Scholarship and Fellowship Plan, the Governments of certain Commonwealth countries have made awards available at their own institutions of higher education to men and women from other Commonwealth countries. The British Government has allocated nearly £3½ million for the five-year period 1960–65 to enable an average of 500 of these scholarships to be held in Britain at any time; and for some 550 teachers and others to train in Britain under the Commonwealth Bursary Scheme. An example of smaller government schemes is the Athlone Fellowship Scheme, under which about 40 fellowships a year are awarded to Canadian engineering graduates for up to two years' further study, training and research in institutions or industries in Britain.

About 500 British Council[1] scholarships, tenable usually for one year in Britain, are offered annually to graduates of overseas universities. Twenty-four Marshall Scholarships for two years' study at any university in Britain are offered annually by the British Government to graduates from the United States of America and over 60 Rhodes Scholarships are awarded annually to Commonwealth and United States graduates for two years of study at the University of Oxford. Other universities and colleges themselves offer many scholarships for which graduate students of any nationality are eligible[2].

Fellowships and training awards for study in British institutions are available under the Central Treaty Organisation, the Special Commonwealth African Assistance Plan and British technical assistance programmes for several other countries. Large numbers of awards for study or training in Britain are made under the United Nations Programmes of Technical Assistance and the Colombo Plan.

The Commonwealth Education Liaison Committee, set up after the Commonwealth Education Conference of 1959, supplements normal direct dealings on education between the countries of the Commonwealth. Further Commonwealth Education Conferences were held in 1962 and 1964.

Arrangements for Overseas Students

Responsibility for overseas students in Britain rests with the institutions of higher education to which they are attached and with the students' own national representatives in Britain (High Commissions or Embassies). The British Council, by agreement with various Governments, acts as agent for the overseas departments of the British Government on matters affecting students' welfare.

The British Council has overseas students' centres in London (where a new, and larger, building was opened in 1963) and in other university cities. The Council organises a varied programme of lectures, discussions and social and other activities. Many British people like to invite students to their homes and the British Council arranges introductions. In the vacations there are courses in many parts of the country which offer opportunities for getting to know more about British life in town and country. In term time there are visits to various places of interest, and theatre and concert parties are arranged. The British Council assists many students to find accommodation and about 10,000 are met annually on arrival and helped to settle down quickly in their new environment.

Among many voluntary organisations which offer a welcome to overseas students are the East and West Friendship Council, Rotary, Round Table, the Victoria League, the Royal Over-Seas League, the Royal Commonwealth Society, the National Union of Students, the English-Speaking Union and

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[1] The purpose of the *British Council* (founded in 1934) is defined in its Royal Charter as the promotion of a wider knowledge of the United Kingdom and the English language abroad and the development of closer cultural relations between Britain and other countries. The Council is governed by an executive committee of 30 members, broadly representative of many elements of the life of Britain and including nine members nominated by ministers. It is financed almost entirely from public funds. The activities of the Council, which has staff in some 80 overseas countries, include English language teaching and other educational work, fostering personal contacts between British and overseas people, especially in the educational, professional and scientific fields, and running, or helping to maintain, libraries of British books and periodicals overseas. Its work in Britain is concerned mainly with professional visitors and with the welfare of overseas students.

[2] The Association of Commonwealth Universities publishes every two years a list of postgraduate awards tenable at universities in Britain, and awards at overseas universities for which British students are eligible; it is entitled *United Kingdom Postgraduate Awards* (see Bibliography).

Churches of all denominations. The London Conference on Overseas Students, for which the British Council provides the secretariat, co-ordinates their work in the metropolis. In some London boroughs and in other large cities there are committees which help students to make contact with local residents and organisations. Similar conferences have come into being in other large cities in Britain. These organisations also help by entertaining overseas students and by providing hostels. In 1961 the British Government provided £3 million for the Overseas Students Welfare Programme which is administered by the British Council; £2¾ million is being used to assist voluntary organisations in providing an additional 3,400 residential places in hostels, mainly for overseas students, and 2,000 of these places were already in use in January 1965.

British Students Overseas

Under the Commonwealth Scholarship and Fellowship Plan, a number of scholarships are made available annually to United Kingdom students by the Governments of other Commonwealth countries for study in their universities, colleges and other institutions of higher learning. At present Commonwealth Scholarships are being held by United Kingdom students in Australia, *Canada*, *Hong Kong*, *India*, *Malaysia*, *New Zealand*, *Nigeria*, *Pakistan*, Rhodesia and Sierra Leone. In 1964 the Commonwealth Education Conference introduced the Study and Serve Scheme, designed to enable British students to undertake a year's postgraduate study at universities in the developing Commonwealth countries on condition that they also work for a year in appropriate employment in the country concerned.

For many years the United States has offered awards for British students, the best known being the Fulbright travel grants for postgraduate study at American universities. Notable among recently established scholarships are the Kennedy scholarships, to enable British students to study at three American universities, and the Churchill travel scholarships, for men and women in all walks of life. Students of British nationality are also offered scholarships (mostly for one academic year) at institutions of higher education in 20 European countries, and in Brazil, Indonesia, Iran, Israel and Japan (see footnote, p. 173).

Teachers Serving Overseas

Over 1,700 teachers left Britain in 1964–65 for posts in schools, teacher training colleges, technical colleges and universities in other parts of the Commonwealth, including 1,500 who went to serve in the developing countries of the Commonwealth. The number of British teachers recruited to serve in these countries has trebled in three years. Steps taken by the Government to encourage school teachers to serve for a period overseas have included the establishment of a National Council for the Supply of Teachers Overseas and the introduction of special measures to safeguard their interests both while abroad and on their return home. Recruitment is carried out by the Ministry of Overseas Development, the British Council and the voluntary teacher recruiting agencies, such as the Catholic Overseas Appointments and the Overseas Appointments Bureaux.

There are about 1,000 British university teachers serving overseas, most of them recruited through the Inter-University Council on Higher Education, the Association of Commonwealth Universities or the British Council. Government encouragement also includes support for the work of the Committee on University Secondment and the introduction, in 1964, of Special Commonwealth Awards, which are made to leading scholars from British universities who are willing to work for a minimum of two years in

important posts in the universities of developing Commonwealth countries.

Outside these schemes, an increasing number of volunteers are going overseas for one or two years, a large number to teach. Many of them go with the support of voluntary bodies (like Voluntary Services Overseas) which receive some financial assistance from the Government.

Interchange schemes, under which teachers in Britain exchange posts for a year with teachers overseas, include one with the United States and another with Commonwealth countries, whereby each year over 100 British teachers exchange posts with teachers from Canada, Australia and New Zealand. Official exchange schemes also operate between Britain and several European countries both for teachers and for temporary assistants' posts for language specialists.

Other Educational Aid

Britain provides, on request, assistance to the developing countries in several other ways, including the loan of educational experts for technical and consultant services and specialist missions, through various educational organisations and the Ministry of Overseas Development. Financial assistance is also given for building and equipping educational institutions; recent examples include the £5 million grant for educational development in Nigeria and the £1 million grant for the University of Zambia.

YOUTH SERVICES

The object of youth services in Britain is to provide for the leisure-time activities of young people under 21 years of age, and to offer them opportunities—complementary to those of home, formal education and work—for discovering and developing their personal resources, so that they may be better equipped to be responsible members of the community. Membership of youth organisations is voluntary and the facilities they offer are sufficiently varied to appeal to every type of boy and girl. A recent trend has been the active part taken by many youth clubs in helping old people and giving service to their community.

State and Voluntary Partnership

Responsibility for youth services in Britain is shared by the education departments, local education authorities, voluntary organisations and the Churches. There is no attempt to impose uniformity or to create any national youth organisation. A number of youth organisations have spontaneously developed over the last century, mainly by voluntary effort. Government encouragement in England and Wales dates from the 1930s. In 1939 the Youth Service (as it is known in England and Wales) was created as a partnership of voluntary organisations, local education authorities and central government. The status of Youth Service as an essential part of the educational system of Great Britain was confirmed by the Education Act of 1944 and the Education (Scotland) Act of 1945; in Northern Ireland, youth welfare work was promoted under the Physical Training and Recreation Act of 1938, and the Youth Welfare, Physical Training and Recreation Act of 1962.

The education departments provide grants in aid of the administrative and training work of national voluntary youth organisations, towards the expense of training full-time youth leaders and towards the cost of premises and equipment of youth clubs provided by voluntary bodies.

Local education authorities co-operate with voluntary organisations in their areas: most give some financial help and lend premises and equipment; most also employ youth organisers to help in the promotion and encourage-

ment of youth work. Where voluntary services are considered inadequate local authorities themselves organise youth centres and clubs. Most local authorities have appointed youth committees on which official and voluntary bodies are represented.

In addition to grants received from the State and local authorities, voluntary organisations may receive help for special projects from charitable trusts, notably from the King George's Jubilee Trust (see p. 178). The greater part of the funds of the voluntary organisations is, however, raised by their own efforts.

Since 1960 developments in the Youth Service have been greatly influenced by the recommendations of a committee set up to examine the service, under the chairmanship of the Countess of Albemarle.[1] On the advice of the Youth Service Development Council, formed as a result of one of the committee's recommendations, the Department of Education and Science is making larger grants towards the headquarters expenses of national voluntary youth organisations and special grants for voluntary projects, some of which are experimental; it has authorised a building programme for the period 1960–66 at an estimated cost of £20·5 million and co-operated with a local education authority in designing an experimental club; and, to supplement existing facilities, has established a national training college at Leicester for youth leaders. Local authorities' contributions to the Youth Service have also increased; their expenditure for 1965–66 is estimated at £5·8 million. Progress made in the Youth Service since the publication of the 1960 report is being considered by a committee of the Youth Service Development Council, of which Lady Albemarle is chairman.

The Albemarle Committee's inquiry extended only to England and Wales, youth provision in Scotland having already been the subject of reports by advisory bodies; but some of its main recommendations applied to Scotland, while others reflected the existing Scottish position. A Standing Consultative Council on Youth Service in Scotland, with functions similar to those of the Youth Service Development Council for England and Wales, was set up by the Secretary of State for Scotland in December 1959. It was reconstituted in 1964 and given wider scope as the Standing Consultative Council on Youth and Community Service. In 1963 permanent arrangements for training in youth leadership for full-time youth leaders and organisers were made. More money is being made available from central funds to national voluntary organisations in Scotland and, as in England and Wales, increased expenditure on youth services by Scottish education authorities (estimated at £1 million in 1965–66) is taken into account in calculating the Exchequer general grant.

A White Paper on the development of youth services was presented to the Northern Ireland Parliament in 1961. This did not propose any change in the general pattern of youth services but local education authorities were urged to take a more active part in youth work than they had previously done. Such changes as required statutory authority were given effect in the Youth Welfare, Physical Training and Recreation Act (Northern Ireland) 1962. The functions of the Youth Committee, set up in 1944, were taken over by the Youth and Sports Council and extended to reflect the larger part to be played in youth welfare by the local education authorities and sports organisations. Statutory provision was made for larger Ministry grants towards the training costs and salaries of full-time youth leaders and for expenditure on playing fields.

[1] *The Youth Service in England and Wales. Cmnd.* 929.

The Voluntary Organisations

The voluntary organisations vary greatly in character since nearly all of them were formed to serve specific groups of young people, but most of them provide educational and religious activities as well as social and recreational pursuits for their members, and all of them seek to inculcate high ideals of personal conduct and service to the community.

Twenty-seven national voluntary youth organisations with memberships of at least 10,000 are constituent members of the *Standing Conference of National Voluntary Youth Organisations*, a consultative body which, although it takes action only in the name of its member bodies and with their consent, represents their interests on a great number of committees. A further 25 bodies are associate or observer members, for example, the Church of England Youth Council, which represents about 272,000 young people who are members of clubs sponsored by the Church of England. The corresponding body in Scotland is the *Scottish Standing Conference of Voluntary Youth Organisations*, in Northern Ireland the *Standing Conference of Youth Organisations*, and in Wales the *Standing Conference for Wales of Voluntary Youth Organisations*.

These major organisations have a total United Kingdom membership of about 3 million young people under 21.

Among the youth organisations with a mainly religious origin and purpose are the Young Men's Christian Association (YMCA) and Young Women's Christian Association (YWCA), with approximately 48,000 and 20,000 members under 21 respectively; the Boys' Brigade (151,000), the Church Lads' Brigade (13,000), the Girls' Life Brigade (63,000), the Girls' Friendly Society (20,000), Girls' Guildry (28,000), the Methodist Association of Youth Clubs (163,000), the Salvation Army Youth Organisations (106,000), the Catholic Young Men's Society of Great Britain (25,000), the National Council for Catholic Youth Clubs (37,000), the Young Christian Workers (17,000), the Grail (14,000), and the Association for Jewish Youth (18,000).

The Boy Scouts Association and Girl Guides Association have world-wide affiliations; they are undenominational and non-political, and were founded by Lord Baden-Powell in 1908 and 1910 to develop character and good citizenship in boys and girls. They have various sections, based on age groups, but most of their members are under 16 years. Their total United Kingdom membership under 21 is about 477,000 scouts and 552,000 guides.

The National Association of Boys' Clubs, with nearly 2,000 affiliated clubs and 155,000 members, and the National Association of Youth Clubs, with over 3,000 affiliated clubs and 234,000 members, are concerned mainly with the 14 to 20 age-group. Each affiliated club has its own rules, but all aim at giving young people opportunities to develop into mature members of society. Representatives from clubs form local committees and these send representatives to the national members' councils.

The Girls' Venture Corps, with about 4,000 members, formed in 1964 from the Girls' Training Corps and the Women's Junior Air Corps, has an Air Wing offering aviation courses. The pre-Service organisations for boys (the Combined Cadet Force, Sea Cadet Corps, Army Cadet Force and Air Training Corps) combine social, educational and physical development with training for possible entry into the armed forces; their combined membership is about 141,500.

The National Federation of Young Farmers' Clubs in England and Wales has about 40,000 members between 10 and 25 years old, the Scottish Association of Young Farmers' Clubs has about 7,500 and Northern Ireland

Young Farmer Clubs over 4,000 members: in addition to encouraging interest in agriculture and appreciation of country life, the clubs provide training in the arts of citizenship and develop ability to serve the community.

The Welsh League of Youth (Urdd Gobaith Cymru) has a membership of about 43,000; its aim is the 'development of Christian citizenship among the youth of Wales', and its work takes full account of the Welsh background of its members.

The Youth Hostels Associations in England and Wales, Scotland and Northern Ireland have a network of hostels for walkers and cyclists, particularly intended for young people of limited means. They seek to promote knowledge and love of the countryside, and are closely linked with each other and with similar organisations in other countries.

Adult organisations with youth sections include the British Red Cross Society, St. John Ambulance Brigade and the political parties.

Other Organisations Concerned with Youth Work

King George's Jubilee Trust was established in 1935 by King George V, to promote the welfare of the younger generation. The trust fund originally consisted of the nation's gift of approximately £1 million, subscribed to mark the King's silver jubilee but has since been augmented and at the end of March 1964 stood at £1,520,844. Since its inauguration the Trust has disbursed £1,556,844 to the headquarters of the principal voluntary youth organisations and to many local projects, particularly those of an experimental nature.

In 1965 about 200,000 young people between the ages of 14 and 20 took part in the *Duke of Edinburgh's Award*, which is a scheme operated by local authorities, schools, youth organisations, industrial firms and other bodies, and is designed as a challenge to boys and girls to reach certain standards of achievement in three progressive stages in leisure-time activities. The scheme for boys covers sections on public service, pursuits and interests, expeditions and fitness. The scheme for girls is divided into sections on design for living, interests, and adventure and service. A number of Commonwealth countries, including Canada, Australia and New Zealand, now operate the scheme.

The *Outward Bound Trust* maintains in Great Britain five schools for boys which offer 26-day character-building courses, based on adventure and overcoming testing experiences. There is a similar school for girls, with modified courses. About 5,000 boys and 850 girls take part each year. The courses are mainly for boys and girls aged 16 to 19 years; but there are also junior courses for boys and girls aged 14 to 16 and senior courses for young people up to 25 years old, which are of particular value to potential teachers and youth leaders.

The aims of the *Central Council of Physical Recreation*, the *Scottish Council of Physical Recreation* and the *National Playing Fields Association* bring them into touch with many youth organisations: their activities are described in Chapter 19: Sport.

In addition to organisations on a nation-wide basis, there are a large number of town, district or village social clubs run by voluntary groups for general or particular purposes; photographic societies, folk dance, table tennis or jazz clubs, for instance. In small communities social clubs may not be specifically for young people but those with the more strenuous activities (for example, tennis clubs) usually have a high proportion of young people as members.

7
PLANNING AND HOUSING

TOWN AND COUNTRY PLANNING

Britain is one of the most densely populated areas in the world and it is essential to plan land use for a satisfactory national distribution of employment and population, for agricultural development, to preserve the amenities of the countryside, and to improve the places where people live and work.

From 1909 successive Acts of Parliament recognised the principle of the planned use of land, but because the pattern of development over much of the country had already hardened into large unplanned urban concentrations the powers granted to planning authorities were inadequate for the task in hand.

The twenty years between the two world wars were decades of rapid social and industrial change and of developments in industry, engineering, house-building, and motor transport; the population was increasing and becoming more mobile; there was a widespread demand for improved standards of accommodation and consequently a greater need for systematic planning than had hitherto been required. At the beginning of the nineteen-thirties a major effort was made to strengthen planning law and to extend the planning powers of central and local authorities. This resulted in the Town and Country Planning Acts of 1932 which remained the basis of planning law for fifteen years.

Although inter-war planning legislation improved sanitary and environmental conditions and did something to preserve amenities, its general effect was unsatisfactory mainly because it failed to deal adequately with the problems involved in compensating property owners who stood to lose by the introduction of positive planning schemes. Local authorities often hesitated to exercise their powers effectively for fear of being involved in financial liabilities beyond their means, and as a result there was still much unregulated urban development and spoliation of the countryside.

Renewed efforts to tackle these problems were made immediately before and during the second world war. Between 1937 and 1942 three expert committees were appointed to study and report upon (1) the unregulated growth and spread of industry, (2) the hampering of planning by the financial and administrative difficulties of compensation and betterment and (3) the encroachment of urban development upon the countryside. After the war other committees studied the question of new towns and national parks.

Almost all the principal planning recommendations of these committees have now been incorporated in Acts of Parliament, as follows: the New Towns Acts 1946 to 1964; the Town and Country Planning Acts 1947 to 1963; the Town and Country Planning (Scotland) Acts 1947 to 1963; the National Parks and Access to the Countryside Act 1949; the Town Development Act 1952; the Housing and Town Development (Scotland) Act 1957; the Local Employment Acts 1960 and 1963; and the Caravan Sites and Control of Development Act 1960. Town and country planning in Northern Ireland is governed by the Planning and Housing Act (Northern Ireland) 1931; the

Planning (Interim Development) Act (Northern Ireland) 1944; the Planning Acts Amendment Act (Northern Ireland) 1944; and the Amenity Lands Act (Northern Ireland) 1965.

Planning in Great Britain

The Town and Country Planning Act 1962 (which consolidated earlier planning legislation in England and Wales), and the Town and Country Planning (Scotland) Act 1947, are the principal Acts that govern the pattern of land use in Great Britain. They provide for the co-ordination of planning by means of development plans drawn up by local planning authorities and approved by the Minister of Housing and Local Government or the Secretary of State for Scotland; and they control development by making it subject, generally, to the permission of a local planning authority or of a central government department. They also give extensive powers to public authorities to acquire and develop land for planning purposes, and deal with certain questions of amenity, for instance, the preservation of buildings of special historic or architectural interest, and of trees and woodlands, and the control of advertisement display.

In September 1965 the Government published proposals for a major new instrument of planning—a Land Commission—in a White Paper (Cmnd. 2771. 1*s.* 3*d.*), prior to the introduction of legislation being prepared by the Minister of Land and Natural Resources. The Commission will have wide powers to acquire, manage and dispose of land for development.

Development Plans

Under the Town and Country Planning Acts 1947 local planning authorities (in England and Wales, the councils of counties and county boroughs, the London authorities and, in some areas, joint planning boards; and in Scotland, councils of counties and of large burghs, and the councils of the two small burghs of St. Andrews and Thurso) were required to prepare and submit development plans covering the whole of their areas to the Minister of Housing and Local Government and to the Secretary of State for Scotland respectively. Each development plan includes maps and a written statement describing the major projects in the plan and is accompanied by a report giving the background to the plan in terms of existing land use, communications and similar matters. Plans normally cover a period of about 20 years; they must be reviewed at least once in every five years, and may be extended and altered at any time so that they are kept up to date. Development plans for the whole of Great Britain (except the remoter parts of Scotland) have now been submitted to the appropriate ministers, and almost all have been approved.

Many local planning authorities have submitted amendments and additions to their original plans and a number have completed their first five-yearly reviews. Their proposals for changes in their development plans must be advertised and the ministers concerned must consider objections and representations from the public. Usually a public local inquiry has to be held before the proposals are decided. A development plan or its amendment can be legally challenged only on the ground that it is *ultra vires* or that statutory requirements have not been fulfilled, and such a challenge must be made to the High Court within six weeks of publication of the approval or amendment of the plan.

Green Belts

In order to restrict the further sprawl of the large built-up areas, to prevent adjacent towns merging into one another, and in some cases to preserve the special character of a town, the policy has been adopted of establishing 'green belts' around all or part of certain urban areas. In addition to restricting

undesirable growth, these green belts serve to keep the townsman in reach of the countryside. Within a green belt there is a general proscription against any new development except for a limited amount of building in existing villages, development to serve agriculture, and other special uses of land appropriate to a rural area.

The Location of Industry

The Town and Country Planning Acts and the Local Employment Acts 1960 and 1963, contain provisions relating to the location of industry and offices. General problems of industrial development are dealt with jointly by a number of government departments, but the consent of the local planning authority is, as a rule, required for any new industrial building, any extension of a building or any change in the use of an existing building. The use of these powers, together with the more positive powers of the Board of Trade to inhibit the expansion of industry in some areas and encourage it in others, has had a considerable effect on the location of industry; during the past decade new smaller and more widely dispersed centres have grown up, notably in southern England (see p. 260). Special control of office building in and around London and in Birmingham was instituted under the Control of Office and Industrial Development Act 1965.

New Towns

The New Towns Act 1946 gave the Minister of Housing and Local Government and the Secretary of State for Scotland power to make an order designating any area of land (which may include any existing town or other centre of population) as the site of a proposed new town, and in 1965 the same power was given to the Secretary of State for Wales. The appropriate minister must consult the local authorities concerned on the proposal and must be satisfied that it is in the national interest that the land should be developed as a new town. Once the site has been designated, the minister appoints a development corporation (consisting of a chairman, a deputy chairman and up to seven other members) to be responsible for the development of the new town. A master plan showing how the town is to be built is then prepared, and this becomes the basis for development proposals, each of which covers a part of the town. Each proposal is submitted to the responsible minister, who must consult the local planning authority and, together with the Treasury, be satisfied with the proposal on economic grounds before giving approval.

The development corporations have powers in general (subject to the consent of the Minister of Housing and Local Government, the Secretary of State for Wales or the Secretary of State for Scotland) to acquire, by agreement or compulsory purchase, any land or property in the designated areas which is necessary for their purposes, or, in certain circumstances, land adjacent to or outside those areas, and they may provide houses, flats, commercial and industrial premises, estate roads and other buildings or services essential for the development of the towns. In England and Wales the Minister of Housing and Local Government has made a special development order to exempt the development corporations from having to obtain planning permission from the local planning authorities; in Scotland the Secretary of State has made a similar order in respect of Cumbernauld and Livingston new towns.

The capital cost of developing the new towns is advanced to the corporations from public funds and is repayable over 60 years out of the income from the property. The corporations submit annual reports (which include copies of their audited accounts) to the Minister of Housing and Local Government,

the Secretary of State for Wales or to the Secretary of State for Scotland, who lay them before Parliament.

As each new town in England and Wales is substantially completed the development corporation is dissolved and, under the terms of the New Towns Act 1959 its assets and liabilities are handed over to a central agency —the Commission for New Towns. The Commission has assumed responsibility for Crawley and Hemel Hempstead and is preparing to do so for Welwyn and Hatfield. It is responsible for maintaining and enhancing the value of the land entrusted to it; but in discharging its functions it is required to have regard to the purpose for which the towns were established, and to the convenience and welfare of the people working and living in them. No new towns central authority has been proposed for Scotland, where new town development is at a less advanced stage.

Twenty-one new towns have been, or are being, established in Great Britain: seventeen in England and Wales and four in Scotland. Eight of the new towns in England and Wales (Basildon and Harlow in Essex; Hemel Hempstead, Stevenage, Hatfield, and Welwyn in Hertfordshire; Crawley in Sussex; and Bracknell in Berkshire) are designed to help in absorbing excess population from the Greater London area; of the others, Corby in Northamptonshire, Aycliffe, Peterlee and Washington in Durham, and Cwmbran in Monmouthshire are to serve the special needs of their areas; Skelmersdale in Lancashire and Runcorn in Cheshire are to meet the overspill needs of Liverpool; and Dawley in Shropshire and Redditch in Worcestershire will take population from Birmingham. Proposals have been announced for a new town in the Leyland-Chorley area of Lancashire, to take population from Manchester, for one in north Buckinghamshire, to provide housing for people from London, and for one in mid-Wales. The Government has also proposed expansion of Ipswich, Peterborough and Northampton and consideration is being given to the desirability of using the machinery of the New Towns Act for these schemes. The Scottish new towns (East Kilbride in Lanarkshire, Glenrothes in Fife, Cumbernauld in Dunbartonshire and Livingston in West Lothian) are helping to house people from Glasgow. Livingston is also to be a focus for industrial activity in the central belt of Scotland. A further new town is proposed, at Irvine.

New cities for the Southampton–Portsmouth, Bletchley, and Newbury–Hungerford areas, to provide alternative centres of development to London, are proposed in *The South East Study* (see p. 258). Other new towns are suggested at Ashford, in Kent, and Stansted, in Essex.

In Northern Ireland it is planned to create a new city and to expand a number of key towns (see p. 186).

The new towns represent a notable achievement in positive land use. They are generally recognised as one of the most successful post-war experiments, both socially and industrially, and as a profitable long-term investment. Many thousands of people have moved into the new towns during the past decade and to meet their needs an extensive building and civil engineering programme has provided houses, flats, factories, schools, shops, roads, water supplies and sewerage on a very large scale. Additional gas and electricity supplies, more police, fire and bus stations, extra postal, telegraph and telephone services and new health centres have also been provided and most of the towns are well equipped with parks and playing fields of various kinds.

All the more important public buildings (the town hall, the central post office, the public library, the health centre, the college of further education

and the magistrates' court) are situated in the town centres, where some of the most recent planning ideas (notably the separation of the pedestrian from the motorist) are being put into practice. A number of the more developed towns are becoming regional centres and, as the populations grow large enough to give the necessary support, full entertainment and recreational facilities such as skating rinks, dance halls, bowling alleys, swimming pools and sports stadiums are gradually being provided.

Under the New Towns Act 1946 Parliament approved a consolidated fund of £50 million to provide for advances to the development corporations for work on the new towns. This fund was increased by subsequent Acts and now stands at £550 million. A total of about £400 million had been advanced to the corporations by March 1965.

Town Development Schemes

The Town Development Act 1952 makes provision for the relief of congestion in large industrial towns in England and Wales by encouraging the transfer of population and industry from these areas to places suitable for expansion. Schemes have been approved for moving more than a quarter of a million people and, so far, about 32,000 families have moved under arrangements of this kind.

The Housing and Town Development (Scotland) Act 1957 makes similar provision for Scotland; agreements between Glasgow Corporation and other authorities provide for the housing of over 15,000 Glasgow families outside the city.

Redevelopment of outworn and obsolete areas is taking place in many towns: Glasgow, for example, has started a programme of rebuilding 30 areas, housing nearly a third of its population and accommodating much of the industry and commerce of the city. Detailed proposals for four of these areas have been approved and the work of clearance and rebuilding is well advanced.

National Parks and Access to the Countryside

The National Parks and Access to the Countryside Act 1949 provided that selected areas of beautiful country in England and Wales should become national parks, where the characteristic landscape would be safeguarded and facilities for open-air recreation provided or improved.

A National Parks Commission was set up by the Act and its work has resulted in the establishment of ten national parks: the Peak District, the Lake District, Snowdonia, Dartmoor, the Pembrokeshire coast, the North York Moors, the Yorkshire Dales, Exmoor, Northumberland and the Brecon Beacons. These parks cover a total area of 5,254 square miles, almost one-eleventh of the area of England and Wales. They have various forms of administration, based on representation of the local planning authorities of the areas in which they are situated, plus members nominated by the Minister of Land and Natural Resources. These specially constituted authorities control development in the parks (which are still in private ownership) and take steps to preserve and enhance the natural beauty of the landscape and to promote enjoyment of the area by the public. For instance, trees are planted to screen blemishes on the landscape, unsightly structures are removed, new building is made to harmonise with the natural surroundings, advertisement displays are reduced, and car parks and camping and caravan sites are provided in suitable localities, together with information centres to help visitors. Government grants at the rate of 75 per cent are available for certain measures designed to enhance natural beauty and improve recreational facilities.

There are no National Parks in Scotland but the Scottish National Parks Working Party, set up to consider the five areas recommended as national parks by the Scottish National Parks Survey Committee, submitted a report on each of them. They are: Loch Lomond—Trossachs; Glen Affric—Glen Cannich—Strath Farrar; Ben Nevis—Glen Coe—Black Mount; the Cairngorms; and Loch Torridon—Loch Maree—Little Loch Broom. Close supervision is being maintained over development in these areas by means of Scottish National Parks Directions, which require the local planning authorities concerned to refer proposed developments to the Secretary of State for Scotland for consideration. Local planning authorities have recently been asked to re-examine their areas and to define those of great landscape value in their development plans.

The National Parks Commission also has power to designate areas in England and Wales outside the national parks as 'areas of outstanding natural beauty'. Eighteen of these areas had been designated by April 1965; others are under consideration. Government grants are also available for certain measures designed to enhance the natural beauty of these areas.

Designation of a park or area of outstanding natural beauty does not mean that the general public has right of access. Local planning authorities must survey the extent to which land in all parts of England and Wales, as well as in national parks and areas of outstanding beauty, is already open to the public, and may increase it by means of agreements with owners or by access orders. Government grants are available towards the cost of making such agreements or orders and in the Peak District, particularly, large tracts of moorland have been opened to the public in this way.

A survey of all footpaths and bridleways in England and Wales is being made by local authorities as a comprehensive national record of public rights of way; and in some areas existing footpaths and bridleways are being linked to form long-distance routes, which will become continuous rights of way. Responsibility for making proposals for long-distance routes, footpaths or bridleways rests with the National Parks Commission; once the proposals are approved by the Minister of Land and Natural Resources, it falls to the local authorities to give effect to them. Ten routes—in all, nearly 1,300 miles—had been approved by April 1965. Large stretches of these paths are already public rights of way and the first long-distance footpath to be completed (the Pennine Way, which stretches for some 250 miles) was opened in 1965. The establishment of further routes is under discussion.

Forest Parks

The Forestry Commission has formed, and opened to the public, seven Forest Parks in some of the finest country in Britain: Argyll, Glen Trool, Glen More, and the Queen Elizabeth Forest Park in Scotland; the Forest of Dean and the Wye valley woods on the borders of England and Wales; Snowdonia in Wales; and the Border Forest Park (adjoining the Northumberland National Park to the westward), which includes forests on the borders of Northumberland and Cumberland in England and of Roxburgh in Scotland. The total area of the seven parks approaches half a million acres. Camping facilities are provided in all the parks.

The historic New Forest, in Hampshire, although not a Forest Park, is also open to the public.

Nature Conservation

The responsibility for nature conservation rests with the Nature Conservancy, which is a committee of the Natural Environment Research Council (see p. 218). The Council derives its powers in this field from its royal charter and the National Parks and Access to the Countryside Act 1949, as amended by

the Science and Technology Act 1965. The object of conservation is to influence soils, water, vegetation and animal life by means of research, experiment and control. This entails the acquisition and management of a representative series of reserves, as well as the establishment of laboratories for use in long-term research schemes (see p. 219) and the making of grants-in-aid for specified research.

The Nature Conservancy is responsible for 111 nature reserves in Great Britain, with a combined area of 228,353 acres (by June 1965), of which over 58,800 acres comprise the Cairngorms, the largest reserve in Britain and one of the largest in Europe. Nine other areas (mostly in the north) are managed by local authorities, using their powers under the National Parks Act, in consultation with the Conservancy.

Twelve forest nature reserves have also been set up; of these, eight have been created by agreement between the Forestry Commission and the Nature Conservancy and consist of forest land managed under joint supervision; one is the result of a similar arrangement made with the Crown Estate Commissioners; two derive from Forest Nature Reserve Agreements made with the Duchy of Cornwall; and one from an agreement made with the Department of Agriculture and Fisheries for Scotland.

Preservation of Amenities

Responsibility for the preservation of the historic, scenic and architectural beauties of Great Britain is vested mainly in the Minister of Housing and Local Government, the Minister for Land and Natural Resources, the Secretary of State for Scotland, the Secretary of State for Wales, and the local planning authorities. Lists of buildings of special architectural or historic interest are being compiled and so far more than 110,000 buildings have been listed. Local authorities have special powers to prevent the demolition of such buildings and to control other works that would damage their character. The Ministry of Public Building and Works is responsible for the maintenance of royal parks and palaces, for the protection of ancient monuments (under the Ancient Monuments Acts), and for making grants (on the recommendation of the appropriate Historic Buildings Council, see p. 230) for the repair and maintenance of buildings of outstanding historic or architectural interest or their contents and for the upkeep of adjoining land. About 700 of the more important protected monuments in Britain are in the care of the Ministry; and grants totalling over £5 million have been made towards the cost of urgently needed repairs to over 1,000 historic buildings in England, Scotland and Wales.

Under the Town and Country Planning Acts 1947 local planning authorities have power (*a*) to protect trees and woodlands by means of tree preservation orders (some 5,000 of which are in force throughout Great Britain); (*b*) to prevent mineral workings becoming permanent eyesores by attaching suitable conditions to planning permissions; and (*c*) to restrict or regulate the display of advertisements in the interests of amenity or public safety. Local authorities are also empowered, under the Clean Air Act 1956, to declare 'smoke control areas', in which the emission of smoke from chimneys constitutes an offence, and to make grants towards costs incurred by owners and occupiers of premises in these areas in making the necessary changes in their appliances.

Voluntary amenity societies, wholly dependent upon the support of their members, include: the Council for the Preservation of Rural England, founded in 1926 to organise concerted action to secure the protection of rural scenery and of town and country amenities from disfigurement or injury; the

Association for the Preservation of Rural Scotland (founded in 1926) and the Council for the Preservation of Rural Wales (founded in 1928); the Commons, Open Spaces and Footpaths Preservation Society; the Ramblers' Association; the Society for the Protection of Ancient Buildings; the Pilgrim Trust; the National Trust for Places of Historic Interest or Natural Beauty in England, Wales and Northern Ireland; and the National Trust for Scotland. The National Trust for England, Wales and Northern Ireland (which was founded in 1895 and now has some 155,000 members) is (apart from the Crown) the largest land-owner in the United Kingdom. It has acquired, mainly through gifts, over a thousand properties, which it holds for the enjoyment of the public; it administers more than 320,000 acres of land of great natural beauty; and it owns many fine gardens. The National Trust for Scotland, an independent body, founded in 1931 to promote the preservation of places of historic or architectural interest or of natural beauty in Scotland for the benefit of the public, now has about 27,000 members and has under its care over 60 properties, covering in all over 79,000 acres.

The Council for Nature (established in 1958) is a foundation of about 300 natural history societies and voluntary bodies concerned with nature conservation and represents the interests of some 100,000 naturalists at public inquiries on developments likely to threaten British flora and fauna. The Council, which undertakes practical tasks of nature reserve management as well as information work on all aspects of natural history in the British Isles, receives grants from the Department of Education and Science, the British Broadcasting Corporation and the Carnegie United Kingdom Trust.

Planning in Northern Ireland

Under the Planning and Housing Act (Northern Ireland) 1931 local authorities are empowered to prepare planning schemes for their areas in order to secure proper sanitary conditions, amenity and convenience in the laying out and use of the land.

The planning provisions of the 1931 Act are permissive, but the Planning (Interim Development) Act (Northern Ireland) 1944 brought under planning control all land not subject to a scheme under the 1931 Act and empowered local authorities to secure more effective control of development until planning schemes came into operation.

Since 1944 progress has been made by the authorities in the preparation of outline advisory plans. These plans indicate broadly the proposals for their areas and provide a foundation for more detailed plans. They also facilitate the control of development until planning schemes are completed.

Interim development control is exercised in accordance with the 1944 Act, which requires that, where application is made to an authority for permission to develop, the authority may grant the application conditionally or unconditionally or may refuse it altogether. In the event of a refusal or conditional approval, the applicant may appeal to the Ministry of Development for Northern Ireland (the department primarily responsible).

Planning in Northern Ireland has entered a new phase in recent years with the publication of the *Belfast Regional Survey and Plan*, in April 1964, and the *Report on Economic Development in Northern Ireland*, in February 1965. These reports have led to a greater emphasis on regional planning in Northern Ireland and their general thesis of preserving and enhancing Northern Ireland's physical environment has been accepted by the Government.

The Government and local authorities are co-operating in limiting the growth of the Belfast urban area and plans are being prepared for a new city linking the two boroughs of Lurgan and Portadown in County Armagh.

Plans are also being prepared for the expansion of a number of other key towns including Antrim, Ballymena and Newry. The New Towns (Northern Ireland) Bill 1965 provides the machinery for the development of new towns and the expansion of existing ones.

A White Paper, *The Administration of Town and Country Planning in Northern Ireland*, published in 1964, contains proposals for a central planning authority responsible for the overall planning of Northern Ireland which would work with a number of local development committees in the detailed planning of each area.

Preservation of Amenities

The Amenity Lands Act (Northern Ireland) 1965 enables the Ministry of Development to acquire or control areas of natural beauty or amenity; to designate National Parks; to create nature reserves; to provide facilities for visitors to such areas; to put areas of outstanding natural beauty or of scientific interest under a special form of planning control; and to secure the clearing of derelict sites in rural areas.

Industrial Development

The Ministry of Development co-operates with the Ministry of Commerce in the selection of industrial sites in order to secure the best possible use of the land and to facilitate the efficient provision of housing and other services in connection with industrial development (see p. 271).

Northern Ireland Forest Park

Northern Ireland's first forest park at Tollymore Park, Newcastle, County Down, was opened to the public in 1955. Situated at the foot of the Mountains of Mourne, it covers an area of 1,200 acres. It contains an arboretum comprising a wide variety of native and exotic trees, and an exhibition of natural history, and is rich in mountain, river and parkland scenery. Caravan facilities and a camping site for youth organisations are available.

HOUSING

Between 1945 and March 1965 over 5 million new houses and flats were built. Today, the numbers of dwellings and households are roughly equal. Despite this achievement much still remains to be done before all the housing problems facing the country are solved. The major problems are: a shortage of housing resulting from the increase in population, the even more rapidly increasing number of households, and rising living standards; the modernisation of 4 million structurally sound old houses that lack amenities now considered essential; and the many slum houses remaining to be cleared in the large cities, a legacy of the nineteenth century, when a mass of poor quality houses was put up in industrial areas.

Responsibility for formulating housing policy and supervising the housing programme is borne by the Minister of Housing and Local Government in England, by the Secretaries of State in Scotland and Wales and the Minister of Development in Northern Ireland. To help in dealing with long-term problems of land for housing, industry, agriculture and transport, the Ministry of Housing and Local Government is undertaking regional surveys of population trends and future needs for land as a basis for regional plans covering development over a period of twenty years. The plans will be revised at least every ten years.

The actual provision of housing accommodation in any area is the concern of the local authority. In England and Wales and Northern Ireland the local housing authorities are the councils of county boroughs, boroughs, urban districts and rural districts, the Greater London Council, the London

borough councils and the Common Council of the City of London. In Scotland all town and county councils are housing authorities.

There are 17½ million dwellings in Britain: 15½ million in England and Wales, 1,690,000 in Scotland and about 404,000 in Northern Ireland. About one house in four is owned by public authorities (in Scotland the figure is almost one in two), more than one in three are in owner occupation and most of the remainder (mainly older houses) are rented from private landlords. Today one family in four lives in a post-war dwelling.

New Building

Private enterprise is now responsible for over half the housing being built in Britain (some 224,000 of a total of 383,000 dwellings built in 1964); the rest is built by local authorities, new towns development corporations, the Scottish Special Housing Association Ltd., the Northern Ireland Housing Trust[1] and certain government departments (for housing families of the armed forces or other services). Local authority housing is normally built for letting; privately sponsored dwellings for owner-occupation. The Government is encouraging the highest possible rate of house-building, particularly by local authorities and housing associations, which are non-profit-making bodies providing houses for letting rather than for sale; it is also encouraging the co-ownership of groups of new dwellings by their occupants (see p. 190).

Most of the new dwellings in Britain are houses (usually of two storeys); the remainder are flats or maisonettes, mostly in blocks of from 2 to 20 storeys, although a few blocks may be higher. High blocks are generally built in central urban areas where they replace old, overcrowded dwellings. In the new towns and on new housing estates they provide focal points and help planners to achieve higher densities of population per acre, where desirable, while still providing open spaces.

Accommodation in a house designed for a family of four or five people includes one or two living rooms, a kitchen, a store, a bathroom and a water closet and two or three bedrooms. A typical 3-bedroom house built by a local authority in England and Wales in 1964 had a superficial area of about 920 square feet and cost £2,303 to build.

Local Authority Housing

Nearly 58 per cent of houses and flats built since 1945 have been built by local authorities (that is, generally, by private builders under contract to the authorities). Local authorities are responsible for seeing that adequate standards are maintained in all newly built houses, for slum clearance and for ensuring that, as far as possible, housing conditions are satisfactory in their areas. In their building programmes they are being encouraged to use systems of industrialised housing, with standardised components. These offer the advantages of very rapid construction on the site, greater independence of weather conditions, and the use of fewer skilled workers than traditional building methods require, an important factor in areas where there is a shortage of skilled building labour. Control of building standards is the responsibility of the central departments, which issue manuals of guidance on design and layout for different types of houses and flats provided by local authorities.

The Ministry of Housing and Local Government has set up offices in Manchester, Newcastle upon Tyne, Birmingham, Leeds, Bristol and Nottingham to advise local authorities on methods of increasing their rate of house

[1] The Scottish Special Housing Association, a statutory body, was established in 1937 to erect houses for letting to supplement building by local authorities. It now owns about 58,000 houses. The Northern Ireland Housing Trust was set up in 1945 for a similar purpose. It has built about a quarter of Northern Ireland's post-war houses.

building and slum clearance. As the slums are dealt with, attention is being paid to the renewal of the decaying areas in towns and the demolition or improvement of the 4 million old houses remaining, many of which are obsolescent.

For many years local authorities have provided an increasing number of smaller dwellings for old people—mainly one-bedroom bungalows or flats. In 1964 they built nearly 33,000 in England and Wales, over a quarter of their total house-building. They have also built flatlets for frail or infirm old people who can lead independent lives with some help: the flatlets normally consist of small blocks of centrally heated bed-sitting rooms with kitchens and lavatories; other rooms such as bathrooms, laundry and large lounges are shared and the residents relieved of the work of keeping them clean. A resident warden helps the old people with jobs they cannot manage single-handed and is on call in emergencies.

In selecting tenants for council dwellings local authorities give preference to families living in overcrowded or unsatisfactory conditions. Rents are low, particularly in Scotland, in comparison with privately owned housing, with the result that most authorities have a deficit on their housing account that is made good from other income. In order to avoid subsidising council-house tenants who can afford to pay an economic rent, about two-fifths of the councils operate rent-rebate schemes, under which the general level of rents is high enough to cover housing costs, and rebates are given to tenants with low incomes.

Research and Development

Research into building techniques and into new methods of house construction, as well as into the needs of families, is carried out by the Urban Development Groups of the Ministry of Housing and Local Government and of the Scottish Development Department, the Building Research Station, the architects' departments of major local authorities and the research groups in big constructional firms. All government building research and development is co-ordinated by the Directorate of Research and Development at the Ministry of Public Building and Works. In 1964 the Ministry set up the National Building Agency to help in speeding up the rate of public and private building by giving technical advice.

Slum Clearance

Of the estimated slum dwellings in Britain in 1955—about one million—some three-fifths had been cleared by 1965. It is expected that in about ten years' time the great majority of the 1,700 housing authorities in Great Britain will have succeeded in getting rid of all their present slums. In certain areas, however, particularly the older industrial towns, including Birmingham, Glasgow, Liverpool and Manchester, four of the biggest cities in the country, the proportion of unfit houses is so high that clearance will take much longer.

To help in those areas of Britain where the number of slum houses is so large that it would not be practicable to replace all of them within the next few years, local authorities can acquire houses unfit for human habitation and 'patch' them in order that they may provide passable accommodation pending their demolition. The intention is that these houses should be demolished as soon as possible: the temporary repairs are not intended as an alternative to slum clearance. Exchequer contributions are available to meet part of the costs of acquisition and essential repairs.

Housing authorities are obliged to see that other accommodation exists, or can be provided by them, for people displaced from slum clearance areas. Where an unfit house is demolished by order of the local authority and the owner retains his land, he normally receives no compensation. If the local

authorities acquire an unfit property in order to demolish it themselves and to rebuild on the land, the normal basis of compensation is the market value of the house as it stands or the value of the site after clearance, whichever is the less. In England and Wales, however, owner-occupiers who bought between 1939 and 1955 at present receive full compensation for their loss regardless of whether the sites of their houses are being acquired by the authority or not; similar terms apply to business occupiers. In England, Wales and Scotland the slum clearance code provides for special payments for condemned houses which have been well maintained although inherently unfit and business occupiers may receive hardship payments in certain cases. In Northern Ireland provision is made for payments to owner-occupiers, business occupiers and for good maintenance of older houses.

Housing Finance

The initial capital cost of houses built by or for local authorities is met by raising loans; current expenditure, including loan repayment and interest on loans, is met from rents supplemented by subsidies from the Exchequer and, in many cases, from the rates. Local authorities may raise loans for housing either in the open market or by borrowing from the Public Works Loan Board (see p. 76). In Northern Ireland local authorities, the Housing Trust and housing associations may borrow from the Government Loans Fund.

Loans to enable people to buy their houses by a system of instalment purchase are available from various sources, including building societies, insurance companies, industrial and provident societies and local authorities.

Building societies, of which there are about 730, are the most important of these agencies. They do not build houses themselves but provide long-term loans on the security of property bought for owner-occupation. Most societies are now prepared to make advances of up to 95 per cent of the value of the houses. Loans are usually repayable over periods of up to 25 or even 30 years, by equal monthly instalments to cover capital and interest. The societies' funds are derived mainly from investment of relatively modest sums by the general public.

Many local authorities operate a scheme whereby, for a house costing up to £2,500, they guarantee part of the loan made by a building society so that an advance greater than normal may be made to the purchaser. The Exchequer undertakes to share any liability local authorities may incur under this scheme. Local authorities also have power to make loans under the Housing Acts for the acquisition, conversion, improvement, repair and alteration of houses. Under the House Purchase and Housing Act 1959 they may make loans of up to 100 per cent of the house's value.

Housing Corporation

The Housing Act 1961 authorised Exchequer loans to approved non-profit-making housing associations for the building of houses to let at unsubsidised rents. This provision was increased and extended by the Housing Act 1964 under which a Housing Corporation was set up to stimulate the formation of housing societies. Building societies advance to a housing society two-thirds of the cost of each approved housing scheme, the Corporation providing the remaining third. The housing societies build dwellings either to let at unsubsidised rents or for co-ownership by a group of occupants. Co-ownership gives the occupants most of the advantages of house ownership at a lower cost. The Corporation also has power to buy land for the housing societies.

Housing Subsidies and Improvement Grants

Housing subsidies, at varying rates and for varying purposes, have been provided in Britain since 1919, when they were first introduced to facilitate the building of houses for letting at moderate rents.

In recent years various systems of subsidy have been introduced under successive Housing Acts. The present subsidies in England and Wales provide for a flexible system whereby all local authority dwellings approved by the Minister of Housing and Local Government receive a subsidy, the amount of it depending on the financial need of the housing authority. Authorities with inadequate resources receive a basic subsidy of £24 a year for 60 years for each house built, which may be increased in stages to £40 for authorities with particularly low reserves. For other authorities the basic rate is £8. Additional subsidies exist for high flats, expensive sites, precautions against mining subsidence and building in certain materials. Special subsidies exist for dwellings provided for overspill (£28) and to meet the urgent needs of industry (£24). These provisions enable authorities to build where need exists and help to ensure that Exchequer assistance is available chiefly for those authorities in most need of help.

Private owners in England and Wales can obtain Exchequer assistance for the improvement of houses built before 1945 or conversion of large houses or other buildings for housing. Cash grants may be made by local authorities, with Exchequer assistance, to people converting or improving existing buildings for housing at a cost of over £100 per dwelling. The grants may amount to half the cost, with a maximum grant of £400 for each dwelling. There are certain technical conditions which the dwellings as improved or converted must fulfil, to ensure that public money is spent only on property that will provide satisfactory accommodation for a sufficiently long period. Grants for similar work in houses owned by local authorities may also be paid by the Minister of Housing and Local Government, but on an annual basis over 20 years. In either case, the payment of grant is at the discretion of the local authority or the Minister, as the case may be.

Local authorities are, however, obliged to make grants called 'standard grants', for the provision in houses built before 1945 of a bath, wash basin, water closet, hot-water supply and food store; these cash grants cover half the cost of the work, subject, normally, to a maximum grant of £155, or smaller sums if some of the five items already exist. Grant for the provision of the last three facilities may be made where further improvement is not practicable. Similarly the Minister is obliged to make standard grants to local authorities, but again on an annual basis over 20 years. The Acts under which these improvement grants are available are the Housing (Financial Provisions) Act 1958, the House Purchase and Housing Act 1959, and the Housing Acts 1961 and 1964. From 1949 to March 1965 nearly 883,000 grants had been made.

Building subsidies, improvement grants and standard grants are also provided in Scotland and Northern Ireland; the amounts of subsidy are generally higher owing to different circumstances. In Scotland the Housing (Scotland) Act 1962 provides for subsidies according to a local authority's financial needs. The basic subsidy is £32 per house, which may be increased by stages up to £56 (depending on their financial position) for authorities with inadequate resources and £12 per house for other authorities. There are higher rates of subsidy for housing for special purposes (such as overspill, multi-storey development, agricultural workers). Grants are also available to local authorities and private owners for the improvement or conversion of existing properties, and to private owners for the provision of new houses for farm workers. In Northern Ireland annual subsidies are paid to local authorities, the Northern Ireland Housing Trust and housing associations. Grants for improvements and conversions are payable both to public authorities and

private persons. In addition, 'lump sum' subsidies are paid to private persons who build houses for letting or for owner-occupation. Grants are available for the provision of new houses and for the reconditioning of existing premises to accommodate farmers and approved workers.

The average annual cost of housing subsidies in Britain has been over £100 million since 1954, some three-quarters of the total being paid by the Exchequer and about a quarter by local authorities.

Control of Rents

Rent control, originally introduced in 1915 and intended as a temporary war-time measure, was retained by successive Acts until 1957. During this period nearly all privately owned houses let unfurnished were subject to a system of rent control which gave the tenant a fixed rent and security of tenure.

The Rent Act 1957 released from rent control all dwellings with a rateable value over £40 in the London Metropolitan Police District and in Scotland and over £30 elsewhere; it freed from control all new lettings, whatever the rateable value of the property. A reversal of policy was embodied in the Rent Bill 1965. Broadly, the Bill's proposals were for a new system of rent regulation which would cover all privately rented unfurnished property except the most expensive. Rents would be determined by locally appointed rent officers or, failing agreement between the officer, landlord and tenant, by independent rent assessment committees appointed by the minister concerned. Once determined, the rent would not normally be reviewed for at least three years. For furnished premises the existing system, under which a tenant may go to a rent tribunal for determination of a reasonable rent, would apply over a much wider range of property than previously and tenants would be given greater security of tenure. Eviction without a court order would be made unlawful and harassment of occupiers would become a criminal offence with severe penalties.

Measures of control and de-control also apply in Northern Ireland. In 1951 legislation was passed which permitted prescribed increases in the rent of controlled houses, provided that they were maintained in good repair; and the Housing (Miscellaneous Provisions) and Rent Restriction Law (Amendment) Act (Northern Ireland) 1956 permitted an increase of one-third in the rent levels fixed by the 1951 Act where the landlord had recently incurred expenditure of a certain amount on repairs. The 1956 Act also released from control houses with a net annual value of over £50 (with certain safeguards) and houses with a net annual value of over £26 of which the landlord was in actual possession when the Act came into force, or of which he subsequently obtained possession.

8
THE CHURCHES

Every person living in Britain possesses the right of religious freedom as described in Article 18 of the Universal Declaration of Human Rights: he may change his religion at will, and may manifest his faith in teaching, worship and observance without interference from the community or the State. Churches and religious societies of all kinds may own property, conduct schools, and propagate their beliefs in speech and in writing.

Freedom of conscience in religious matters was achieved gradually from the seventeenth century onwards; in many cases relaxation in the administration of laws discriminating against minority religious groups preceded the repeal of the legislation concerned. Heresy ceased to be a civil offence with the passing of the Ecclesiastical Jurisdiction Act 1677, and the Toleration Act of 1688 granted freedom of worship to Protestant dissenters. In 1828 the repeal of the Test and Corporation Acts freed nonconformists from political disabilities and made it possible for them to be appointed to public offices; Roman Catholics gained political emancipation under the Roman Catholic Relief Act 1829; the Jewish Relief Act 1858 enabled Jews to become members of Parliament; while religious tests that had been imposed on prospective students and members of the academic staff of the universities of Oxford, Cambridge and Durham were successively abolished by Acts of 1854, 1856 and 1871. Nowadays, there is no religious or denominational bar to the holding of public office, except that the Lord Chancellor may not be a Roman Catholic.

In the services administered by the State, such as the armed forces, the national hospitals and the prisons, the clergy of the established Church of England or the Church of Scotland provide the principal ministrations and are paid a salary by the State for this part of their work. Priests of the Roman Catholic Church and ministers of other denominations may also be appointed or specially called in as required. Voluntary schools (see p. 156) provided by churches of any religious denomination may be wholly or partly maintained from public funds.

There is no precisely accurate or uniform method of assessing the number of adherents to the various churches in the United Kingdom, since no inquiries are made about religious beliefs in population censuses or other official returns, and each church adopts different criteria in counting its members. The membership figures given in the following sections should therefore be taken as approximate.

The Church of England

The Church of England is the Established Church, and claims to be the ancient catholic church of the land. At the Reformation in the sixteenth century, it repudiated the supremacy of the Pope, but retained the historic episcopate, and the creeds and sacraments upon which its doctrines are based; therefore it claims to be both 'catholic' and 'reformed'. Its form of worship is embodied in the Book of Common Prayer, which was first compiled in 1549.

The Church is uniquely related to the Crown in that the Sovereign, who must be a member of the Church of England, is called 'Defender of the Faith' (a statutory title as protector of the Church) and promises on his or

her accession to uphold it. The coronation of the Sovereign is performed by the Archbishop of Canterbury; prayers for the Sovereign and other members of the royal family are said in all the statutory services of the Church; Church of England archbishops, bishops and other senior ecclesiastical dignitaries, as well as incumbents of Crown livings, are appointed by the Sovereign on the advice of the Prime Minister[1]; and all clergymen take the oath of allegiance to the Crown.

The Church is also linked with the State through the House of Lords, in which the archbishops of Canterbury and York and twenty-four senior diocesan bishops have seats (see p. 33). This makes it possible for the views of the Church leaders to be expressed freely on any moral issue raised in connection with the corporate conduct of the State as well as on specifically ecclesiastical issues—a matter of particular significance in view of the fact that the clergy of the Church of England (together with those of the Church of Scotland, the Church of Ireland and the Roman Catholic Church) are legally disqualified from sitting in the House of Commons.

The Church is not free to change its form of worship, as laid down in the Book of Common Prayer, without the consent of Parliament[2]; canons (Church rules) cannot be made or amended without the consent of the Queen; and the measures of the Church Assembly (as distinct from its regulations) also require the Royal Assent.

Church Organisation and Government

The Church of England is organised by geographical areas into two provinces and 43 dioceses. The Province of Canterbury contains 29 dioceses and that of York 14. Each diocese is subdivided into ecclesiastical parishes, of which there are about 14,500 in all. The Archbishop of Canterbury is Primate of All England and bishop of his own diocese of Canterbury; the Archbishop of York is styled Primate of England and is bishop of his own diocese of York. The baptised membership of the Church is about 27 million, i.e. two-thirds of the population born and resident in the two provinces.

Spiritual authority in the Church rests with the bishops. The authoritative bodies in matters of doctrine, belief and practice are the Convocations of Canterbury and York, each presided over by its archbishop, and consisting of an upper house of bishops, and a lower house of representatives of each cathedral chapter, archdeacons and elected clergy. The Convocations meet not oftener than three times a year.

The legislative and central administrative body of the Church is the National Assembly of the Church of England, which is commonly called the Church Assembly. It was set up in 1919 at the request of the two Convocations, and was given power to legislate by measure by the Church of England Assembly (Powers) Act of 1919. It can discuss any matter connected with the Church of England, but may not make any doctrinal statements, nor infringe upon the rights of the Convocations. It consists of three houses: bishops, clergy and laity. The first two houses are composed of the members of the Convocations; the house of laity consists of men and women elected every five years by the lay members of diocesan conferences, and the constitution allows for ten co-opted members.

The Church Assembly usually meets three times a year. Measures, after

[1] A committee has been set up to discuss with the Government's legal advisers the form of necessary legislation about Crown appointments, with power to prepare any measure thought desirable.

[2] A measure (Prayer Book (Alternative and Other Services) Measure 1965) permitting limited revision of the Prayer Book and changes in the form of worship has received the Royal Assent and the process of revision will shortly begin.

passing through various stages in the assembly, are presented to an ecclesiastical committee of both Houses of Parliament, consisting of 30 members, of whom 15 are appointed by the Lord Chancellor and 15 by the Speaker of the House of Commons. This committee lays the measures, together with a report upon them, before both Houses. If both Houses so resolve, the measure is sent to the Sovereign for Royal Assent, after which it has the same force and effect as an Act of Parliament. Parliament, though it may reject a measure, has no power to amend it.

The Church Assembly is the centre of an administrative system consisting of boards and councils dealing with various aspects of the Church's work, such as education, recruitment and training for the ministry,[1] and Church work at home and overseas. The Church Assembly, through the Schools Council of its Board of Education, is responsible for some 7,200 Church of England schools of all types, for approximately half of which the Church bears a quarter of the cost of improvements, alterations and repairs.

Parochial church councils were set up in 1921 to associate the laity with the government of the Church in the parish. The members of these councils are appointed by the parochial electors, i.e. persons who are baptised, are not members of any other church, are 17 years of age and over, and have applied for membership of the electoral roll of the parish where they habitually reside or worship. The estimated number on the parish electoral rolls is about $2\frac{3}{4}$ million.

The Church of England has its own ecclesiastical courts. Their jurisdiction today consists largely of faculty cases, with very occasional cases of discipline against clergy, either for moral or ecclesiastical offences. A faculty is necessary for any specific alteration or addition to the fabric or ornaments of a church or to a churchyard.

There are 25 Church colleges of education in England and two in Wales, all of which are run by independent governing bodies. With substantial grants from the Department of Education and Science a major programme of expansion, including the opening of two new colleges, has taken place during the last few years; this has raised the total number of students in the colleges to about 12,000. The cost to the Church, mainly from funds provided by the Church Assembly, has been about £3 million.

The Church Assembly has also nearly completed a programme of modernisation and improvements of theological colleges (of which there are 26) and establishments for the training of women in the pastoral work of the Church, and has provided grants for the greater part of the cost.

Church Finance

Each parish is responsible for its own finances, and also contributes an annual apportioned quota to diocesan funds, and each diocese similarly contributes to the Church Assembly. In the diocese, the financial authority is the diocesan board of finance, which administers the money contributed by the parishes, and acts as trustee on behalf of the parochial church councils, which have only limited powers of holding property. The Central Board of Finance administers the Church Assembly Fund, supported by diocesan contributions, and devoted to the maintenance of central services, including capital expenditure on training colleges and theological colleges and the grants for training candidates for ordination.[2]

[1] A commission, consisting of not more than 20 members (bishops, clergy and laity) has been appointed to study what reforms are necessary in the deployment and payment of the clergy.

[2] A small standing body has been set up by the archbishops to bring the needs and resources of the Church of England under continuous review.

The State makes no payment direct to the Church as such, though it pays for the services of chaplains in the armed forces and in prisons and hospitals, and contributes substantially to the maintenance of Church schools and training colleges.

The endowment income of the Church is mainly administered by the Church Commissioners, the body largely responsible for the payment of clergy stipends and the provision of finance for pensions, new churches, parsonage houses and, to a small extent, church schools. The total net income from the Commissioners' investments (nearly £18 million in 1964) has greatly increased during the past ten years; in broad terms, this has meant a rise in the stipends of the poorer clergy and that the Commissioners have been able to embark on schemes of assistance for providing better parsonage houses, for church buildings in new areas of population, and for better pensions for clergy and their widows.

The Anglican Communion

The Anglican Communion comprises 19 autonomous churches in the United Kingdom and overseas, with a total membership of over 40 million.

In the British Isles, in addition to the established Church of England, there are unestablished Anglican Churches in Ireland, Scotland and Wales: the Church of Ireland has 14 dioceses; the Episcopal Church in Scotland, 7 dioceses and some 98,000 members; and the Church in Wales, 6 dioceses and some 200,000 Easter communicants.

The Lambeth Conference for unofficial consultation between all Anglican bishops meets every ten years; it is presided over by the Archbishop of Canterbury. The conference has no executive authority, but enjoys great moral prestige, and its findings on doctrine, discipline, relations with other communions, and on the attitude of the Anglican churches to political and social questions are widely studied.

An executive officer of the Anglican Communion is the secretary of the Anglican Advisory Council on Missionary Strategy, and exercises general supervision on behalf of the consultative body of the Lambeth Conference over all matters affecting the welfare of the Anglican Communion which call for attention between the meetings of the conference.

The Church of Scotland

The established church in Scotland is the presbyterian Church of Scotland. It has been described as 'the supreme example of a church which is established and yet is free'. Its position, defined in the Treaty of Union 1707, was further safeguarded by the Church of Scotland Act 1921, under which it has complete internal self-government within the terms of the schedule to the Act, 'Articles Declaratory of the Faith of the Church of Scotland'.

Whereas in episcopacy church government is a hierarchy of persons, in presbyterianism there is a hierarchy of courts. All ministers are of equal status, and each of the 2,027 churches is governed locally by the Kirk Session, consisting of the minister and elected elders (of whom there are nearly 48,000); above this is the Court of the Presbytery, then the Court of the Synod, and finally the General Assembly, which meets annually and consists of elected ministers and elders presided over by an elected Moderator who serves for one year. The Sovereign is represented at the General Assembly by the Lord High Commissioner. The Church of Scotland has complete freedom in all spiritual matters and the right to appoint its own officers and to decide all matters of doctrine and discipline. Its decisions are not subject to parliamentary debate or modification.

The training for the ministry, which lasts at least six years, has given the

Church a high reputation for scholarship and has in turn influenced the standard of education in Scotland. The membership of the Church of Scotland is estimated at about 1,260,000.

The Free Churches

The phrase 'Free Churches' is now commonly used to describe those churches in England which were more generally known in the past as 'nonconformist' churches; and protestant churches in Scotland (except the established Church of Scotland), Wales and Northern Ireland. The main Free Churches are the Methodist, Baptist and Congregational Churches, and the unestablished presbyterian churches throughout Britain. In addition, there are a number of other protestant denominations in the United Kingdom as well as such religious associations as the Society of Friends and the Salvation Army, which have certain links with the main Free Churches.

The word 'nonconformist' signifies dissent from certain of the formularies and practices of the established church. In general, the Free Churches base their reason for existence on their distinctive convictions regarding organisation and worship.

The Methodist Churches

The largest of the Free Churches, the Methodist Church, which originated in the eighteenth century following the evangelical revival by John Wesley, took its present form in 1932, with the union of the majority of separate Methodist Churches. It has over 710,800 adult full members. The supreme authority is the annual conference and the system of government is in many ways presbyterian, the leaders' meeting corresponding to the kirk sessions, with circuit meetings and district synods resembling presbytery and synod. One of the characteristics of Methodism is its strong emphasis on lay leadership. There are some 21,600 trained lay preachers sharing the work of 4,200 ministers and preaching in many local churches.

Methodist Churches which did not join the union in 1932 include: the Independent Methodists, in which ministerial service is on a purely voluntary basis and women (many of whom are ministers) have full equality with men; and the Wesleyan Reform Union (with some 5,600 members) which, while retaining the essential Methodist doctrine, gives autonomy to each of its 157 individual churches.

The Congregational and Baptist Churches

The Congregationalists are the oldest community of dissenters in Britain. In 1831 most of their churches were formed into the Congregational Union. Local churches have formed county and national unions, whose secretariat and assemblies have much influence, but no compulsive authority over them, since great importance is attached to the autonomy of local church meetings. Adult membership is approximately 202,300.

Like the Congregationalists, the Baptists are for the most part grouped in associations of churches and the majority of these belong to the Baptist Union formed in 1813. Baptists differ from Congregationalists in that they practise the baptism of believers only; they do not baptise infants. The Baptist churches have about 300,900 members.

The Unestablished Presbyterian Churches

The Presbyterian Church in Ireland has a membership in Northern Ireland of 140,400. The Presbyterian (or Calvinistic Methodist) Church of Wales, which arose from the revivalist movement led by Howell Harris in 1735, numbers some 127,000. The Presbyterian Church of England has nearly 69,900 members; its highest court is its general assembly; women are admitted to the eldership and ministry.

Other presbyterian churches in Britain include: the Free Church of Scotland; the United Free Church of Scotland; the Free Presbyterian Church

of Scotland; the Reformed Presbyterian Church of Scotland; the Reformed Presbyterian Church of Ireland; and the Non-Subscribing Presbyterian Church of Ireland.

Other Denominations

Among other Protestant denominations in the United Kingdom are: the Unitarian and Free Christian Churches; the Churches of Christ (known also in the United States of America as Disciples of Christ), which have been an organised community in Britain since early in the nineteenth century; the British Province of the Moravian Church, which is an international missionary Church; the Free Church of England (or Reformed Episcopal Church), which was formed in 1844 as a direct result of the Oxford Movement; the Society of Friends; and the Salvation Army.

The Society of Friends, or Quakers, came into being in the middle of the seventeenth century under the leadership of George Fox. A distinctive feature is the way of worship: outward sacraments are not observed and there is no separate ministry. Friends place great emphasis on work for peace, and their influence in many parts of the world, especially in social reform and in the relief of suffering, is very wide in relation to their numbers. There are 440 Quaker Meetings in Britain and over 21,000 members; and the Society has nine schools (the pupils and staff of which are not exclusively Quaker).

The Salvation Army, founded in 1865 (as the Christian Mission), is a religious movement, composed of men and women who seek the spiritual and social betterment of their fellows, primarily by preaching the gospel to those hitherto untouched by religious effort. The movement, in which military rather than ecclesiastical terminology is used, has branches all over the world, and its social work (particularly that connected with the welfare of members of the British armed forces serving overseas) is well supported.

The Christian Scientists, who are in no way connected with any other church, have about 330 branch churches and societies in Britain.

The Roman Catholic Church

The Roman Catholic hierarchy in England and Wales, which became temporarily extinct during the sixteenth century, was restored in 1850; the Scottish hierarchy became extinct in the early seventeenth century and was restored in 1878, while the Irish hierarchy never became completely extinct. The normal government of the Roman Catholic Church, namely by territorial archbishops and bishops, is once again the rule in the whole of the United Kingdom.

The central territorial unit of the Roman Catholic hierarchical organisation is the province or archdiocese under the metropolitan, who is always an archbishop. The chairman of the bench of bishops in England and Wales is the Archbishop of Westminster. A province normally comprises several dioceses, each under a bishop aided by a chapter of canons and others, and by priests in charge of the parishes into which the diocese is subdivided. In England and Wales there are five provinces and archdioceses (Westminster, Liverpool, Birmingham, Cardiff and Southwark), 14 dioceses, and nearly 2,300 parishes; in Scotland there are two provinces and archdioceses (St. Andrews and Edinburgh, and Glasgow), six dioceses, and about 400 parishes; in Northern Ireland there are six dioceses (several of which have territory partly in the Irish Republic and partly in Northern Ireland since there is one hierarchy for the whole of Ireland) and about 170 parishes. In the whole of the United Kingdom there are some five million adherents (including children) to the Roman Catholic faith.

The Roman Catholic Church attaches great importance to the education of its children in their own faith, and requires that the children of marriages

between its own members and members of any other denomination should be brought up as Roman Catholics. Many schools for Roman Catholic children in the United Kingdom are staffed by members of the religious orders for men and women, who also undertake other social work such as nursing, child care, and the conduct of homes for the aged.

Jewry

Jews first settled in England at the time of the Norman conquest, but were expelled at the end of the thirteenth century by an edict of Edward I. The present Anglo-Jewish community dates from 1656, the earliest arrivals being the Sephardi (from Spain and Portugal). At the end of the seventeenth century an Ashkenazi community (from Germany and East Europe) was established, which increased rapidly and spread to the principal provincial cities. As a result of the virtual destruction of whole Jewish communities on the Continent during the second world war, the present Anglo-Jewish community of some 450,000 is the largest group of Jews in Europe.

The Anglo-Jewish community is divided into two schools of thought, each of which has its own form of worship and its own services: the Orthodox (the original groups) and the Reform. The Reform Movement, which attaches less religious importance to some of the ancient rituals and practices of the Jewish faith, began in 1840. It was followed in 1901 by the establishment of the Liberal Jewish Movement which, in addition, lays emphasis on the re-interpretation of traditional Judaism in the light of modern thought and custom. Of the Jews in Great Britain who belong to any kind of synagogue, about 80 per cent are Orthodox. The Chief Rabbi is the head of the largest group (Ashkenazi) within Orthodox Jewry; the Haham is the head of the Sephardi group.

Synagogues in Britain number approximately 450. There has been an increase in the number of Jewish denominational schools, which are now attended by about one in eight Jewish children; other Jewish children attend the ordinary State or independent schools and receive extra-curricular instruction in the Jewish faith.

Other Religious Communities

Many immigrants to Britain from overseas Commonwealth countries and foreign countries have established centres for worship for their own communities in the United Kingdom, and especially in London. The Christian communities include the Greek, Russian, Polish and Serb Orthodox, with some Estonian and Latvian Orthodox, and also the Armenian Church. There are also churches belonging to the Lutheran Churches of Denmark, Finland, Germany, Norway and Sweden, and centres where Estonian, Latvian and Polish Lutherans worship according to their creed. In addition, the French, Dutch, Swiss, Hungarian and Polish Reformed Churches are represented in Britain, the first three having their own places of worship. There are also a number of other religious sects of British or foreign origin; figures of membership in Britain of most of them are not available.

The principal non-Christian communities in Britain, apart from the Jews, are the Muslims and the Buddhists.

The Muslims

The Muslims are the more widely represented, their number in Britain being estimated at about 250,000, of whom over 90,000 are in London where the London Central Mosque and Islamic Cultural Centre, the Shiah Islamic Assembly Centre and the East London Mosque are situated. The Shah Jehan Mosque is at Woking, Surrey, and there are mosques or Islamic centres in many of Britain's larger cities.

The Buddhists

There are several thousand adherents of Buddhism in Britain. The Buddhist Society has its headquarters in London, with a Shrine Room; there are also Shrine Rooms in the two Vihara in London, in one of which live monks from the East and in the other western monks.

Co-operation between the Churches

An outstanding feature of recent years has been the growth of co-operation between the Churches. The British Council of Churches, founded in 1942, includes official representatives from almost all the churches of the British Isles, with the exception of the Roman Catholic Church. The Council facilitates common action between the churches and seeks to further the cause of Christian unity. The Archbishop of Canterbury is president. In addition, most, though not all, of the Free Churches in England and Wales are members of the Free Church Federal Council (formed in 1940 by the amalgamation of the Federal Council of Evangelical Free Churches with the National Free Church Council), the aims of which are to promote unity and joint action between the Free Churches, and to provide a channel through which the Free Churches can communicate and negotiate with central and local government authorities as a united body. The report of the conversations held during the past six years between representatives of the Church of England and the Methodist Church visualised union between the churches in two stages: the first to be a period of full communion during which the two churches remain distinct, and the second to be the achievement of organic union. Discussions on changes in organisation to allow of closer relations have also been taking place between the Church of England, the Church of Scotland, the Episcopal Church in Scotland, and the Presbyterian Church of England.

The Archbishop of Canterbury is advised on these matters, both at home and abroad, by the Missionary and Ecumenical Council and the Church of England Council on Foreign Relations.

The Anglican, Presbyterian and Free Churches in the British Isles also participate in the World Council of Churches, which was constituted at Amsterdam, Netherlands, in 1948. The council links together 171 churches in over 50 countries for co-operation in action and the study of common problems.

Co-operation of other Churches with the Roman Catholic Church takes place on some specific issues through the Churches' Main Committee. The Council of Christians and Jews works for better understanding between members of the two religions and deals with problems arising in the social field.

9
PROMOTION OF THE SCIENCES AND THE ARTS

THE PROMOTION OF THE SCIENCES

Scientific research is carried out, as it always has been, by individual scientists. In former times the agencies promoting and financing it in Britain were mainly wealthy men, privately endowed universities and learned societies. But in recent times a growing awareness of the importance of scientific research and development as a basis of military, economic, social and cultural, strength, has led to large-scale government support and the budget for science has assumed a prominent position in total government expenditure. The Government is now the main patron and source of funds for scientific research as a whole though private industry provides a larger proportion of funds for civil research. Considerable sums are also provided by public corporations, independent trusts and foundations, and learned societies.

Furthermore, it has become an acknowledged responsibility of the Government not only to undertake research directly but also to keep under review facilities for the training of scientists, to encourage fundamental research, to finance certain research projects, and to ensure that adequate research is directed to matters of national interest. As a result, a system of collaboration which leaves the greatest possible measure of freedom to individual scientists has developed between the universities, industry and the Government. The learned societies, members of which work in all three, play an important part in the discussion and publication of the results of research. Important work is also undertaken by independent organisations.

THE PATTERN OF EXPENDITURE

Total expenditure, government and private, on research and development in Britain was estimated in the most recent survey undertaken for the former Advisory Council on Scientific Policy to have increased from £300 million in 1955–56 to £634 million in 1961–62.[1] This represented 2·7 per cent of the gross national product compared with 1·7 per cent in 1955–56. Of this, the Government provided £385 million, including £139·3 million for civil research and development, compared with £6·58 million in 1945–46. By 1964–65 the latter figure had increased to £204·4 million, as shown in detail in Table 8.

In 1961–62 government departments provided over 60 per cent of the funds and carried out 28 per cent of the research, whereas private industry provided 33·6 per cent of the funds and carried out 58 per cent of the research, some of it with government funds, but the proportionate contribution of private industry to civil research seems since to have been increasing. Expenditure on research in various sectors of private industry is given on p. 211.

[1] Another full-scale official survey is in progress but results have not yet been published. One unofficial estimate suggests that total expenditure has reached £800 million a year, of which £500 million is on civil research.

THE GOVERNMENT AND SCIENTIFIC RESEARCH

Organised scientific research dates back at least to the founding of the Royal Society in 1660 (see p. 209), but active participation by the Government is largely a twentieth century development, stimulated by two world wars. Government financing of science before 1900 was confined to the Royal Greenwich Observatory (see p. 218), founded in 1675 and the first of Britain's state-supported scientific institutions; the Geological Survey (1835)—the first national institution of its kind in the world; a chemical laboratory, now the Laboratory of the Government Chemist (1842: see p. 211); and the Meteorological Office (1854: see p. 205). From 1900–1914 government support for science grew steadily with the establishment in 1900 of the National Physical Laboratory, in 1909 of the Post Office Research Section, and also of the Development Commission, to promote research into agriculture and rural industries; and in 1913 of the Medical Research Committee. During the first world war government recognition of the importance of scientific research and its application was hastened and led to the establishment of the Department of Scientific and Industrial Research (DSIR). The Medical Research Council (MRC) superseded the Medical Research Committee in 1920, and the Agricultural Research Council (ARC) was established in 1931. Since the second world war government support of science has been extended to include several new organisations. The Nature Conservancy, now part of a new research council (see p. 218), was set up in 1949, the Atomic Energy Authority in 1954 and the Department of Technical Co-operation, now succeeded by the Ministry of Overseas Development (see p. 222), in 1961.

Ministerial Responsibility for Civil Science

Government participation in civil science was for many years the responsibility of a minister holding one of the ancient offices of state traditionally within the Cabinet—the Lord President of the Council or the Lord Privy Seal—advised (from 1947) by an Advisory Council on Scientific Policy (ACSP). Following publication in 1963 of reports of the Robbins Committee on higher education (see p. 166) and of the Trend Committee on the organisation of civil science,[1] a Secretary of State for Education and Science was appointed from 1st April, 1964, to be responsible for a department dealing with education and civil science (see p. 203).

The decisions of the new Government, elected in October 1964, on the reorganisation of governmental civil science were given legislative effect in the Science and Technology Act 1965. Central responsibility for civil science rests with the Secretary of State for Education and Science, advised by a Council on Scientific Policy, which replaced the former Advisory Council, and for technology with the Minister of Technology, advised by an Advisory Council on Technology. Other government departments continue to be responsible for certain branches of research and development.

Under the Act, the Department of Scientific and Industrial Research (DSIR) was dissolved on 1st April, 1965, and its activities distributed among other departments and research councils, including two new ones: the Science Research Council and the Natural Environment Research Council.

The Secretary of State for Education and Science is now responsible for directing and financing the Research Councils, formerly directed by Committees of the Privy Council (which were dissolved under the Act) and financed either through the Treasury or the Department of Education and

[1] The Committee of Enquiry into the Organisation of Civil Science, set up by the Prime Minister in March 1962 under the chairmanship of Sir Burke Trend.

TABLE 8
ESTIMATED GOVERNMENT EXPENDITURE ON CIVIL RESEARCH AND DEVELOPMENT

	1963–64	1964–65
	£ million	*£ million*
Universities (and Learned Societies)[a]	31·2	37·6
Department of Scientific and Industrial Research[bc]	25·0	30·4
Medical Research Council	7·0	8·5
Agricultural Research Council	7·0	8·1
Nature Conservancy	0·7	0·8
Development Fund	0·6	0·7
Ministry of Aviation[b]	36·3	44·7
Agriculture Departments	5·0	5·8
Other Civil Departments[d]	3·0	4·0
Ministry of Defence (Navy)—Observatories and Oceanography	0·6	0·9
Ministry of Defence (Air)—Meteorology	0·6	0·7
Atomic Energy Authority—(Civil Research and Development)	45·0	49·0
National Institute for Research in Nuclear Science[c]	7·8	7·9
Space Research[e]	2·2	3·0
Overseas Research	2·3	2·3
TOTAL	174·3	204·4

Source: based on *Cmnd. 2538.*

[a] Details of total university research expenditure are not separately maintained. The figures are based on the estimates prepared for 1961–62 for special inquiry into research and development expenditure and excludes grants from Research Councils, which are included under the subsequent research council headings.

[b] Excluding space research, as defined in [e] below.

[c] Since dissolved (see pp. 202 and 217).

[d] Post Office research is excluded since it is no longer directly financed by the Exchequer.

[e] Includes: expenditure by DSIR on space research, both in its own establishments and in the form of research grants; the United Kingdom contribution to ESRO (see p. 218); and the Ministry of Aviation expenditure on sounding rockets and satellites. It excludes the British contribution to ELDO (see p. 218).

Science. The Act enables the Secretary of State and the Minister of Technology to make payments hitherto borne by other departments or research councils.

The Department of Education and Science

The Department of Education and Science (see p. 52) is responsible, among other things, for the universities and civil science throughout Great Britain. The Department's relations with the universities are conducted through the University Grants Committee (see p. 167); and its responsibilities for civil science are discharged mainly through the research councils (see below). The Department also has, in consultation with other departments, general governmental responsibility for Britain's scientific space research programme, which is co-ordinated by the Science Research Council (see p. 211). The Department has taken over *inter alia* from the former DSIR responsibility for overseas scientific liaison, including the scientific attachés at overseas missions and for promoting more efficient handling and utilisation of scientific and technical information. For the second purpose it has set up the Office for Scientific and Technical Information, which will be responsible for the National Lending Library for Science and Technology and for grant aid

to the Association of Special Libraries and Information Bureaux (ASLIB) (see p. 220). There are at present four research councils for which the Secretary of State for Education and Science is responsible: the Science Research Council (see p. 211), the Medical Research Council (see p. 213), the Agricultural Research Council (see p. 214), and the Natural Environment Research Council (see p. 218). Others may be established under the terms of the Science and Technology Act.

The Council on Scientific Policy

In the exercise of his responsibilities for the formulation and execution of government scientific policy the Secretary of State for Education and Science is advised by the Council on Scientific Policy (CSP), which replaced the former Advisory Council on Scientific Policy. The Council, which was appointed in January 1965, consists of a chairman and thirteen other members; unlike its predecessor the new Council is composed entirely of independent members. There are, in addition, assessors from the research councils and from the University Grants Committee. Among the issues with which the Council is concerned is the balance of scientific effort in those areas for which the Secretary of State is responsible.

The Ministry of Technology

The Ministry of Technology has the general responsibility of guiding and stimulating a major national effort to bring advanced technology and new processes into British industry.

The Ministry has taken over sponsorship responsibility for the machine tool and computer industries from the Board of Trade and for the electronics and telecommunications industries from the Ministry of Aviation and the General Post Office respectively. The Technical Support Unit, formerly under the Treasury, forms the basis of a Computer Advisory Unit. The Ministry undertakes technical and economic studies of selected industries and processes to determine where action is needed, followed by the preparation and implementation of specific programmes for technological advance, particularly in those branches of industry for which it has assumed sponsorship. The Ministry is also responsible for examining, in collaboration with other government departments, other factors affecting technological advance, including engineering standards practice, the use of public purchasing contracts and the status and supply of engineers and technologists.

The Ministry is responsible for important research laboratories (see p. 211). Arrangements have been made to continue the long-standing close association of the Royal Society with the work of the National Physical Laboratory. The Ministry gives financial aid to 48 co-operative industrial research associations. In discharge of a responsibility under the Science and Technology Act 1965, to further the practical application of research, it maintains a regional service and helps to finance industrial liaison officers centred on colleges of technology and technical colleges throughout the country.

The Minister is responsible for the United Kingdom Atomic Energy Authority, which he may require to undertake research and development outside nuclear energy, and for the National Research Development Corporation.

Advisory Council on Technology

The Minister of Technology is chairman of the Advisory Council on Technology, set up to advise on the application of advanced technology in British industry. There is a deputy chairman and ten other members, representing scientific, economic, trade union and industrial interests.

Committee on Manpower Resources for Science and Technology

The Committee on Scientific Manpower of the former ACSP has been replaced by the Committee on Manpower Resources for Science and Technology, established in February 1965. The new Committee, which reports directly to the Secretary of State for Education and Science and to the Minister of Technology, will be concerned with the total national resources of qualified scientific and technological manpower, which includes not only those who qualify each year but also the existing population of scientists and technologists, and their effective utilisation. The Committee includes 16 independent members, including the chairman, chosen for their wide experience in educational and industrial matters, as well as departmental representatives.

Other Government-sponsored Research

A number of other government departments remain responsible for certain branches of research.

Transport and Aviation

The Ministry of Transport is concerned with research into road construction, safety and traffic flow (see p. 377), most of the basic work being carried out by the Road Research Laboratory, at Harmondsworth, west of London, now responsible to the Ministry of Transport, and by the Ministry of Defence. Research on radio aids for marine navigation is undertaken by the Ministry of Defence, which is also responsible for inter-Service electronic valve research at the Services Electronics Research Laboratory (SERL). The Government's programme of research on marine nuclear propulsion is undertaken by the Atomic Energy Authority.

The Ministry of Aviation, which carries out most of the research needed to meet the technical requirements of air defence (see p. 120), is also responsible for some civil research, for instance, at the Royal Aircraft Establishment at Farnborough and Bedford and the National Gas Turbine Establishment at Farnborough, and at the Royal Radar Establishment, Malvern. Some fundamental research is carried out for the Ministry by universities and industrial organisations. The Minister is advised by an Aeronautical Research Council and an Electronics Research Council.

Fuel and Power

The Ministry of Power is responsible for research into safety and health of mineworkers. The coal, electricity and gas industries are required to settle their general programmes of research in consultation with the Minister.

Meteorology

The Ministry of Defence finances the Meteorological Office, which is responsible for research in meteorology and geophysics, mainly directed to non-military ends. The headquarters of the Office and most of its research sections are at Bracknell, Berkshire. The Forecasting Research Section has been equipped with a large-capacity electronic computer. Balloon and aircraft soundings and radar techniques are used to investigate the movement and composition of the atmosphere, and instruments are being designed which will be used in rockets and an earth satellite. The Ministry of Defence also makes grants for fundamental meteorological research carried out under the auspices of the Royal Society or in university departments.

Land Use and Planning

The Ministry of Housing and Local Government and the Ministry of Land and Natural Resources deal with geographical, geological, economic and sociological research relating to the use and development of land in England and Wales. Similar arrangements are made in Scotland by the Scottish Home and Health Department, and in Northern Ireland by the Ministry of Development.

Communications

The Post Office, through its Engineering Department, undertakes research

and development on telecommunications systems, electronic devices and materials. Amongst its current projects are: trans-oceanic cable systems capable of carrying up to 1,000 conversations and the high-frequency long-life transistors required for them, the development of electronic telephone exchanges, further automation of mail-handling equipment and studies of character recognition, and pulse-code modulation for use in the inland network. An extensive programme on satellite communications continues, largely at the Post Office earth station at Goonhilly Downs, Cornwall, which is being used successfully in tests with the *Telstar*, *Relay* and *Early Bird* satellites. Studies of colour TV signals are being made with a view to agreeing an international system. The Post Office co-operates with industry in the engineering of new systems, field trials and equipment standardisation, and with many government departments having similar interests.

Botany

A number of scientific institutions administered by government departments undertake research work in addition to their other scientific activities. These include the Royal Botanic Gardens, Kew, founded in 1759 and now administered by the Ministry of Agriculture, Fisheries and Food, which has the largest collection of living plants in the world. Its three research departments are: the Herbarium, concerned primarily with the classification and accurate determination of plants; the Jodrell Laboratory, for the study of plant anatomy and plant physiology, cytology and genetics; and the Museum of Economic Botany, dealing with the economic exploitation of plants. The library, attached to the herbarium, was founded in 1853; it consists of more than 55,000 botanical books, about 80,000 reprints and separately issued items and a collection of over 150,000 drawings and paintings of plants. In 1964 the 400-acre estate known as Wakehurst Place, Ardingly, Sussex, was taken over by the Royal Botanic Gardens, Kew. The Royal Botanic Garden, Edinburgh, founded about 1660, is administered by the Ministry of Public Building and Works.

The Parliamentary and Scientific Committee

The Parliamentary and Scientific Committee was founded at the end of 1939 by members of the House of Commons and replaced the former Parliamentary Science Committee. It is one of a number of unofficial, all-party parliamentary groups which have grown up spontaneously and have varying degrees of influence. Membership is open to members of Parliament of any party in both Houses, and also to nominated representatives of such non-profit-making scientific and technological organisations in Britain as may be affiliated under its constitution. The Committee provides, as far as possible, for a regular exchange of information between members of Parliament and scientists.

THE LEARNED SOCIETIES

The learned societies have had a profound and lasting influence upon the development and organisation of science in Britain. They have provided the background for continuity of research from the seventeenth century onwards, a forum for scientists to exchange ideas and a reliable source from which new ideas for the enrichment of knowledge can flow. Although today most research is conducted under other auspices, the learned societies have retained their traditional function of facilitating the spread of scientific knowledge.

At present there are over 200 learned scientific societies in Britain with approximately 400 scientific publications. There are also numerous technical institutions and professional associations, many of which are playing a distinguished part in promoting their own branches of science or are interested in the education and professional well-being of their members. Prominent examples of these are the British Medical Association, the Institutions of

Civil Engineers, Mechanical Engineers, Electrical Engineers, Chemical Engineers, Metallurgists; the Royal Institute of Chemistry, the Institute of Physics and the Physical Society and the Institute of Biology.

The most eminent of the learned societies concerned with science in its broadest aspects (as distinct from those societies with specialised interests and activities) are the Royal Society, Royal Society of Arts, Royal Institution and British Association.

Royal Society

The Royal Society, or more fully, the Royal Society of London for the Improvement of Natural Knowledge, founded in 1660, occupies a unique place in the country's scientific affairs and corresponds to national academies of science in other countries. Election to it is regarded by scientists as a high honour. The Queen is Patron. There are today three main categories of Fellowship: Royal Fellows, comprising the Queen Mother and three Royal Dukes; Foreign Members, of whom there are about 65; and the main body of Fellows, numbering about 625. Election to the Fellowship, which is for life, was for many years restricted to 25 persons a year and the foreign membership to four a year but in 1965 the former was increased to 32 with the intention of awarding some of the new places to applied scientists in both the physical and biological sciences. The Society is governed by a council of 21 members.

Its present activities include the holding of scientific meetings; publication of research work, mainly in the *Philosophical Transactions* and the *Proceedings*; the presentation of medals; the giving of endowed lectures; and the award of research appointments and grants. Among its research appointments are the Foulerton, Wolfson and Sir Henry Dale Research Professorships and eight other research professorships supported by parliamentary grant-in-aid. The highest medal awarded is the Copley Medal, for which scientists from all countries are eligible; there are also three Royal Medals, and the Rumford, Darwin, Buchanan, Sylvester, Hughes and Leverhulme Medals. There are five lectureships: the Croonian (biology), the Bakerian (physical sciences); the Ferrier (nervous system); the Wilkins (history of science); and the Leeuwenhoek (microbiology). In recent years the Society has set up committees, some of them jointly with other bodies, to promote improvements in education in science and to emphasise the importance of applied sciences, especially engineering.

Although an independent private corporation, the Society has always had a special relationship with the Government, which provides its accommodation and makes grants for research activities administered by it. The President of the Society is consulted on scientific appointments to government research councils and Fellows serve on most governmental advisory councils and committees concerned with research.

The Society represents the United Kingdom in the international unions comprising the International Council of Scientific Unions (ICSU) and appoints national committees for each of them. It also plays a leading part in international scientific programmes such as the International Geophysical Year (IGY) (1957–58), the International Years of the Quiet Sun (IQSY) (1964–65) and the International Biological Programme (1965–70).

Royal Society of Arts

The Royal Society of Arts (properly, the Royal Society for the Encouragement of Arts, Manufactures and Commerce) has a character at once scientific, artistic, technical, industrial and commercial. Since its foundation in 1754, however, one of the Society's principal objects has been to promote the progress

and application to the useful ends of all departments of science. Today it fulfils this purpose chiefly by disseminating new scientific knowledge. The Society regularly holds meetings for the delivery of lectures, and publishes a monthly *Journal*, thus providing effective media for the exposition and assessment by leading authorities of developments which have a public as well as a specialist interest.

Royal Institution

The Royal Institution was founded in 1799 as a public body for facilitating the introduction of useful mechanical inventions and improvements, and for teaching the application of science to everyday life. Later it undertook the 'promotion of chemical science by experiments and lectures for improving arts and manufactures', and 'the diffusion and extension of useful knowledge'. Its character, however, was largely determined by the work of Sir Humphry Davy and Michael Faraday, who established a tradition of research. Today, the Royal Institution has extensive research laboratories, and lectures are given on recent developments in science and other branches of knowledge. Its library of some 60,000 books includes many early scientific works and manuscripts.

British Association

The British Association for the Advancement of Science was founded in 1831 to promote general interest in science and its applications. One of its chief activities is the Annual Meeting, attended by many young students as well as by eminent scientists. In addition the Association plans special lectures, exhibitions and discussions (some designed for young audiences), the publication of pamphlets, the organisation of conferences, the appointment of study groups and liaison with the press and with sound and television broadcasting services. The Association has area committees and three lectureships for young scientists—the Kelvin, the Darwin and the Lister lectureships, dealing respectively with the physical, biological and sociological sciences—to encourage scientists to make their activities known to wider audiences. The British Association has an organised relationship with over 150 scientific bodies and learned societies. It has also played an important part in the development of science by taking or recommending action to remove obstacles to the discovery and application of scientific knowledge.

THE UNIVERSITIES AND INSTITUTIONS OF UNIVERSITY STATUS

In 1964–65 the total estimated university expenditure on scientific research was about £37·4 million. The most important government contribution was through the University Grants Committee (UGC), which provides about 70 per cent of the income and about 95 per cent of the capital needs of the universities. This Committee advises the Secretary of State for Education and Science on the recurrent grants needed by the universities on a quinquennial basis, assessing their requirements on the basis of plans and proposals put forward by the universities themselves, bearing in mind such factors as national needs, available resources of academic manpower, potential student numbers in various fields and existing gaps in teaching or research. Moreover, since the total cost of all the universities' desirable projects is likely to exceed any financial provision that any government would be able to make, it is the Committee's responsibility to achieve some balance in the total expenditure on new developments between universities and between fields of development. From the funds provided by the Government the Committee allocates block grants to each university for each of the five years. The Committee exercises no close supervision over the subsequent expenditure of these grants, although it indicates to the universities the direction in which new developments

during the next quinquennium would most appropriately take place; and it would normally expect to be invited to agree to any major deviation from the programmes put forward in the universities' quinquennial submissions.

Scientific research in the universities is also supported from the Exchequer through the Department of Education and Science. This support takes two forms. First, about half the postgraduate students in science and technology in the universities receive maintenance awards from the research councils, through postgraduate scholarships, studentships or fellowships. These awards are in some cases for periods of up to three years for training in research work and in others for shorter periods for advanced studies. The cost of these studentships is currently of the order of £3 million a year. Second, grants are given to the universities by the research councils for specific projects, particularly in new or developing fields of research. In recent years the research councils, in addition to making grants of this kind, have made funds available for expensive items of university equipment required for specific programmes of research. The research councils' support for research in the universities, excluding expenditure by the Medical Research Council and the Agricultural Research Council on their own research units within the universities (which remain under the control of, and are wholly financed by, the councils themselves), amounted in 1964–65 to about £7 million or one-ninth of the expenditure on research in the universities.

The other main channels of support for scientific research in the universities are various government departments, the Royal Society, industry and the independent foundations, which provide funds amounting in the aggregate to about £5 million. The contributions from sources other than the University Grants Committee amount to nearly a third of the total university expenditure on research.

In addition to the universities, colleges of advanced technology in England and Wales, which are acquiring the status and title of universities, and central institutions in Scotland are playing an increasing part in scientific and technological research and development. These colleges and institutions are financed by the education departments but are now making a growing demand on the support for research provided by the research councils.

Universities in industrial centres have tended to acquire outstanding reputations in studies relating to their local industries. The tendency is increasing although the industries in each district are becoming more and more diversified.

Co-operation for Aid to Research

All universities and university colleges in the United Kingdom have laboratories or research departments.[1] The government research councils provide grants for research projects in universities and award a substantial number of studentships for postgraduate training in science and technology, as well as post-doctoral research fellowships; the National Research Development Corporation (see p. 221) awards development contracts to university departments; and leading firms in such industries as chemicals, oil, motor vehicles, textiles, electrical equipment, food manufacture, and mining provide grants for specific research projects or endow research fellowships, such as the Imperial Chemical Industries and Leverhulme Fellowships, or professorships. Foundations which provide similar benefactions include the Nuffield

[1] The many topics under investigation in these laboratories and in those of the major technical colleges are listed in *Scientific Research in British Universities and Colleges* (see Bibliography).

Foundation,[1] the Ford Foundation, the Carnegie Trust, the Wellcome Trust and Courtaulds' Scientific and Educational Trust Fund. Among individuals whose major contributions to universities have included provision for research facilities have been Lord Nuffield, with gifts to the Clarendon Laboratory, Oxford, Lord Austin, who provided new buildings for the Cavendish Laboratory, Cambridge, members of the Wills family, who financed the Physics Laboratory at Bristol, members of the Boot family at Nottingham and of the Brotherton family at Leeds.

Co-operation between industry and commerce and the universities and colleges of advanced technology is common. A notable example is the Manchester Joint Research Council, set up in 1944 by the Manchester Chamber of Commerce and the University of Manchester, which organises lectures and discussion meetings and conducts investigations into the use made of research by industry. Another example is the Glass Delegation of the University of Sheffield, which directs the work of the Department of Glass Technology and is composed of members appointed by the Council of the University and representatives of firms and companies who subscribe funds for training and research. An example of co-operation between the Government, an independent organisation and a university is the radio telescope at the Nuffield Radio Astronomy Observatory, Jodrell Bank, Cheshire (see p. 218), financed jointly by the Government, the Nuffield Foundation, the late Lord Nuffield personally and Manchester University, the last being responsible for its development.

Following a scheme already in operation in Scotland, a technical information service for industry is being expanded by the Ministry of Technology and the Department of Education and Science, based on colleges of advanced technology and technical colleges; industrial liaison officers spend part of their time on teaching and other work in the colleges. Collaboration was agreed in 1964 between the AEA's establishment at Risley and Manchester College of Science and Technology; as a first step Risley staff are giving assistance as part-time professors and lecturers at the College.

Statistics of Qualified Scientists

Statistics, based on replies to questions put to a 10 per cent sample of the population at the 1961 census, showed that in 1961 there were 287,610 people in Great Britain with scientific and technological qualifications (136,520 scientists and 151,090 engineers and technologists). On the basis of a survey made in 1956 the then Committee on Scientific Manpower (see p. 205) of the Advisory Council on Scientific Policy estimated that the number of scientists and engineers qualifying annually would need to be raised from 10,000 in 1956 to 20,000 between 1966 and 1971. The Government accepted this figure as a reasonable goal and supported measures to ensure that the universities and technical colleges together would be able to produce at least this number. In 1962 what was then known as the Committee on Scientific Manpower of the ACSP forecast an annual growth rate in these figures of 4·8 per cent in the period 1962–65. It also forecast a shortage of mathematicians, electrical and mechanical engineers and physicists.

The emigration of scientists, though a matter of concern to a country such as Britain, whose economy relies increasingly on science-based industries, is no new phenomenon and is common to all advanced countries. It is in the interests of science that interchanges should take place. Many of those who

[1] The Nuffield Foundation was established by Lord Nuffield in 1943 for a variety of social, charitable and other purposes. Prominent among the Foundation's many activities are the promotion of medical, scientific and social research.

leave return later and others come to work in Britain from the Commonwealth, Europe and the United States.

SCIENCE RESEARCH COUNCIL

The Science Research Council (SRC), which came into formal existence on 1st April, 1965, and consists of a chairman and eleven other members, covers all branches of fundamental science other than those for which the other research councils are responsible. It supports research in engineering and technology in the universities. Provision is made for it to carry out research and development through its own establishments; to encourage and support similar research by any other person or body; to provide and operate equipment for common use by universities, technical colleges and similar institutions; to make grants for postgraduate studies; and to disseminate knowledge of science and technology. Its own establishments include the Royal Greenwich Observatory, previously financed by the Ministry of Defence (Navy), the Royal Observatory, Edinburgh, formerly financed by the Treasury, the Radio Research Station, formerly attached to DSIR, and the establishments of the National Institute for Research in Nuclear Science (NIRNS)—the Rutherford High Energy Laboratory, Berkshire, and the Daresbury Nuclear Physics Laboratory, Daresbury, Lancashire (see p. 217). The SRC also co-ordinates the British scientific space research programme and advises on British policy towards international research bodies, such as the European Organisation for Nuclear Research (CERN) and the European Space Research Organisation (ESRO).

INDUSTRIAL RESEARCH

According to the report of the former Advisory Council on Scientific Policy (see p. 204) total expenditure on research and development by the different industrial sectors in 1961–62 (excluding establishments of less than 100 employees) was as follows (in £ million): aircraft 140·6; electronics 49·9; chemicals and allied industries 39·7; electrical engineering 36·2; mechanical and marine engineering and shipbuilding 33·7; metal manufacture 10; motor vehicles, locomotives, etc., 9·8; scientific instruments 9·2; textiles, leather, etc., 8·7; food, drink and tobacco 7·1; mineral oil refining 6; construction 1·5; other manufacturing industries 13·5.

The greater part of industrial research in Britain is undertaken in the research organisations of the larger firms. Industrial research organisations vary widely between the largest firms employing over 4,000 qualified staff and some employing very few; though the emphasis is on commercial development, some fundamental research is done. Other main agencies are government laboratories, universities and technical colleges, industrial research associations, independent institutes for sponsored research and consultant laboratories.

Ministry of Technology Research Stations

The following research institutions have been transferred to the Ministry of Technology from the former DSIR.

The *Forest Products Research Laboratory* at Princes Risborough, 36 miles west of London, studies the mechanical, physical and chemical properties of home-grown and imported timber. The *Hydraulics Research Station* at Wallingford, on the River Thames, studies problems of water flow in open channels such as rivers, estuaries and harbours, and coastal erosion. The *Joint Fire Research Organisation*, controlled jointly with the Fire Offices' Committee, is concerned with the detection, suppression, and inhibition of fires and the safety of life in fires. The *Laboratory of the Government Chemist* in London has a statutory function as official analyst and as an adjudicator in

cases of disputed analyses and also carries out analytical research and advisory work for government departments on request. The *National Physical Laboratory* at Teddington, near London, conducts research in various branches of non-nuclear physics and maintains British primary standards and physical units and includes the former *National Chemical Laboratory*, concentrating on basic chemical research applicable to a wide variety of industries. The *National Engineering Laboratory* at East Kilbride, south of Glasgow, carries out basic and applied research in mechanical engineering to provide industry with information required to solve its own particular problems and has unique facilities for making precision engineering measurements and testing hydraulic machinery and heat exchange plant. The *Torry Research Station* at Aberdeen (with a branch laboratory at Hull) investigates problems arising in the handling, processing, and transport and storage of fish. The *Warren Spring Laboratory* near Stevenage, Hertfordshire, provides facilities for research and development, including pilot-scale work on subjects of national importance which cannot be fitted into the programme of other organisations, undertakes sponsored research and can accommodate teams from industry. It also compiles the official British register of research in human sciences (see p. 219). The *Water Pollution Research Laboratory* at Stevenage is concerned with the safe disposal of sewage and trade effluents and with the purity of water supplies. The *Building Research Station* near Watford, Hertfordshire, is concerned with the techniques of building design and construction, and the organisation, productivity, and economics of building work.

Research Associations

The scheme by which the Government gives financial help to groups of firms with similar interests to form organisations known as research associations, to carry out industrial research co-operatively, was started in 1917 and is now operated by the Ministry of Technology. At the end of 1964 there were 48 such associations, with a combined income of £11 million (compared with £5·1 million in 1955), of which a little less than a quarter was contributed by the Government. Suitably specialised associations are now available for about 70 per cent of British industry, varying in size from the British Iron and Steel Research Association (BISRA) with an annual income of over £1·3 million, of which £159,000 is provided by government grant, to the British Brush Manufacturers Research Association with an income of only £16,000. The largest are those dealing with the metals and electrical engineering industries, coal utilisation, cotton and man-made fibres, production engineering, motor vehicles, marine engineering and shipbuilding. (Particulars of these and other associations are given in the relevant sections of Chapter 11, Industry.) The amounts of the government grants are related to the contributions made by the industries concerned.

The research associations are autonomous bodies governed by their own councils, the members of which are mostly representatives of industry, although the Ministry of Technology is also represented. The councils are advised in preparing research programmes, for which they have complete responsibility, by research committees representative of their industrial members, often with the addition of university or government scientists. The Ministry of Technology appoints two Visitors for each association: normally, one is a scientist and the other an industrialist—both of some eminence. Nearly all research associations admit to membership Commonwealth manufacturers and a growing number of foreign manufacturers. The associations make the results of their work known to member firms by a

variety of methods, among which are bulletins, technical reports, lectures, films, training classes, exhibitions and mobile demonstration units.

Public Corporations

Some of the public corporations which run the nationalised industries have their own research organisations (see Chapter 11), in particular those concerned with fuel and power: the National Coal Board, the Central Electricity Generating Board, the Gas Council. They also give support to organisations concerned with research on matters of interest to them.

Private Institutes for Sponsored Research

A number of institutes for sponsored research have been established to extend the facilities for private research for industrial firms by studying problems which are not within the scope of the average industrial laboratory. In these institutes research organised by private firms can be carried out confidentially, so that the results remain the property of the sponsor.

Among British institutes of this type are: *Fulmer Research Institute*, Stoke Poges, Buckinghamshire, which is now owned by the Institute of Physics and the Physical Society, concentrates on metallurgy and allied subjects; *Sondes Place Research Institute*, Dorking, Surrey, which is concerned mainly with chemistry, chemical engineering and mechanical engineering; *Arthur D. Little Research Institute*, Musselburgh, near Edinburgh, a British institute working in close collaboration with a well-known American institute with a similar name; the *International Research and Development Company* at Heaton, Newcastle upon Tyne; and the *United Power Company* at Heston, near London.

MEDICAL RESEARCH

A Medical Research Committee was appointed in 1913 to administer the research funds provided under the National Health Insurance Act of 1911. In 1920 the Committee was superseded by the Medical Research Council (MRC), established under Royal Charter and supported by a grant-in-aid provided by Parliament, now through the Secretary of State for Education and Science.

In addition to financing the Medical Research Council, the Government gives substantial support to medical research particularly in the basic sciences, through block grants to universities distributed through the University Grants Committee; and to clinical research through the National Health Service. Other government-financed research for defence purposes, for example at the Microbiological Establishment at Porton, Wiltshire, has civil applications related to medical science.

Important contributions to the support of research in particular subjects are made by private industry, especially the pharmaceutical industry, and by private charities or fund raising organisations, of which the Nuffield Foundation and the British Empire Cancer Campaign are the largest.

Medical Research Council

The Medical Research Council (MRC) is responsible to the Secretary of State for Education and Science. There are twelve members of the Council, nine of whom, representing different branches of medical knowledge and the fundamental sciences on which these are based, are appointed after consultation with the President of the Royal Society and with the Council itself; on retirement, these scientific members are not eligible for immediate reappointment. Three are lay members, one of whom must be a member of the House of Lords and one a member of the House of Commons.

The MRC's chief function is to promote research into all aspects of health and disease. In planning and carrying out its research programme, the Council

is assisted by special committees appointed to advise on particular subjects. Three of the more important of these are the Clinical Research Board, set up in consultation with the health departments to assist the development of clinical research, and the Tropical Medicine Research Board, appointed in consultation with the Ministry of Overseas Development, to advise on the promotion and co-ordination of research in this field; and the Biological Research Board, which advises on the promotion of research in the non-clinical field. Its arrangements for the support of research fall under four main headings: (1) investigations by members of the Council's scientific staff, mostly working in its own research establishments; (2) temporary research grants to independent investigators in universities and elsewhere; (3) long-term research grants in support of specific research programmes in university medical departments ('research groups'); and (4) research fellowships and scholarships for tenure both at home and abroad. The programme includes fundamental studies of the structure and natural processes of the body; clinical and laboratory studies of disease; the development and evaluation of special methods of treatment and also of prophylaxis and diagnosis; and the study of social and occupational factors affecting health and the efficiency of body and mind.

The National Institute for Medical Research, at Mill Hill and Hampstead, London, is the Council's main research establishment; in addition, there are about 80 smaller establishments, generally known as research units, which are attached in most cases to universities and hospitals in the United Kingdom. The Council also undertakes work overseas and, with additional support from funds made available through the Ministry of Overseas Development, maintains laboratories in the Gambia and units in Uganda and Jamaica.

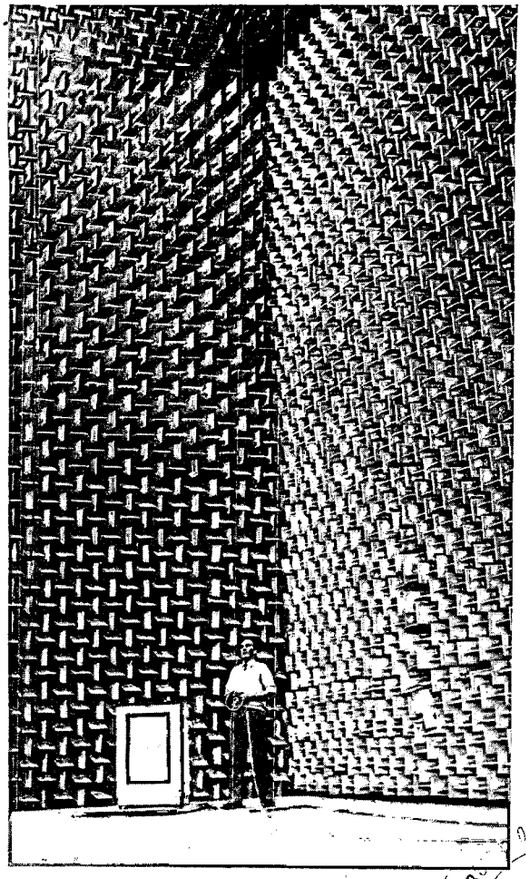
AGRICULTURAL RESEARCH

Agricultural research in its early days was not centrally organised and the first agricultural research institutes were privately maintained. The Development Commission, set up under the Development and Road Improvement Act 1909, recommended that financial aid should be made available from the Development Fund to 'aid and develop agriculture and rural industries by promoting scientific research' and in 1911 this fund was used to promote a scheme which led to the establishment of many of the present-day agricultural institutions. In 1931 the Agricultural Research Council (ARC) was established by Royal Charter. In addition to advising the agricultural departments on the programmes of the institutes and, in the early stages, acting as scientific adviser to the Development Commission, the ARC was given funds to spend at its own discretion and gradually took over the Commission's responsibilities for agricultural research.

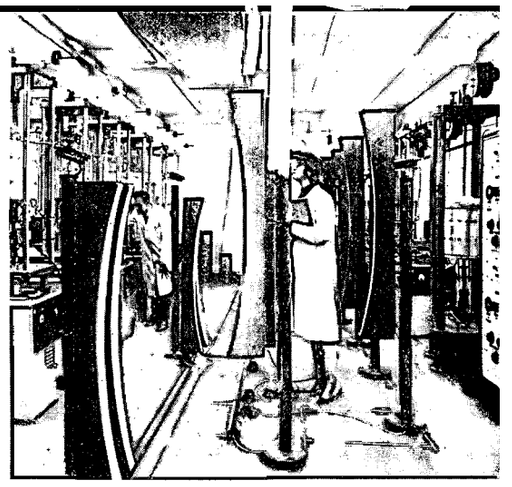
Agricultural Research Council

The Agricultural Research Council consists of eighteen members, including representatives of the agricultural departments. In addition to distinguished scientists, the membership includes men with practical farming experience. The Council is under the general oversight of the Secretary of State for Education and Science.

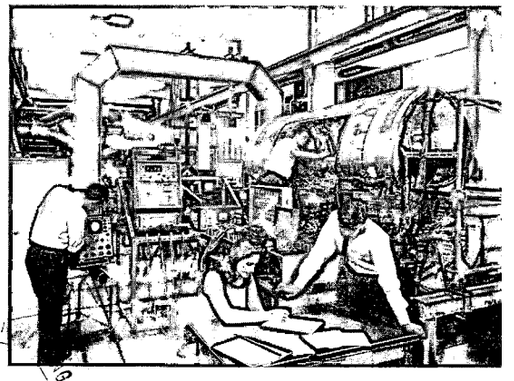
The Council is responsible for 14 independent state-aided agricultural research institutes and also has ten institutes under its direct control and 15 units which it has established under distinguished scientists associated with universities. In addition there are eight independent institutes in Scotland financed by the Department of Agriculture and Fisheries for Scotland with advice from the Council on their scientific programmes, staffing and equipment.



The Building Research Station's noiseless chamber, lined with wedges of foamed polyurethane and with a suspended wire-mesh floor.



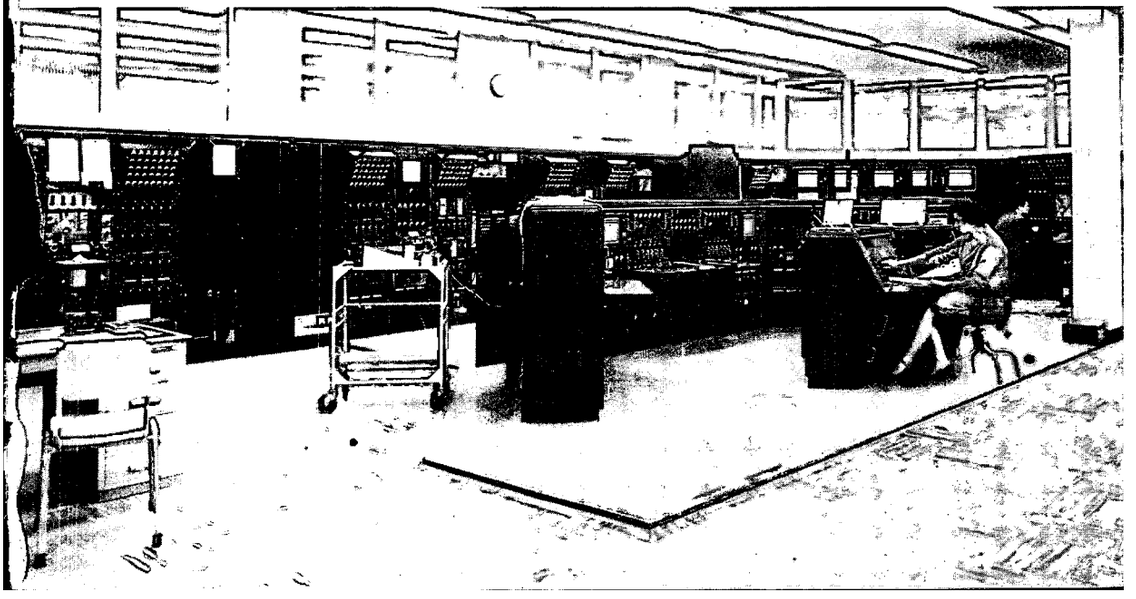
Study of the creep properties of aluminium alloys for the *Concord* project, at the BAC laboratories at Filton.

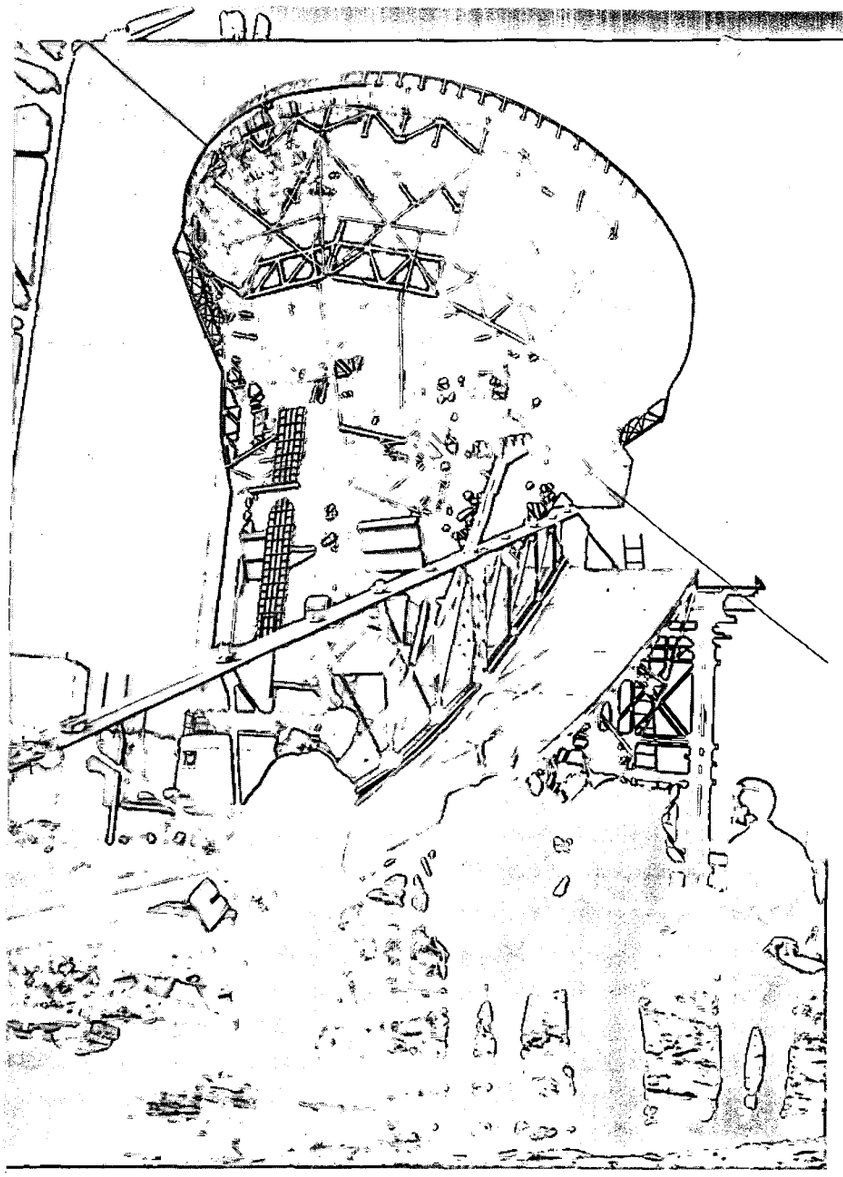


Students of aeronautics at Imperial College of Science and Technology working with model fuselage and supersonic wind tunnel.

LIBRARY

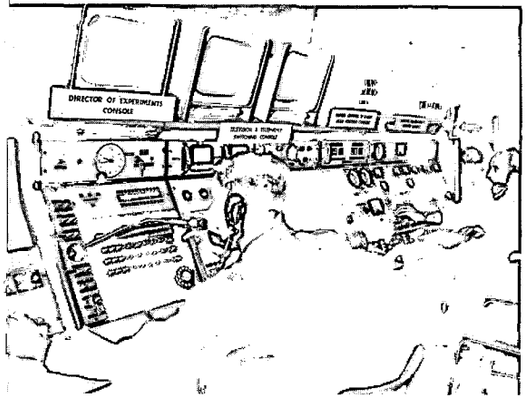
International Research and Development Company's analogue computer at Newcastle upon Tyne.



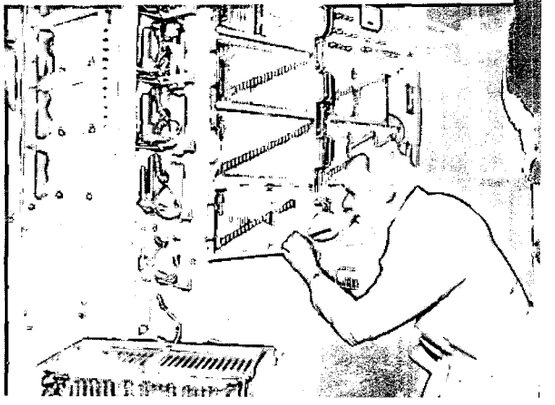


The Goonhilly Downs satellite communications earth station ready to be operated in conjunction with the US *Early Bird* satellite.

A bank of consoles in one of the control rooms at Goonhilly Downs.



Building a British low-cost computer at a Boreham Wood electronics factory.



The Council makes special research grants to support promising new lines of work in university departments. It awards postgraduate studentships to provide special training for those wishing to make a career in research and fellowships to enable research workers of exceptional promise to undertake independent research.

The Government Agricultural Departments

The Ministry of Agriculture, Fisheries and Food, which has a Scientific Advisory Panel, established in 1965, carries out applied research in its own veterinary laboratories at Weybridge, Surrey, and at Lasswade, Midlothian, and also at its plant pathology laboratory at Harpenden, Hertfordshire; while at its infestation control laboratory at Tolworth, Surrey (with a field station at Worplesdon), it co-ordinates work on the control of insect pests of stored food and conducts research on the control of harmful mammals and birds. The Central Veterinary Laboratory at Weybridge has been appointed by the World Health Organisation (WHO) as the third international laboratory for biological students. In Northern Ireland the Ministry of Agriculture is responsible for the promotion of agricultural research and research divisions dealing with a variety of aspects have been established.

The Ministry of Agriculture, Fisheries and Food maintains four laboratories for marine, shell-fish and salmon and freshwater fisheries research, and four research vessels. The Department of Agriculture and Fisheries for Scotland maintains a marine research laboratory and four research ships at Aberdeen, and a freshwater research laboratory at Pitlochry.

With the guidance of the Chief Scientific Adviser (Food), the Food Science and Plant Health Division of the Ministry of Agriculture, Fisheries and Food is responsible for formulating the Ministry's general policy on the acquisition and dissemination of scientific and technical information about food and the food handling and processing industry; for furnishing scientific advice to the other divisions of the Ministry; and for sponsoring or carrying out experimental work. The division has its own experimental laboratories and kitchens in London. The Food Research Advisory Committee, appointed by the Minister of Agriculture, Fisheries and Food and the Secretary of State for Scotland, advises on food problems requiring investigation or research which should be undertaken with the aid of public funds.

The Forestry Commission undertakes experimental work relating to silvicultural and allied problems (see p. 355). By means of grants, it also aids forest research work undertaken by various universities and other institutions, including the Commonwealth Forestry Institute, Oxford.

NUCLEAR ENERGY

The Atomic Energy Authority (AEA), set up under the Atomic Energy Authority Act 1954, is responsible for research and development in nuclear energy. It is answerable to the Minister of Technology, who is responsible under the Atomic Energy Acts 1946 to 1949 for promoting and controlling the development of atomic energy and ensuring that the proper degrees of importance are attached to its various applications. The Authority has a large programme of research into, and development of, the peaceful applications of nuclear energy. As an essential part of the British Government's nuclear power programme, the Authority develops new types of nuclear power stations to the stage at which they can be adopted for the generation of electric power on a commercial scale and for this purpose it builds and operates experimental and prototype nuclear reactors. Construction and operation of the nuclear power stations themselves is the responsibility of the Central Electricity Generating Board and the South of Scotland Electricity Board.

The Minister of Aviation is responsible for the development and production of nuclear weapons for the Services in accordance with agreed defence policy; in practice, however, the Atomic Energy Authority produces the explosive nuclear material and assemblies for nuclear weapons under contract and carries out weapon research.

The Ministry of Technology and the Authority collaborate with a number of other government departments and with the Radiological Protection Service on various aspects of health and safety in relation to atomic energy. Expert advice on radiation hazards is provided by the Medical and Agricultural Research Councils and by the Radioactive Substances Advisory Committee, appointed by the Secretary of State for Education and Science. This committee advises ministers on regulatory aspects of safety measures in the use of radioactive substances and apparatus producing radiation.

The Ministry of Technology and the Authority are jointly responsible for co-operation with other countries in the atomic energy field. This is accomplished partly through the medium of bilateral agreements with a large number of individual countries and partly through British membership of the International Atomic Energy Agency and the European Nuclear Energy Agency.

The Atomic Energy Authority

The Atomic Energy Authority, the members of which are appointed by the Minister of Technology, at present consists of a chairman, a deputy chairman and eleven other members, seven of whom are part-time.

The Authority, like other statutory public corporations, is free from day-to-day government control (subject to the power given to the responsible minister to issue directions to the Authority in matters of overriding national importance), but differs from them in that most of its revenue is derived from money voted by Parliament. The commercial activities of the AEA have recently been separated from its other functions and are now financed through a trading fund with an initial capital of about £37 million. Under the Science and Technology Act 1965 the functions of the Authority have been extended so that the Minister may, after consultation, require it to undertake research and development outside nuclear energy.

The organisation has a London office, responsible for central financial and administrative matters and for procuring raw materials. Its establishments are divided into five groups.

The *Research Group's* principal establishment is the Atomic Energy Research Establishment (AERE) at Harwell. Others are the Wantage Research Laboratory, which does research into new and improved uses of radioisotopes and an establishment for research into plasma physics and controlled thermonuclear fusion at Culham. Harwell also runs an isotope school at Wantage, and a reactor school, which provide training for home and overseas students.

The *Weapons Group*, centred on Aldermaston, conducts research on and development of nuclear weapons and other research work with civil, as well as defence, applications. It has outstations at Foulness and Orfordness in eastern England.

There are three groups with headquarters at Risley, in north-western England. The *Reactor Group* works on the design and development of reactors. It is responsible for the prototype Advanced Gas-Cooled Reactor (AGR) at Windscale, which has been operating successfully since February 1963 and which formed the basis of the design chosen for the first nuclear power station in Britain's second nuclear power programme (see p. 289). The Group also includes the Atomic Energy Establishment at Winfrith, Dorset, where work on a wide range of reactor types is carried out.

A prototype Steam Generating Heavy Water (SGHW) reactor, with an electrical output of 120 MW, is being constructed there and a number of experimental reactors of different types have been in operation for some time. It is also the location of the *Dragon* project, a 20 MW reactor financed jointly by the member countries of the Organisation for Economic Co-operation and Development (OECD), including members of the European Atomic Energy Community (Euratom). The Reactor Group also includes the Dounreay experimental reactor establishment in the north of Scotland, which houses a materials-testing reactor and a fast-breeder reactor. The latter has achieved the highest power output of any of its type in the world. The Group has research laboratories at the main establishments of the *Production Group*, which is responsible for the operation of factories producing and reprocessing fissile material at Windscale (Cumberland), Capenhurst (Cheshire) and Springfields (Lancashire) and the AEA's nuclear power plants at Calder Hall (Cumberland) and Chapelcross (Dumfries), and for the Calder Operations School. The work of this group is now mainly commercial; it not only supplies all the nuclear fuel for the British nuclear power stations which form Britain's first nuclear power programme, but is also supplying fuel for similar power stations in Japan and Italy. The Group has also attracted large overseas orders for the reprocessing of nuclear fuel. It also controls the Radiochemical Centre at Amersham, which produces and sells radioisotopes. The third group with headquarters at Risley is the *Engineering Group*, responsible for the construction of plant, works and buildings, and for the design and inspection of fuel elements for production purposes.

High Energy Physics

In 1957 the Government set up a National Institute for Research in Nuclear Science (NIRNS), to provide, for common use by universities and others, facilities and equipment beyond the scope of individual universities and institutions. On 1st April, 1965, NIRNS was dissolved and its functions taken over by the Science Research Council (see p. 211). The SRC establishments concerned with high energy physics are the Rutherford High Energy Laboratory, Chilton, which houses a 7,000 million electron volt (MeV) proton synchrotron (particle accelerator), completed in 1963; the Daresbury Nuclear Physics Laboratory, Cheshire, which is to house a 4,000 MeV synchrotron; and the Atlas Computer Laboratory, Chilton, which is also used for other scientific work.

SPACE RESEARCH

The Secretary of State for Education and Science, in consultation with other ministers, has general governmental responsibility for Britain's space research programme. Under the Science and Technology Act 1965, the co-ordination of the programme is the responsibility of the Science Research Council (see p. 211). The execution of the programme remains in the hands of scientists in universities and government research establishments, under the general supervision of a Space Research Management Group, within the SRC, which is responsible for channelling and administering grants to universities provided from government funds. Identifiable government expenditure on the space research programme is at present some £3 million a year. Advice on the programme's purely scientific aspects is given by the British National Committee on Space Research, appointed by the Royal Society. This Committee provides British representation on non-governmental international scientific groups and is responsible for experiments flown in rockets and satellites. Private industry also develops and provides

equipment and materials needed in space research; for instance, the third Anglo-American artificial earth satellite, *UK–3*, and the upper atmosphere *Skylark* rockets are being made by private industry. Two organisations in which Britain is playing a leading part have been set up to give European countries the opportunity to participate more fully in space research and technology—the *European Space Research Organisation* (ESRO) and the *European Launcher Development Organisation* (ELDO). The first stage of the planned ELDO satellite launcher will be provided by the British *Blue Streak* rocket, which had its first live firing in 1964 from the Woomera range (see p. 120). The SRC provides the United Kingdom contribution to ESRO.

In November 1964 a committee to review Britain's defence interests in space and to make recommendations on future research and development was set up.

The satellite prediction centre at Slough, attached to the Radio Research Station, also the home of one of the three World Data Centres for space research, co-ordinates optical and radio tracking activities in Britain. Optical observation of satellites is carried out regularly by many individual observers in the British Isles and by the Royal Edinburgh Observatory's outstation (see below), radio tracking is undertaken at the Radio Research Station itself and by the radio telescopes at Jodrell Bank and the Royal Radar Establishment at Malvern. The Royal Aircraft Establishment at Farnborough is carrying out a programme of basic satellite technology and has undertaken a design study for a communications satellite. The General Post Office undertakes research work connected with experiments in satellite communications. Under two inter-related international agreements reached in July 1964, in Washington, Britain is taking part in a world-wide satellite communications system together with the United States, European and other countries.

OPTICAL AND RADIO ASTRONOMY

Large optical telescopes were first constructed in Britain by Herschel and Rosse in the eighteenth and nineteenth centuries. At present British optical observatories are being extensively re-equipped. The Isaac Newton 98-inch telescope, nearing completion for the Royal Greenwich Observatory, Herstmonceux, will provide additional facilities for optical astronomers in Britain; and grants to the Radcliffe Observatory in South Africa, with its existing 74-inch telescope, and the merger of the Royal Observatory, Cape Town, and the Royal Greenwich Observatory and Anglo-Australian observatories built and projected in Australia enable astronomers to have improved use of large optical telescopes in both hemispheres. The Royal Edinburgh Observatory has been re-equipped with modern instrumentation for use in stellar spectroscopy and photometry.

Radio astronomy, developed since 1931, is carried out mainly at Cambridge, at Jodrell Bank, Cheshire, and at the Ministry of Aviation's Royal Radar Establishment at Malvern. A Radio Astronomy Planning Committee, set up in December 1961 to advise on the nature and extent of Britain's radio astronomy research programme both nationally and internationally, is now responsible to the Science Research Council. In a report published in 1965 the Committee recommended that £4 million should be spent in support of increased facilities for radio astronomy in Britain, which occupies a pre-eminent position in this subject.

THE NATURAL ENVIRONMENT RESEARCH COUNCIL

The Natural Environment Research Council (NERC), which was established in June 1965, supports research in earth sciences and ecology. It has taken over the Nature Conservancy, the Geological Survey and Museum (with

which has been merged the Directorate of Overseas Geological Surveys from the Ministry of Overseas Development) the Hydrology Research Unit, the National Institute of Oceanography, and the functions of the Development Commission in relation to marine and freshwater biology and fishery research.

The Nature Conservancy was set up in 1949. Its functions are to provide scientific advice on the conservation and control of the natural flora and fauna of Great Britain; to establish, maintain and manage nature reserves in Great Britain, including the maintenance of physical features of scientific interest; and to organise and develop the research and scientific service related thereto. Research stations have been set up at Merlewood, Grange-over-Sands, in Lancashire; at Furzebrook, Wareham, in Dorset; at Bangor, Wales; and at Speyside, Inverness. There are field stations at Moor House, Westmorland, and at Anancaun, Ross, and an experimental station at Monks' Wood, Huntingdon; at these, long-term ecological research is undertaken into such problems as the relation of vegetation to soils and climates, peat growth, effects of grazing and of moor burning, coastal erosion and roadside spraying. Grants are made for research, and the Nature Conservancy awards annually a number of postgraduate studentships.

The NERC is also responsible for the support of long-term forestry research in consultation with the Forestry Commission; it has financial and policy responsibility for the research in seismology and geomagnetism carried out by the Meteorological Office and co-ordinates research in meteorology generally with that carried out by the Meteorological Office. It is establishing committees for each main activity, based on the body previously responsible. Joint arrangements are being made between NERC and the Ministry of Land and Natural Resources (see p. 55) about the work done by the Nature Conservancy and the Geological Survey.

THE SOCIAL SCIENCES

The past ten years have seen appreciable expansion of research in the social sciences. These include: the purely social disciplines, such as economics, demography, sociology, social anthropology, political science, and their applications; the bio-social disciplines, such as social psychology and personality and development psychology; and a third group, taking in social and psychological medicine, social and industrial administration, market research and management studies.

Several government departments have funds allocated for social research. The Warren Spring Laboratory of the Ministry of Technology maintains a register of British research which lists projects in hand in colleges, government departments, industrial associations and firms. Other government departments concerned include the Home Office, which has a large research unit which carries out a wide variety of sociological studies, and the Central Office of Information, with its Social Survey Division which conducts sample survey inquiries at the request of government departments and from time to time also carries out studies in collaboration with universities and other independent research organisations.

An independent committee of inquiry, set up under the chairmanship of Lord Heywood, to review research in social studies in government departments, universities and other institutions, and to advise whether changes were needed in arrangements for supporting and co-ordinating research, issued its report in June 1965. The Government has accepted the Committee's recommendations and a Social Science Research Council is being established under the Science and Technology Act.

OTHER RESEARCH

Among other research agencies may be mentioned the zoological societies and scientific museums.

Zoological Gardens

Zoological research is among the activities of the world-famous Zoological Gardens, extending over 34 acres in Regent's Park, London, which were opened by the Zoological Society of London in 1828. A natural zoo of 500 acres was opened in 1931 at Whipsnade, in Bedfordshire, by the Society. Among other well-known zoos are those at Edinburgh, Bristol, Chester and Dudley, and a small, private, natural zoo at Chessington, Surrey.

Scientific Museums

The British Museum (Natural History) is the principal centre in the Commonwealth for the general study of natural history; it has extensive collections of extant and fossil animals and plants and of minerals, rocks and meteorites. The Science Museum illustrates the development of pure and applied science in all countries, but chiefly in Britain, which has always held a leading place in engineering, agriculture, navigation, mining, aeronautics, and in the development of industrial machinery and processes, all of which are represented in the museum's collections. The geology of Britain is known in more exact detail than that of any other country in the world, and the Geological Survey, responsible for this work, has an outstanding collection of exhibits in its Geological Museum. These three museums are in South Kensington, London.

Important collections outside London are the Museum of Science and Industry, in Birmingham, and the Museum of the History of Science, at Oxford.

APPLICATIONS OF RESULTS OF RESEARCH

The dissemination of the results of research to other research workers and to ultimate users has become a problem of some magnitude as the volume of information has grown. The traditional method of scientific publication, in which results are written up into papers and published in journals, is still the main means of communication among scientists. The leading learned societies have for long been important agencies for communicating scientific information.

Libraries

The Ministry of Technology and the AEA devote considerable sums to information services. The Department of Education and Science, through the Office for Scientific and Technical Information, gives financial support to ASLIB, which runs a technical information department and maintains a panel of translators and a Commonwealth Index of Translations covering scientific subjects. A national Reference Library for Science and Invention is being formed, based on the Patent Office Library; it will be part of the British Museum Library. There are plans for erecting a new building on the south bank of the Thames. The National Lending Library for Science and Technology, now under the Department of Education and Science, at Boston Spa, Yorkshire, has been in full operation since 1962. It covers all subjects in science and technology, and to some extent medicine, and is also responsible for increasing the number of translations of foreign (especially of Russian and Chinese) scientific literature, in which work it collaborates with the National Science Foundation of the United States. A description of the general library services, which also cater for scientific needs, is given on p. 232.

Besides information services provided by its various groups, the AEA has an information centre and an isotope information bureau at its London headquarters.

In agriculture, the Commonwealth Agricultural Institutes and Bureaux (see p. 222) provide abstracts and an information service in various branches of agricultural science. The ARC publishes an *Index of Agricultural Research in Progress*, and gives an account of current developments in its annual reports. The advisory services of the agricultural departments bring research results directly to the farmer.

Medical research results are communicated mainly through journals and periodicals; but the MRC issues special reports and includes special articles in its annual reports.

Development Agencies

Several agencies assist in the commercial development and spread the use of new inventions.

National Research Development Corporation

The National Research Development Corporation (NRDC) was set up in 1949 under the Development of Inventions Act 1948, to secure the development and exploitation of inventions in the public interest. For this purpose the Board of Trade was empowered to make advances of capital to the Corporation. All functions of the Board of Trade in regard to NRDC were transferred to the Ministry of Technology in February 1965. Capital of £5 million, provided for during its first five years, was increased in 1958 to £10 million over twenty years. Under the Development of Inventions Act 1965, the amount was increased to £25 million and the time limit removed.

Projects so far sponsored by the Corporation include, among many others, such varied items as Hovercraft, electronic digital computers, towed flexible barges (known as dracones), interferon (an anti-viral agent), selective weed-killers, a hydrogen-oxygen fuel cell as a transportable source of electricity and a group of new antibiotics called cephalosporins, at least one of which, *Ceporin*, is now commercially available. The Corporation has a substantial annual income from the exploitation of inventions. In the case of Hovercraft the NRDC has participated not only in early research and development but in the subsequent activities of Hovercraft Development Limited, which it set up to continue the work.

OVERSEAS SCIENTIFIC RELATIONS

Britain plays a considerable part in overseas scientific collaboration, including the exchange of scientific information. In areas of non-governmental collaboration, under the aegis of the International Council of Scientific Unions, the primary representative of the United Kingdom is the Royal Society.

The Government is concerned with inter-governmental organisations: these include specialised agencies of the United Nations (the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the World Health Organisation (WHO) and the Food and Agriculture Organisation (FAO) and the Intergovernmental Oceanographic Commission); the organisations concerned with nuclear energy (the International Atomic Energy Agency, and the European Nuclear Energy Agency), and space research, and the proposed International Agency for Research on Cancer. There are agreements between the United Kingdom AEA and other atomic energy authorities, including that of the Soviet Union (and there are permanent representatives of the United States Atomic Energy Commission in London and of the United Kingdom AEA in Washington). In addition, there are inter-governmental agreements with Euratom, and bilateral agreements with other countries. Britain is also represented on the Committee for Scientific and Technical Personnel and on the Committee for Scientific Research of the OECD.

Commonwealth Scientific Committee

The Commonwealth Scientific Committee (CSC) consisting of the heads of the national research organisations of Commonwealth countries, formed in 1958 from the previous Standing Committee set up in 1946, meets biennially. Operating under the CSC are: the Commonwealth Scientific Liaison Offices and the various specialist committees on fuel research, mineral resources and geology (including a Commonwealth Geological Liaison Office), mineral processing and the collection of micro-organisms.

The secretariat for the Committee is provided by the Commonwealth Scientific Liaison Offices.

The Commonwealth Scientific Offices

A British Commonwealth Scientific Conference held in 1946 recommended the continuance and extension of the scientific collaboration of the war years by the creation of the Commonwealth Scientific Liaison Offices, a group now consisting of the Scientific Liaison Offices of the various Commonwealth countries together with the Overseas Liaison Group of the Department of Education and Science.

Commonwealth Agricultural Bureaux

The Commonwealth Agricultural Bureaux comprise three Institutes and ten Bureaux, all of which except one bureau are in Britain and each of which is concerned with a particular branch of agricultural science. Their purpose is to act as clearing houses for the interchange of information of value to research workers in agricultural science throughout the Commonwealth. This they achieve by scanning and indexing journals of scientific repute in all languages, by keeping in touch with agricultural research in progress and by the dissemination of this information by the periodic issue of Abstract Journals. Fifteen Abstract Journals are published periodically and have a combined annual circulation of about 22,500 copies. A list of research workers in agriculture, animal health and forestry in the Commonwealth is published from time to time, and this list includes an indication of topics under investigation by the individual workers concerned. The Bureaux also issue monographs on their own particular subjects and deal with inquiries received from research workers in all parts of the Commonwealth. In addition, the Institutes provide taxonomic and identification services.

Ministry of Overseas Development

One of the main aims of the Ministry of Overseas Development (ODM) is the promotion of scientific research in the interests of developing countries. The aid given covers specialist advice from Britain, advisory visits, conferences for exchange of information, training scientists from overseas in universities and research institutions in Britain, recruiting scientific staff from Britain, and providing support for existing research services overseas, for example, in East Africa and the Caribbean. Some equipment is also given to encourage scientific training and applied research. The Department works with the many specialist bodies concerned, particularly the research councils and the Ministry of Technology. It administers and supports the work of, for example, the *Anti-Locust Research Centre* in London, internationally recognised as a world centre for locust research since 1931. The *Tropical Products Institute* in London aims at improving the economical viability of the less-developed countries of the tropics, especially those within the Commonwealth, by research into new uses for tropical plant and animal products. The ODM provides some £2 million a year to support research for the benefit of developing countries, mostly in agriculture and medicine.

The British Council

The aims of the British Council in the sciences (including agriculture, medicine and technology) are to foster co-operation between British scientists and scientists of other countries, and to promote among overseas specialists a better understanding and knowledge of Britain and its scientific achievements.

In co-operation between scientists emphasis is placed on the interchange of scientists between Britain and other countries. Overseas tours and advisory visits by British specialists are arranged and scientists recruited for overseas posts. In the other direction the Council invites senior specialists to Britain for visits and discussions with British experts, and makes awards to post-graduate students; it also administers the programmes of a large number of senior specialists and students who travel to Britain under the auspices of the UN specialised agencies, or under various bilateral technical assistance schemes, or as private individuals. A number of high-level scientific short courses are organised each year for overseas specialists. The Council is also responsible for administering travel grants awarded under the Foreign and Commonwealth University Interchange Schemes. It is also increasingly concerned with science education at school level in the developing countries.

Information on Britain's scientific achievements is provided either through the Council's overseas libraries or direct from the London headquarters which includes specialist departments (and libraries) for medicine and science. Material published or compiled by these London departments includes *British Medical Bulletin*, *British Medical Booklist*, the universities section of *Scientific Research in British Universities and Colleges* (see Bibliography), and publications listing certain British training facilities.

THE PROMOTION OF THE ARTS

This section describes the assistance and encouragement given to the arts by the Government, local authorities, voluntary societies and other organisations. Although valuable support comes from private sources, including trusts and commercial concerns, the Government and local authorities are taking an increasingly active part. In October 1964, for the first time, a minister was appointed to take a special interest in the arts. The Government considers that its role is not 'to dictate taste or restrict the liberty of even the most unorthodox and experimental of artists' but to support the arts so that a high level of artistic achievement can be sustained and the best in the arts made more widely available.[1] Government support to the arts can be grouped under three heads: education, preservation and patronage.

The main educational functions are carried out in England and Wales through the Department of Education and Science, in Scotland through the Scottish Education Department and in Northern Ireland by the Ministry of Education. In partnership with local education authorities and voluntary bodies, they are concerned with schools, colleges of further education and community centres. The Department of Education and Science is also concerned with public libraries and is responsible for the Victoria and Albert Museum, and the Scottish Education Department is responsible for the Royal Scottish Museum.

The Government aids the preservation of Britain's cultural heritage by means of grants which largely finance most of the national museums and galleries; through the Ministry of Public Building and Works, which looks

[1] *A Policy for the Arts: The First Steps* (Cmnd. 2601), 1965.

after historic buildings and ancient monuments; and by giving financial help to independent bodies concerned with preservation, such as the National Trust. General help for the arts is given through government grants for music, drama, painting and sculpture; these are channelled for the greater part through the Arts Council, which contributes to the aspects of the arts not provided for by other agencies. Other state-aided organisations include the British Film Institute and the Council of Industrial Design.

Estimated government expenditure on the arts in Great Britain in 1965–66 was over £16½ million. Direct allocations included nearly £6 million for all national museums and galleries, £2¾ million for the Arts Council and £1½ million for the preservation of historic houses and ancient monuments.

The Arts Council of Great Britain was established under a Royal Charter in 1946. Its members are appointed by the Secretary of State for Education and Science, in consultation with the Secretaries of State for Scotland and Wales. Its main objects are to develop in the public greater knowledge and understanding of the fine arts, to improve the standard of execution and to advise and co-operate with government departments, local authorities and other organisations. The Council's grant from the Government amounted to £2·8 million in 1965–66.

The Arts Council of Northern Ireland, which has similar aims, receives a grant from the Northern Ireland Government of £36,000, plus up to a maximum of £14,500 on a £ for £ basis on contributions from local authorities.

The British Council (see footnote, p. 173) takes an active part in displaying overseas the best in British drama, music and the visual arts.

Local Support

Municipalities play an important part in encouraging the arts. Under the Local Government Act 1948 they may levy up to a sixpenny rate in England and Wales (just under fivepence in Scotland) for expenditure on entertainment in all its forms, including cultural activities. They may also spend money on buildings for the arts and provide and maintain museums and art galleries. As a rule local councils refrain from actual management of orchestras and theatre companies (usually having a representative on the governing boards or trusts concerned), but they often provide the buildings for the performance of music or drama.

Birmingham, for example, has one of the finest museums in the country, partly finances an orchestra, plans to build a new repertory theatre and has made a loan to an amateur theatre; it is also contributing to an arts centre for young people. Manchester completely finances a civic theatre; Sunderland has added an arts centre to its museum and generously supports its theatre. The London County Council (the Greater London Council since April 1965, see p. 70) built the Royal Festival Hall and is building an arts centre on the south bank of the River Thames (to comprise the National Theatre, an opera house, a new concert hall and an exhibition gallery as well as the Festival Hall); it contributes to the finances of three orchestras, supports several museums, took the initiative over the National Theatre (see p. 236) and commissions sculpture for its schools. The authorities for the new towns in Great Britain have power to make contributions to the cost of amenities and to appoint social development officers to make known the needs of voluntary organisations.

Private Contributions

There are many voluntary bodies concerned with promotion of the arts including such charitable trusts and foundations as the Carnegie United

Kingdom Trust, the Pilgrim and Foyle Trusts, the United Kingdom branch of the Calouste Gulbenkian Foundation and the Rayne Foundation. A large number of organisations are concerned with separate aspects of the arts; examples are mentioned later in this chapter. Some of their most valuable work is done in assisting projects during the early stages. Industrial patronage, including support from television companies, has increased considerably in recent years.

Festivals and Arts Associations

The arts benefit most when the patrons—central and local government, voluntary bodies, industry, the universities and individuals—combine. The most outstanding example is the Edinburgh Festival Society; other arts festivals which have developed a similar basis of responsibility are those of Bath, Cheltenham, King's Lynn, Leeds, Norwich and York.

A special venture in 1965 was the Commonwealth Arts Festival. Over 13,000 performers from 19 Commonwealth countries took part at festival centres in London, Liverpool, Cardiff and Glasgow. Trades Councils, the Calouste Gulbenkian Foundation and others are supporting *Centre 42*, an organisation started in 1962 at the suggestion of the Trades Union Congress. Its aim is to bring the arts into the life of the community by means of local festivals, but its first permanent centre will be in London.

Regional co-operation in arts patronage is growing. The pioneer organisation was the North Eastern Association for the Arts which combines representatives of local authorities, chambers of commerce, Tyne-Tees Television Ltd., universities, industrial firms and trade unions. It helps to support an orchestra, three arts centres and a theatre. Three other regional arts associations have since been set up and the Government hopes to see such bodies established on a country-wide basis.

VISUAL ARTS

A number of modern British painters and sculptors have a high international reputation, winning 53 international prizes since 1949 and commissions for major works in foreign cities. The growth of interest in the visual arts at home has been stimulated by an increasingly lively attitude towards display on the part of museums and galleries, and by the varied activities of many institutions, societies and private galleries.

Painting and sculpture receive state support by grants to national institutions and, indirectly, through purchase grants made to local art galleries and museums, to local education authorities for art schools and other means of promoting education in art, and to the Arts Council, which takes an active part by organising exhibitions and building up its own collection of contemporary British art. The Government is advised on grants and matters of policy by the Standing Commission on Museums and Galleries and the Royal Fine Art Commissions for England and Wales and for Scotland.

Knowledge of Britain's fine arts is fostered overseas by the British Council's exhibitions and lectures. It also provides information and advice to inquirers abroad and to visitors in Britain. In 1964–65, 44 fine art exhibitions organised by the Council were shown in 50 countries and the Council was also responsible for British participation in five international exhibitions.

Museums and Art Galleries

Over 900 museums and art galleries are open to the public in Britain, though many are only small collections.

National Collections

There are 18 national museums and art galleries in Britain. Those in London probably contain between them the most comprehensive collection of objects

of artistic, archaeological, scientific, historical and general interest ever to exist within one city. The British Museum has unparalleled collections of archaeological and ethnographical material in addition to housing the national library of printed books, manuscripts, newspapers and periodicals; its Department of Prints and Drawings also possesses collections of the widest extent and richness. The Victoria and Albert Museum contains works of fine and applied art of all countries and periods, arranged mainly according to material, though primary collections have been arranged to bring together, by style, period or nationality, masterpieces of all the arts. The National Gallery houses paintings by almost all the greatest European masters. The Tate Gallery has collections of paintings of the British school from the eighteenth century onwards, with a few earlier works, and modern foreign schools (since 1850) and modern sculpture.

The other important national collections in London are the National Portrait Gallery, the Imperial War Museum, the National Maritime Museum, the London Museum (to be amalgamated with the Guildhall Museum into the Museum of London, with one collection illustrating the history and archaeology of the capital, and which will be housed in the City), the Wallace Collection (furniture, armour, *objets d'art* and paintings, mainly French works of the seventeenth and eighteenth centuries); and the British Museum (Natural History) and the Science Museum (see p. 220).

Scotland, Wales and Northern Ireland

There are six national museums and art galleries in Edinburgh: the National Museum of Antiquities of Scotland, the National Gallery of Scotland, the Royal Scottish Museum, the National Portrait Gallery of Scotland, the Scottish United Services Museum, and the Scottish National Gallery of Modern Art. The National Museum of Wales, in Cardiff, has a branch at St. Fagan's Castle where the Welsh Folk Museum is housed; and in Northern Ireland there is the national Ulster Museum in Belfast.

Other Collections

Other important collections in London include the Armouries (Tower of London), the Public Record Office (see p. 232) and the Soane Museum. Almost every city and large town has a museum devoted to art, archaeology and natural history, usually owned by the municipal authority but sometimes by a local learned society or privately by individuals or trustees to whom some wealthy collector in the past has bequeathed his treasures. Both Oxford and Cambridge are rich in museums, mostly associated with the universities—the Ashmolean Museum in Oxford, founded in 1683, is the oldest in the country and the Fitzwilliam Museum in Cambridge has fine art galleries and a notable collection of engravings, manuscripts and books. Other universities have notable collections, primarily for teaching purposes but also open to the public. There are important museums and art galleries in Birmingham, Bristol, Glasgow, Leeds, Leicester, Liverpool, Manchester, Norwich, Southampton and York. In Northern Ireland there are notable museums in or near Belfast (the Ulster Folk Museum and the Northern Ireland Arts Council Gallery) and in Armagh City.

In recent years there has been a notable development of 'period-house museums', for which outstanding private residences of former times have been taken over by national and municipal authorities, as at Temple Newsam (Leeds), Aston Hall (Birmingham), and the Royal Pavilion (Brighton). Many private art collections housed in historic family mansions (including those in the ownership of the National Trust) are open to the public at certain times. In 1962 a small but important gallery was opened in Buckingham Palace for exhibition of pictures from the extensive royal collections.

The Herbert Art Gallery and Museum at Coventry, which opened in 1960, was the first to be built in Britain since 1939. Since 1960 new, or extensively altered, museums have been opened at Derby, Doncaster, Durham (the Gulbenkian museum, at the University), Manchester (the Whitworth Art Gallery) and Scunthorpe. New, or greatly extended, museums and galleries are planned for Bristol, Hull, Liverpool, Belfast and Cardiff.

Co-operation

A function of the Standing Commission on Museums and Galleries is to advise the Government on the relationship between national and provincial institutions. Close relations are fostered by the seven area museum councils so far established in Great Britain. They are grant-aided by the Government and help to improve technical facilities.

The *Museums Association*, to which museums and art galleries and their staffs throughout the country belong and which also has many overseas members, is an independent organisation. The Association serves as a central body for the collection of information and the discussion of matters relating to museum administration, and as a training and examining body for professional qualifications.

Exhibitions

Temporary exhibitions produced by the Arts Council, the Art Exhibitions Bureau, and the Circulation Department of the Victoria and Albert Museum are a regular feature of many museums.

In the year which ended on 31st March, 1965, the Arts Council arranged 71 separate art exhibitions in Great Britain, the most important of which were at the Tate Gallery or its own gallery in London; 359 showings of these exhibitions were given in 161 other centres. The Arts Council of Northern Ireland arranged 15 exhibitions in Belfast, of which 4 toured 28 different centres. All exhibitions at the Whitechapel Art Gallery in east London are loan exhibitions (mainly of contemporary artists). The National Gallery and British Museum also have loan exhibitions. The Greater London Council exhibits modern sculpture in one of its parks every third year and is building an exhibition gallery, due to be opened in 1966, as part of its arts centre.

Commercial exhibitions of works by old masters and living artists are held throughout the year in the galleries of the art dealers of London (largely in the Bond Street area).

The various national art exhibiting societies include the Royal Academy, which holds summer exhibitions of works by members and non-members and winter exhibitions usually devoted to national schools of painting or the art of a particular period; the Royal Scottish Academy; the Society of Scottish Artists; the Royal Society of British Artists; the Royal Society of Painters in Water Colours; the Royal Society of Portrait Painters; the Artists' International Association; the Women's International Art Club; and the London Group (all the foregoing are associations of professional painters); and the Institute of Contemporary Arts. Some of these societies, notably the Royal Academy at Burlington House, have their own galleries in London. In Northern Ireland there are the Royal Ulster Academy of Arts, the Ulster Society of Women Artists and the Ulster Arts Club. Among regional societies are the Newlyn Society of Artists, the Midland Group of Artists (Nottingham), the Birmingham Society of Artists and the Penwith Society of Arts, while an increasing number of amateur art societies throughout the United Kingdom hold local exhibitions and encourage local interest in the fine arts in various ways. John Moore's exhibition, held in Liverpool every two years, is open to all British painters and sculptors and sets a high professional standard; prizes are awarded. There are also exhibitions of children's art, including the

National Exhibition of Children's Art sponsored annually by the *Sunday Mirror*.

Finance

All national collections are financed from government funds, both those that are the direct responsibility of the Department of Education and Science (the Victoria and Albert and the Science Museums) and those run by trustee bodies. Besides meeting the administrative costs, this finance makes provision for annual purchase grants, which rose from £125,000 in 1958–59 to nearly £800,000 in 1965–66. The Government also provides special *ad hoc* purchase grants and collections may receive certain pre-eminent works of art acquired by the Treasury in lieu of estate duty. The buildings are maintained by the Ministry of Public Building and Works. Local museums and art galleries can be helped in building up their collections through the annual government grant (£108,000 in 1965–66) administered by the Victoria and Albert and Royal Scottish Museums.

The Carnegie United Kingdom Trust which has done much to encourage the growth of museums during the past thirty years spends an average of £10,000 a year for this purpose. Among voluntary bodies which buy pictures for public collections are the National Art Collections Fund and the Contemporary Art Society.

Industrial Design

The Council of Industrial Design (CoID) was set up in 1944 by the President of the Board of Trade as a grant-aided body to improve British industrial design. The Council has 29 members, a majority being prominent industrialists, and there is a separate Scottish committee. The CoID runs exhibitions and displays at the Design Centre, in the Haymarket, London. There is a selective, changing display of well-designed British consumer goods in current production. Supplementing it and maintained at the Centre is an illustrated record of good design, known as *Design Index*. Up to 20 Design Centre Awards are presented annually to the makers of outstanding products in the Index and an additional award, the Duke of Edinburgh's Prize for Elegant Design, is presented annually to the designer of a single product chosen from the Index. A recent development at the Design Centre is the series of exhibitions showing in detail particular design problems in both the consumer and capital goods industries. There is a Scottish Design Centre in Glasgow; and there are permanent design exhibitions in Bristol, Nottingham and Manchester which function independently but have duplicates of *Design Index*. The CoID organises conferences, courses and exhibitions in Britain and overseas, and maintains a record of designers and a photographic and reference library on industrial design. It has an education section, a retail section and publishes a monthly magazine, *Design*.

Other bodies concerned with industrial design include the Royal Society of Arts (see p. 207), the Society of Industrial Artists and Designers, which is the representative professional body in Great Britain of designers engaged in industry and commerce, and the Design and Industries Association (DIA), a voluntary association of industrial companies, designers, and others interested in the promotion of good design in industry. The Crafts Council of Great Britain, which runs the Craft Centre at Hay Hill, London, is a voluntary body. Its aims are to improve the standard of craft design and to promote closer relations between craftsmen and industry.

Art Education

Formal art education is given in publicly supported art colleges, university art schools, the Royal Academy Schools and a few private art schools. There

are the regional colleges and local art schools and classes administered by the local education authorities; and at a senior level there is the Royal College of Art, London, whose students have usually completed a course at a local education authority college. (The Royal College of Art is to be financed in the same way as the universities, see p. 166.) Art is also taught at an advanced level at the four Scottish Central (Art) Institutions administered by the Scottish Education Department. University art schools include the Slade School of Fine Art and Goldsmiths College (London), the Ruskin Drawing School (Oxford), the Reading School of Art, the Department of Fine Art of the University of Newcastle upon Tyne, and the School of Art of University College, Aberystwyth.

The leading academic institutions for the teaching and study of the history of art are the Courtauld Institute of the University of London, the Department of Classical Art and Archaeology in University College, London, and the Warburg Institute, also a part of London University.

The structure of publicly supported art education has recently been under review. In England three-year full-time courses leading to a Diploma in Art and Design were instituted in 1963 and are available to students who have successfully completed a pre-diploma course. A post-diploma qualification will soon be available. The Diploma is broadly comparable to a university pass degree, and is administered by the National Council for Diplomas in Art and Design (an independent self-governing body set up by the then Minister of Education in 1961). In Scotland each of the four schools of art awards a diploma which is roughly equivalent to the pass degree of a university.

Art has a place in the curriculum of every type of school, and the Society for Education through Art, among other activities, encourages the purchase by schools of original works of art by organising an annual Pictures for Schools exhibition. A loan scheme for reproductions of works of art which is used extensively by schools is operated by the Arts Council.

Architecture

Official responsibility towards the nation's architecture is concerned with encouraging the best in new building and preserving the best that has been inherited from the past.

Several government departments are concerned with domestic architecture and help to promote good design in various ways, such as the award of medals for housing design. The Ministry of Housing and Local Government, the Scottish Development Department, and the Northern Ireland Ministry of Development are responsible in their respective countries for approving the layout and design of local authority housing schemes, and issue reports and circulars setting standards for local authority housing. The Ministry of Housing and Local Government has under its chief architect a research and development group responsible for examining methods of building more cheaply, and for maintaining a high standard of design. The Ministry of Public Building and Works is responsible for the design, building and maintenance work of all government departments and has a research and development group under an architect Director-General which co-ordinates research and development groups throughout the government service. The Architects and Building Branch at the Department of Education and Science and the Development Group of the Scottish Education Department carry out research and development for the school building programmes. The Ministry of Health is carrying out a very large building programme and the Regional Hospital Boards, through their architectural departments, are

responsible for the design and construction of a large number of hospitals and ancillary buildings.

Government departments are assisted in an advisory capacity by the Royal Fine Art Commissions for England and Wales and for Scotland, which also advise planning authorities and other public bodies on questions of public amenity or artistic importance. Many large-scale modern buildings have had the approval of the commissions.

A number of professional, advisory and other societies and institutions exist to further the interests of architecture.

Preservation

The Minister of Public Building and Works has duties in connection with the preservation of ancient monuments and historic buildings in Great Britain; in Northern Ireland this responsibility is vested in the Ministry of Finance. The Treasury has powers to accept historic houses and their collections of works of art in lieu of death duties; such properties are normally transferred to the National Trusts (see p. 186). The Royal Commissions on Ancient and Historical Monuments for England and for Wales and Monmouthshire record in detail all ancient and historical remains in their countries and publish a series of surveys. They are responsible for the National Buildings Record, maintaining and enlarging the library of over half a million photographs of English and Welsh architecture, and keeping an index of architectural records in public and private possession. The Royal Commission on the Ancient and Historical Buildings of Scotland has the same responsibilities as the English and Welsh Commissions, but the National Buildings Record for Scotland is maintained by the Ministry of Public Building and Works. The Ancient Monuments Boards for England, Scotland, and Wales, set up under the Ancient Monuments Acts, consider which monuments should be listed in accordance with those Acts and advise the Minister of Public Building and Works on questions concerning ancient monuments. In Northern Ireland the Ministry of Finance administers the Ancient Monuments Acts (Northern Ireland) and is advised by the Ancient Monuments Advisory Council. The Historic Buildings Councils for England, Scotland, and Wales, constituted under the Historic Buildings and Ancient Monuments Act 1953, advise the Minister of Public Building and Works on such questions as the provision of grants towards the repair or maintenance of buildings of outstanding historic or architectural interest. The Historic Buildings Council for Scotland also advises the Secretary of State for Scotland on the exercise of his functions relating to such buildings under the planning Acts. A Historic Buildings Bureau looks for new uses for unoccupied historic buildings of outstanding interest.

There are many voluntary preservation bodies, both local and national, such as the Georgian Group, the Society for the Protection of Ancient Buildings, and the National Trust in England, Wales and Northern Ireland and the National Trust for Scotland, which together own more than a hundred houses of historic or architectural interest, many of which contain pictures and other works of art. Most of these houses, and a number of other ancestral homes, are open to the public at a small charge and attract large numbers of visitors. The Historic Churches Preservation Trust was formed in 1952 to raise funds to supplement the efforts of parishes to put their churches into good repair: by the end of 1964, it had allocated about £800,000 to about 1,700 churches and chapels of various religious denominations.

Civic Trust

The Civic Trust seeks to promote high standards in architecture and civic planning and to encourage a wider interest in the appearance of towns,

villages and the countryside. The Trust makes awards for good architectural design in housing layout, planning developments and improvement schemes. A Civic Trust for Wales was established in 1964 and there are 550 local civic societies which, though independent, have similar aims and are advised and encouraged by the Civic Trust.

Education and Professional Associations

In Britain it is illegal for a person to practise under the title of 'architect' unless registered with the Architects' Registration Council of the United Kingdom. Most students train at a full-time school of architecture, of which there are 29 recognised for exemption from the Intermediate and Final examinations of the Royal Institute of British Architects (RIBA) and three recognised for the intermediate examination only. In addition, there are 40 schools of art and technical institutes (eight full-time) which prepare students for the external examinations of the RIBA.

The Royal Institute of British Architects is the leading professional architectural institution in Britain. Allied to it are 50 autonomous societies covering the whole of the United Kingdom and most of the overseas Commonwealth. Membership is 21,000 with some 6,000 students. It has one of the largest and most important architectural libraries in the world housing 70,000 books and periodicals and many thousands of drawings. The RIBA is concerned with a wide range of activities covering professional practice, science, technology, statistics, architectural competitions, professional and public relations; arranges lectures and discussions on a variety of subjects, presents exhibitions and, through its Board of Architectural Education, controls the training and examination of architects. The Royal Gold Medal for Architecture is awarded annually by the Queen on the recommendation of the RIBA. Among other associations are the Incorporated Association of Architects and Surveyors, the Institute of Registered Architects and the Faculty of Architects and Surveyors. Societies include the Architectural Association, the Architecture Club, and several which cover particular aspects of architecture, such as the Modular Society.

LITERATURE AND LIBRARIES

The study of literature is included in the curricula of all schools, colleges and universities. There are free public libraries throughout the country, private libraries and a large number of private literary societies. Book reviews are featured in the press and on radio and television and there are numerous periodicals concerned in whole or in part with literature.

Government support is given through the Arts Council which makes triennial awards for the best books of poetry published and provides bursaries for poets, encourages poetry readings and subsidises the Poetry Book Society. It has founded a reference and lending library of modern English poetry (see p. 232) and in 1963 collaborated with the British Museum in setting up a national collection of contemporary poets' manuscripts.

Recognition of outstanding literary merit is given in the form of literary prizes, a number of which are awarded annually, for instance, the Queen's Gold Medal for Poetry, the James Tait Black Memorial prizes for biography and literature, the John Llewellyn Rhys Memorial prize for young writers of promise, the Hawthornden prize for imaginative writing, the Winston Spencer Churchill Literary Award for an outstanding work in the history of the English-speaking peoples, the Library Association Carnegie Medal for an outstanding book for children, the Kate Greenaway Medal for the best children's book illustration and the Somerset Maugham award for young writers.

Libraries

The British Museum Library in London (over 7 million volumes) is the largest in Britain. The National Library of Scotland (over 2 million volumes) is in Edinburgh, and that of Wales in Aberystwyth (nearly 2 million volumes). Together with the Bodleian Library of Oxford University (2½ million volumes) and the Cambridge University Library (2½ million volumes) these comprise the 'copyright' libraries of the country and are entitled to receive a copy of each new book published in Britain: the British Museum Library must receive a copy, the other libraries may claim one.

Other national libraries are the National Lending Library for Science and Technology (see p. 220), the Patent Office Library (see p. 220) and the National Central Library (see p. 234).

The Science Museum, Victoria and Albert and the British Museum (Natural History) in South Kensington all have large libraries and many government departments have old-established libraries of considerable size and importance, for example those of the Board of Trade, Ministry of Agriculture, Fisheries and Food and War Office (now in the War Department of the Ministry of Defence). The Public Record Office contains the non-current records of the superior courts of law and of most of the government departments, as well as such famous historical documents as Domesday Book; it also houses the National Register of Archives (maintained by the Historical Manuscripts Commission) which contains particulars of numerous local and private records.

Besides the few great private collections, such as those of the John Rylands Library, Manchester, and the Signet Library, Edinburgh, there are the rich resources of the learned societies and institutions.[1] Examples are the libraries of the Royal Institute of International Affairs, the Royal Commonwealth Society, the Commonwealth Institute, the Royal Geographical Society, the Royal Institute of British Architects (see p. 231), the British Drama League (see p. 237), the Royal College of Music, Royal Academy of Music, the Central Music Library (administered by Westminster City Council), the National Library for the Blind and the National Book League, which also houses the Arts Council library of modern poetry.

Libraries in Education

The great expansion in education in recent years has increased the strain on library resources at all levels of education. The ancient university libraries of Oxford and Cambridge are not matched by any of the more recent foundations, although the combined library resources of the colleges and institutions of the University of London total over 3½ million volumes and the university libraries of Edinburgh, St. Andrews, Glasgow, Birmingham, Liverpool, Manchester and Leeds each have over half a million volumes. However, many universities have succeeded in building up large and important research collections in special subjects; for example the Barnes Medical Library at Birmingham and the Brotherton Library of English Literature at Leeds. The new universities are also rapidly building initial collections, and the University Grants Committee (see p. 167) has a library committee to consider university library problems in relation to university development and expansion.

The importance of good libraries is recognised at all levels of the education system. School libraries, most of which are maintained by local education authorities, give instruction in the use of libraries. This service is often organised by the public library and stock and staff are common to both services. The Inner London Education Authority has a school library stock

[1] For scientific societies and institutions see p. 206.

of 200,000 volumes and is the largest single employer of qualified librarians in the country. Liaison between schools and public libraries is frequent in most areas and parties of schoolchildren are regularly introduced to the public library system, which they can use in addition to the school library.

Public Libraries

Britain is served by a complete network of public libraries, administered by over 500 public library authorities (county councils, county borough councils, London borough councils, municipal borough councils and urban district councils). The authorities in Great Britain, which provide more than 40,000 service points, have a total stock of nearly 80 million books. (These figures do not include the libraries in the publicly maintained schools.) Nearly one-third of the total population are currently registered members of public libraries.

Under the Public Libraries and Museums Act 1964, which implemented the principal recommendations of the Roberts Report on the *Structure of the Public Library Service in England and Wales* (Cmnd. 660, HMSO, 1959), the Secretary of State for Education and Science is charged with the supervision of the public library service in England and Wales from 1st April, 1965. Under the Act, public library authorities are designated and have a duty to provide an efficient and free lending and reference library service for books and periodicals. The Secretary of State, who is assisted by two advisory councils, has accepted the *Standards of Public Library Service in England and Wales* (HMSO, 1962—the recommendations made by a Working Party) as the level of service to be provided by library authorities.

Rural areas are served by a number of means including the travelling van or mobile library; about 350 vehicles are now in service. Public libraries also send books by post. There are facilities for people who cannot normally get to public libraries, including people in hospitals, prisons and borstals, and, especially in Scotland, those on many of the off-shore lighthouses and islands.

In addition to lending books, about a quarter of the library authorities now lend gramophone records of various kinds and a growing number are adding loan collections of works of art, either originals or reproductions. Nearly all library authorities provide children's departments and reference libraries and many of the larger towns have built up collections of national importance in various subjects. Art, music, commercial and technical departments are being provided in increasing numbers to meet growing and more specific demands and nearly every library authority possesses a significant collection of books and documents illustrating the local history of its area. Qualified and specialist staff are available for consultation in all but the smallest libraries. The city libraries of Birmingham, Bristol, Edinburgh, Glasgow, the Guildhall Library of the City of London, Hull, Leeds, Liverpool, Manchester, Sheffield and Westminster have especially large and important collections.

The public library is often a local cultural centre. Film shows, lectures, adult education classes, book-week exhibitions, drama groups, gramophone recitals and children's story hours are among the many activities. About one in five public libraries provides special facilities for these extension activities.

Library Co-operation

Under the Public Libraries and Museums Act 1964, statutory recognition is given to the hitherto voluntary system of library co-operation in England and Wales which has grown up since the first quarter of this century. The ten existing regional library bureaux in England and Wales (consisting mainly of public libraries in each area) aim to be largely self-sufficient in the interlending of current British books by means of a national system of subject specialisation. They organise co-operation through their own member

libraries and through the National Central Library, which is responsible for interlending at national and international level and has a bookstock of its own of nearly 300,000 volumes built up by purchase, gift and the operation of the British National Book Centre exchange scheme with foreign libraries. The combined resources of libraries available to the interlending machinery of the National Central Library, which includes university, industrial and other non-public libraries, amount to some 100 million books and many thousand sets of periodicals. It is envisaged that under the 1964 Act the regional bureaux will be replaced by fewer, larger, regional councils.

There is a growing number of local co-operative schemes outside the normal framework of interlending. These are associations of industrial and commercial libraries combining their resources normally through the agency of the local public or technical college library so that specialist books and periodicals as well as information are made available to participating members. There are some 20 of these schemes varying in scope, some of the better known being centred on Sheffield, Acton (London), Liverpool, Newcastle, Hull, Nottingham, Bradford, Bristol, Hertford and Coventry.

The Scottish Central Library carries out, in Scotland, functions similar to those of the regional bureaux and of the National Central Library. Both Central Libraries are financed in part by Exchequer grants. In Northern Ireland there is no equivalent to the National Central Library and no regional library bureaux; access to the stocks of all co-operating libraries is available on application to the Belfast public libraries, Queen's University Library and the county libraries.

Library Associations

The principal professional organisation is the Library Association, which was granted a Royal Charter in 1898 to unite all persons engaged or interested in library work; to promote the better administration of libraries and, *inter alia*, to hold examinations in librarianship and to issue certificates of efficiency. The Association in 1965 had a membership of over 15,000, of whom 2,000 were from overseas countries. It maintains a Register of Chartered Librarians, publishes books and pamphlets, a *Yearbook* and an official journal, *The Library Association Record*. The Association and its branches, groups and sections hold regular conferences in various parts of the United Kingdom. There are also associations of libraries of which the Association of Special Libraries and Information Bureaux (ASLIB, see p. 220) and the Standing Conference of National and University Libraries (SCONUL) are of major importance.

Books

New books constitute the large majority of all books published in Britain. In 1964 nearly 1,100 British publishers issued 26,154 separate titles, of which 20,894 were new books and the rest reprints or new editions. In recent years there has been a great increase in the number of paperbacked books of all kinds.

The above figures include only a small selection of government publications by Her Majesty's Stationery Office, which is the largest publishing organisation in Britain. The great majority of books, however, are produced by about 300 of the principal commercial publishers. These include the university presses, notably the Oxford University Press (including the Clarendon Press) and the Cambridge University Press.

Using the copies deposited under copyright law in the British Museum, the British National Bibliography is published weekly, with three, six, nine and twelve monthly cumulations, listing in a classified order, with indexes, all new books and new editions, excluding reprints, of books published in Britain.

Leading organisations representing the interests of those concerned with book production and distribution are the Publishers' Association and the Booksellers' Association. The Society of Authors is a professional association of writers. The National Book League has a membership covering all who are interested in books: authors, publishers, booksellers, librarians and readers. It encourages an interest in books and arranges exhibitions in Britain and some overseas. Knowledge of British books and periodicals overseas is greatly assisted by the British Council through the lending and reference libraries (about 180) run or supplied by it, and through the many book and periodicals exhibitions which it tours overseas. (For sales and exports of books in 1964, see p. 325.)

Literary and Philological Societies

Societies for the promotion of literature include: the English Association and the Royal Society of Literature. The British Academy for the Promotion of Historical, Philosophical and Philological Studies, generally known as the British Academy, is the leading society of humanistic studies and receives a grant from the Treasury.

A number of societies sponsor poetry readings and recitals; the Poetry Society, the Apollo Society and the Barrow Poets are among the best known. Poetry also plays an important part in various annual festivals, including the National Eisteddfod—the bardic festival held in Wales—the Stratford-upon-Avon Festival of Poetry, the Cheltenham Festival of Literature, and the biennial poetry festival organised by the Poetry Book Society in London.

Among the specialist societies are the Early English Text Society, the Bibliographical Society, the Harleian Society, the Saltire Society, and several societies devoted to particular authors, of which the largest is the Dickens Fellowship. There are a number of clubs and societies, such as the Book Society and the Poetry Book Society, which exist to distribute selected new books to their members.

DRAMA

Government support for drama is given through the Arts Councils of Great Britain and of Northern Ireland which grant subsidies to certain theatrical managements operating on a non-profit-distributing basis (that is, using profits to finance future productions), provided that such managements have given evidence of serious aims and of consistently high standards of practical competence. The Arts Council of Great Britain operates a scheme to promote new drama: guarantees may be offered to managements giving the first professional production of selected new plays; and promising authors may be awarded bursaries. Schemes are also in operation to train stage designers, producers and those wishing to take up theatre administration. Subsidies are given for parties travelling to the theatre from outlying districts.

The British Council makes the British theatre better known abroad by organising and sponsoring international tours by important companies such as the Royal Shakespeare Theatre Company, and by sending overseas drama lecturers and exhibitions of theatrical design or of books dealing with the British theatre, and by providing newly published plays through its overseas libraries.

Professional Theatre

There are about 200 professional theatres in Britain. The centre of theatrical activity is in London, where there are some 30 principal theatres in the 'West End' and several more in the suburbs, but important developments are taking place in the provinces. In London, with six exceptions (Covent Garden, Sadler's Wells, the Old Vic, the Royal Court, the Mermaid and the

Aldwych) the theatres are let to some 25 producing managements on a commercial basis for each production.

Among London companies receiving Arts Council grants are the English Stage Company, which produces contemporary plays mainly at the Royal Court Theatre, the Mermaid, the National Theatre and the Royal Shakespeare Theatre Company.

The National Theatre Company was formed in 1963; it will eventually play in the new National Theatre, to be built on the south bank of the Thames in London. The capital costs of the theatre will be met mainly by the Exchequer and the Greater London Council; grants towards the Company's running costs are being made by the Arts Council and the Greater London Council. The Company, whose repertoire consists of classical and modern plays from all countries, is large enough for simultaneous productions to be undertaken in London (at the Old Vic Theatre) and in the provinces or overseas. Provincial tours are seen as an important part of its function as a National Theatre.

The Royal Shakespeare Company presents Shakespearean plays at the Royal Shakespeare Theatre, Stratford-upon-Avon, and international classical and modern plays at the Aldwych Theatre, London. It will eventually have a permanent London home in the proposed City of London arts centre in the Barbican. Since 1964 world-famous companies have presented their own plays in the Royal Shakespeare Theatre Company's World Theatre Season at the Aldwych.

The provincial theatres are served by productions touring either before or after London presentation, by companies specially formed for touring, and by local repertory companies. An important development is the growth of the civic theatre. The term is generally taken to include some companies which have the use of their own theatres (as in Bristol, Lincoln, Liverpool, Nottingham, Salisbury, Perth and Birmingham) or rent them from a local authority on favourable terms, and those like the Belgrade Theatre, Coventry, which was built by the city council and where the activities include drama study and teaching (see p. 238). Many of these companies are assisted by the Arts Council. London managements watch their activities and may sometimes bring their productions to the West End. Many of the leading dramatists, producers, designers, actors and actresses in Britain started their careers in such companies, whose work influences current theatrical practice.

A number of new theatres have been opened both in London and the provinces in recent years, including, in London, the Mermaid Theatre and the completely reconstructed Queen's Theatre. Coventry's Belgrade Theatre, opened in 1958, was the first full-scale theatre to be built by a civic authority since 1939. Since then civic theatres have been built at Croydon, Eastbourne and Torquay, and smaller theatres have been opened at Middlesbrough, Richmond (Yorkshire) and Whitehaven (Cumberland). The new Nottingham Playhouse and the Phoenix Theatre, Leicester, opened in 1963 and the Yvonne Arnaud Theatre, at Guildford, in 1965. New theatres are being built or planned for Birmingham, Bromley, Hornchurch, Ipswich, Manchester and Norwich. A Festival Theatre opened in 1962 at Chichester, Sussex. Entertainments centres to include theatres are proposed for Bolton, Blackpool, Bradford, Exeter and Sheffield.

In Northern Ireland the Ulster Group Theatre in Belfast specialises in Ulster comedy; and the Belfast Arts Theatre presents some international drama and lighter theatrical entertainment. The Lyric Players Theatre, a non-profit-making organisation, under a board of trustees, presents Irish and

international drama, and plans to build a small theatre in or near Belfast. All professional theatres are eligible for grants in respect of specific productions approved by the Arts Council of Northern Ireland.

Theatre Clubs and Licensing

All plays are subject to the provisions of the Theatres Act 1843, which deals with the licensing of theatres and plays and requires all new plays to be approved by the Lord Chamberlain,[1] who may forbid the presentation of any play 'for the preservation of good manners, decorum, or of the public peace'. In the commercial theatre, the Lord Chamberlain may require amendments to be made to the text of a play, but the number of plays for which a licence is refused amounts to under one per cent of the total submitted. He does not, however, exercise his powers over theatre clubs for regular patrons, some of which are run in connection with some of the company-owned theatres and where seats are sold only to theatre club members (for instance, the Arts Theatre, London).

Professional Organisations and Trade Unions

Most managers and artists are members of professional organisations such as the Theatres' Advisory Council, the London Theatre Council, the Provincial Theatre Council, the Society of West End Managers, the Theatrical Managers' Association, the Council of Repertory Theatres, British Actors' Equity (the actors' trade union) and the League of Dramatists. The trade union of theatre staffs is the National Association of Theatrical and Kine Employees.

Amateur Theatre

There are thousands of amateur dramatic societies in Britain with an active membership of some half a million. They are encouraged by local education authorities, by other public bodies, and by four special organisations—the British Drama League, the Standing Conference of Drama Associations, the Scottish Community Drama Association and the Association of Ulster Drama Festivals. Amateur companies which stage productions in their own theatres belong to the Little Theatre Guild of Great Britain; for instance, the Maddermarket Theatre in Norwich and the Questor's Theatre, Ealing, which opened in 1964 and is London's most up-to-date theatre, designed for completely flexible staging.

The British Drama League, founded in 1919, has both affiliated and individual members. It arranges courses, lectures and competitions in dramatic work; it has a library with the largest collection in Britain of plays and books on the theatre, and an information bureau; it also gives advice on playwriting, production, stage management and the organisation of drama festivals. The Standing Conference co-ordinates the various bodies concerned in the amateur dramatic movement. Functions similar to those of the league and the conference in England and Wales are fulfilled in Scotland by the Scottish Community Drama Association, which receives some financial assistance from the Scottish Education Department.

Most universities have active amateur drama clubs and societies; those at Oxford and Cambridge are among the most famous. In 1959 Bristol inaugurated the International Festival of University Theatre, now held annually in Britain.

Dramatic Training and Study

Dramatic training is provided mainly in the dramatic schools and institutions established throughout Britain. Among the most important are the Royal Academy of Dramatic Art (which is grant-aided by the Department of

[1] The Lord Chamberlain, whose office dates from the fourteenth century, is the senior officer of the Royal Household.

Education and Science and which provides a two-year course in all branches of stage work), the Central School of Speech and Drama, the Rose Bruford Training College, the London Academy of Music and Dramatic Art, the Webber-Douglas School, the Guildhall School of Music and Drama and the Arts Educational Schools, all of which are in or near London; and the Old Vic School in Bristol. In Scotland there is the College of Dramatic Art which is an integral part of the Royal Scottish Academy of Music in Glasgow and is grant-aided by the Scottish Education Department.

An increasing degree of recognition is given to dramatic training by universities. The University of London offers a Diploma in Dramatic Art; Bristol University has a department of drama offering a course which an arts student may take as part of a general degree course. Manchester University offers courses in drama for honours or general arts degree students, and a diploma course in Theatrecraft (embracing sound and television broadcasting). The University of Hull has also recently established a Department of Drama with courses leading to degrees or diplomas, and an advanced course in Drama in Schools is offered by the University of Durham. Hull University is building a theatre of its own; Exeter University's theatre, like the recently completed Nuffield Theatre at Southampton, is for the use of both students and the public.

The Society for Theatre Research brings together those interested in the history and technique of the British theatre. The International Theatre Institute has a British centre in London. Its headquarters are in Paris and there are 44 member countries. The main purpose of the institute is to foster international goodwill and understanding by interchange of students, theatrical companies, theatre personnel and all theatrical information. The British centre's committee is composed of representatives of the Arts Council, British Council, League of British Dramatists, British Drama League, Conference of Repertory Theatres and representatives of the theatre.

Theatre for Children

Many schools and youth clubs put on plays and provide some education in drama. In 1964 a new drama centre for the London education service opened at Toynbee Hall in east London. At Coventry special productions are arranged for schoolchildren and members of the Belgrade Theatre's staff teach at local schools; there is also an advisory service for school productions. Nottingham has a Youth Theatre Workshop.

A large number of organisations such as the Unicorn Theatre Trust and Shakespeare for Schools present children's plays in London and the provinces. The National Youth Theatre, consisting of schoolboys, presents Shakespearean productions in London, the provinces and abroad.

MUSIC, OPERA AND BALLET

Music in all its forms draws large audiences; and music festivals, orchestral concerts, choral singing, brass bands, opera and ballet are important features of British cultural life. The increase in musical appreciation among the general public during recent years is shown by the size of the audiences for concerts and for broadcast music. About 101 million gramophone records were produced during 1964. The National Federation of Gramophone Societies has about 350 affiliated societies.

The City of Westminster houses the Central Music Library which lends to other libraries and individuals. Another well-known music collection is the Henry Watson Music Library at the Manchester Central Library. Many other public libraries have collections of music that can be borrowed; and an increasing number also lend gramophone records.

The Arts Council makes grants to a number of symphony orchestras, opera and ballet companies, and music societies. The British Council gives financial assistance to some of the overseas tours of British orchestras, soloists, and opera and ballet companies; it sponsors some recordings of works by British composers, and maintains 127 libraries of British music (scores and records) in 83 countries overseas and, at its London headquarters, a reference library of records, scores and books on music. Musicians from abroad are sometimes invited to Britain as the Council's guests.

The National Music Council, representative of every aspect of British musical activity, is affiliated to the International Music Council and UNESCO.

Music

Seasons of orchestral concerts are promoted every year in many of the large towns and cities of Britain. In London the principal concert halls are the Royal Festival Hall on the south bank of the Thames, used for both orchestral concerts and recitals; the Royal Albert Hall, Kensington, where mainly orchestral concerts, including the annual summer season of Promenade Concerts, are given; and the Wigmore Hall, which is the principal recital centre. An additional small concert hall and a recital room are being built by the Greater London Council on the south bank of the Thames.

Orchestras

Among the leading British orchestras are the London Philharmonic, the London Symphony, the Royal Philharmonic, the New Philharmonia (formed in 1964 from the Philharmonia), the Royal Liverpool Philharmonic, the Hallé (Manchester), the City of Birmingham Symphony, the Bournemouth Symphony, the Northern Sinfonia (Newcastle upon Tyne), the Scottish National and the BBC Symphony, Northern and Scottish orchestras. There are also specialised string and chamber orchestras such as the Philomusica of London, the English Chamber Orchestra and the London Mozart Players, and a number of new orchestras which have been formed during the past few years. Many of these receive financial aid from the Arts Council and local authorities to help with the cost of maintaining ensembles, of presenting new or unfamiliar works, and of improving standards generally; some of them also receive assistance from commercial television and other business organisations. The City of Belfast Orchestra is financed jointly by the Belfast Corporation and the Arts Council of Northern Ireland.

Choral Societies

The principal choral societies in Britain are the Royal Choral, the BBC Choral, the Huddersfield Choral, the Hallé Choir, the Liverpool Philharmonic Choir, the London Philharmonic Choir, the New Philharmonia Chorus (formed in 1964 from the Philharmonia), the Bach Choir, the Royal Edinburgh Choral Union and the Belfast Philharmonic Society. These and many other choral societies are associated with famous orchestras in major choral works; most of them, together with hundreds of similar choral and orchestral societies and music clubs, are affiliated to the National Federation of Music Societies, through which they are supported with funds provided by the Arts Council. Membership of the National Federation has risen to about 900 societies. Among societies which specialise in encouraging the performance of the work of living musicians are the Society for the Promotion of New Music, the Music Section of the Institute of Contemporary Arts and Macnaghten Concerts.

Music Festivals

Music festivals in Britain, originating with the Three Choirs Festival held annually in Gloucester, Worcester or Hereford in rotation, have been in existence for over 200 years. The festival idea has developed considerably in recent years, and festivals of music and other arts are now held annually in

many cities and towns throughout the United Kingdom. The famous Edinburgh International Festival lasts three weeks; other festivals such as at King's Lynn, last a week or less. Among the better known are the Royal National Eisteddfod of Wales; the Llangollen International Eisteddfod; the National Gaelic Mod, held at a different place in Scotland each year; the Cheltenham Festival, largely devoted to contemporary British music; the Aldeburgh Festival; the Bath Festival; the Coventry Festival; the Haslemere Festival; the biennial York Festival; and the Leeds and Norwich Festivals of choral music, which are held triennially. An annual international festival of folk song and dancing is held by the English Folk Dance and Song Society.

Amateur Interest

Interest in amateur music-making is encouraged by the work of County Music Committees,[1] which are aided by the Carnegie United Kingdom Trust and united in the Standing Conference for Amateur Music. The Rural Music Schools Association is concerned with music-making by amateurs in country districts; it brings together professional musicians, teachers, administrators and amateurs.

Professional Organisations

Professional organisations which look after the interests of music and musicians include the Musicians' Union, the Incorporated Society of Musicians, the Composers' Guild, and the Songwriters' Guild.

Opera and Ballet

Regular seasons of opera and ballet are given at the Royal Opera House, Covent Garden, London, leased by the Government[2] to the Royal Opera House, Covent Garden, Limited, which was formed in 1944 to make the famous opera house the home of a national opera and ballet, and which receives a government grant through the Arts Council. The Royal Opera House has its own resident opera company and ballet company which give performances in London and elsewhere. The opera company, which numbers about 200 and has a permanent orchestra, makes an annual tour of provincial centres. The ballet company, incorporated in 1957 with the Sadler's Wells Theatre Ballet and the Sadler's Wells School to form the Royal Ballet, has a high international reputation gained in many overseas tours.

Seasons of opera are also given at the Sadler's Wells Theatre in London; with two permanent opera companies, Sadler's Wells provides a full London season, and opera and operetta for 42 weeks in other centres.

Opera Groups

At Glyndebourne, in Sussex, an opera season, for which an international cast is specially assembled, is held every summer. Other opera companies include the English Opera Group, formed in 1947, and noted for its performances of operas by Benjamin Britten; the New Opera Company, formed in 1957 by members of the Cambridge Opera Group to produce new operas in London and give opportunities to promising amateurs and young professionals; the Handel Opera Society; the Intimate Opera Company, which performs works for very small casts in any hall available; and the Welsh National Opera Company. The Scottish Opera Society presents annual seasons in Glasgow and Edinburgh. Opera in Northern Ireland is promoted by the Grand Opera Society of Northern Ireland and the Studio Opera Group, both receiving a subsidy from the Arts Council of Northern Ireland. The Arts Council (Great Britain) manages three small operatic groups (Opera for All) which specialise in introducing opera to audiences in small towns who

[1] Some of these are voluntary committees and some are local education authority sub-committees.

[2] The Ministry of Public Building and Works acquired a 42-year lease from Covent Garden Properties Limited in 1949.

hitherto have been unfamiliar with it. There are also a number of amateur opera clubs in London and the provinces, in Glasgow and Edinburgh, in Northern Ireland and in universities.

Ballet Companies

Among other ballet companies are the Ballet Rambert, Britain's oldest ballet company, which has discovered many distinguished dancers and choreographers, London's Festival Ballet and two companies specialising in contemporary works, the Western Theatre Ballet and the recently formed London Dance Theatre. The work of the Patricia Mulholland Irish Ballet Company in Northern Ireland, which is sponsored by the Arts Council of Northern Ireland, combines traditional music, dancing and mime.

Education in Music, Opera and Ballet

Professional training in music is given at colleges of music, of which the most prominent are the Royal Academy of Music and the Royal College of Music in London, the Royal Manchester College, and the Royal Scottish Academy of Music in Glasgow; all are grant-aided. There are also the Trinity College of Music and the Guildhall School of Music and Drama, both in London, and the School of Music in Birmingham.

The London Opera Centre for Advanced Training and Development was opened in 1963. It shares some facilities with the Royal Opera House, Covent Garden. Its courses last two or three years.

The leading ballet schools are the Royal Ballet and the Rambert Ballet Training Schools and they have played an important part in raising British ballet to its present high standard.

Other schools offering general education combined with drama and/or ballet are run by the Arts Educational Trust, the Corona Staff Schools and the Italia Conti School.

Young people are encouraged to take an interest in music, opera and ballet. There are frequent children's concerts, given by symphony orchestras directed by prominent conductors. The National Youth Orchestra of Great Britain and the National Youth Orchestra of Wales, made up of the most promising members of school orchestras, are noted for their high standard of performance, and so is the London Schools' Symphony Orchestra. A Youth and Music organisation, affiliated to the international *Jeunesses Musicales* encourages musical education and performances for young people.

In schools, more children are learning to play musical instruments; and over 120,000 candidates a year (children and other students) take the examinations of the Associated Board of the Royal Schools of Music, the largest proportion (over 70,000) choosing the piano as their instrument.

The Royal Ballet has recently sponsored a new organisation, Ballet for All, to give lecture-demonstrations, mainly to schools.

FILMS

Although cinema attendance has been steadily declining in Great Britain since its peak of 1,635 million in 1946 to 408 million in 1965, and the number of cinemas has declined from 4,709 in 1946 to 2,056 in March 1965, British films, actors and creative and technical talent are appreciated both at home and abroad and frequently achieve success at international film events. Television offers very large potential audiences for films and provides opportunities of employment for technicians and actors.

Feature Films

Cinematograph films were first shown to the public in Britain in 1896, and within ten years Britain was in the forefront of film production, but this early ascendancy did not survive the impact of the first world war and since 1914 British films have had to contend with keen competition in the home market

from the United States. However, London is one of the most important centres for the making of films for international markets and export earnings are an important part of total earnings. The British Film Producers Association and the Federation of British Film Makers are the two trade associations to which many feature film producers belong.

Documentary Films

The documentary tradition in short film production in Britain goes back to 1929, when a group of directors began making factual films of a distinctive and imaginative kind on behalf of the Government, and later for commercial organisations. The war years saw a big expansion in this field and, since then, British documentary technicians have continued to produce high quality factual films which have won numerous international awards. An interesting development has been the attempt to re-interpret the documentary tradition in contemporary terms by a group of young technicians—the Free Cinema movement—and by the television film units of the British Broadcasting Corporation and the Independent Television Authority programme companies. The Federation of Specialised Film Associations, the trade association of documentary, short, industrial, advertising and cartoon film makers, has about 100 members.

Foreign Films

Films from abroad made in languages other than English often draw large audiences in London and a few other large cities, but are rarely shown throughout the country.

Production and Distribution

About 10 per cent of British first feature films are made and about 40 per cent are distributed by the Rank Organisation and the Associated British Picture Corporation, which have companies for production, distribution and exhibition. Most producers who are independent of either group make films in association with other film distributors. There are numerous companies (many of them small) which produce short films.

The art of film production is a costly one which depends upon a commercially prosperous industry for its development and needs adequate financial backing combined with freedom for the film-maker to experiment and to express his own ideas. There is no state-owned film production unit in Britain, but the National Film Finance Corporation, a statutory body set up in 1949, lends money for feature film production. Its members—a chairman, a managing director and three to five others—are appointed by the Board of Trade. Its funds (limited by statute to £8 million) are provided up to £6 million by advances from the Board of Trade; the remaining £2 million may be borrowed from non-governmental sources. In recent years the Corporation has been financially concerned with about half the first feature films made in British studios.

There is also a levy on cinema admissions to provide a film production fund. The money so raised is paid out as a percentage of a film's takings, so that the more successful a film is at the box-office, the more it receives from the fund. Started by the industry in 1950 on a voluntary basis, the scheme became statutory under the Cinematograph Films Act 1957, which gave the President of the Board of Trade powers to make regulations governing the collection, by the Board of Customs and Excise, of a levy from exhibitors, and the distribution of the proceeds for the benefit of British film production. The British Film Fund Agency undertakes the distribution.

The Government sponsors a wide range of films and film material to inform audiences overseas about British life and achievement, including documentary films, television programmes and newsreels; they are produced

through the film, television and newsreel services of the Central Office of Information (COI), which commissions their production by private companies. These, together with other films acquired from private industry and public bodies, are distributed throughout the world, in English and many foreign languages, by British Information Services.

Films are also sponsored by other government departments for the home market. These, too, are produced by the COI and include films on such subjects as science, agriculture, health and industry, designed for specialised audiences, as well as films for the general public on, for example, road safety and health education.

A large number of films are sponsored by industrial concerns and other organisations, such as the British Travel Association and the British Productivity Council. The best of these and industrial films from other countries are made available to industrial audiences through the COI's Central Film Library[1] and other agencies.

The Films of Scotland Committee promotes the production of Scottish films covering the industries and cultural traditions of Scotland.

Quota System

To help British films to meet the keen American competition, legislation passed in 1927 introduced the quota system (continued by subsequent legislation), under which a certain proportion of British films must be shown in British cinemas each year. The proportion is fixed by the Board of Trade annually after consultation with the Cinematograph Films Council, any change being effected by statutory instrument approved by both Houses of Parliament. For first feature films it has stood at 30 per cent since 1950.

Cinema Licensing and Film Censorship

The State takes no part in the censorship of films in Britain, but before it can be shown a film must be licensed by the local licensing authority. There are about 700 of these (usually the local authorities or, in some areas, magistrates). In considering the suitability of films the authorities normally rely on the judgment of an independent body, the British Board of Film Censors, to which are submitted all films (other than newsreels) intended for public showing.

The British Board of Film Censors was set up in 1912 on the initiative of the cinema industry, to ensure that a proper standard was maintained in the films offered to the public. It consists of a president, a secretary, and five examiners (including two women). The President, who is usually a man prominent in public life, is appointed by a trade committee after informal consultation with the Home Secretary and the principal associations of local authorities. The Board, which does not use any written code of censorship, may require cuts to be made before granting a certificate to a film; very rarely, it refuses a certificate. Films passed by the Board are placed in one of three categories: 'U' (suitable for universal showing); 'A' (more suitable for adults than children) and 'X' (suitable only for adults). A child under 16 years of age may be admitted to a cinema showing an 'A' film only if accompanied by a responsible adult, and may not be admitted on any condition if an 'X' film is being shown.

Appreciation of the Film

Film reviews appear regularly in the press and on sound and television programmes and many organisations are interested in different aspects of the film. There are numerous private film societies.

[1] The Central Film Library also makes available on hire to schools, colleges and other institutions films on many specialised subjects.

British Film Institute

The development of the film as an art is promoted by the British Film Institute, founded in 1933, which is financed partly by an Exchequer grant. The Institute encourages the making and showing of good films and helps the public to appreciate them. It also administers the National Film Theatre in London and the National Film Archive, runs an annual summer school, and maintains a film library from which films may be hired, a library of books on the film and an information service. It makes grants to the Scientific Film Association, the University Film Council and the Society for Education in Film and Television.

The National Film Archive contains over 18,000 films, including newsreels and other miscellaneous items, besides scripts, art designs, posters and about 500,000 photographic stills, selected to illustrate the history and the art of the film and as significant social and historical records.

The National Film Theatre, on the south bank of the Thames, in London, shows films of outstanding historical, artistic or technical interest; it holds a unique position as a cinema offering regular programmes unrestricted by commercial considerations or by the age or nationality of the films shown.

Society of Film and Television Arts

The Society of Film and Television Arts, formed in 1958 by the amalgamation of the British Film Academy and the Guild of Television Producers and Directors, has as its aim to improve the standard of film and television production and to stimulate public appreciation of the arts.

Festivals

The National Film Theatre organises an annual London Film Festival, which includes films receiving their first showing as well as films which have been successful in international competitive festivals. A council on which leading British film organisations are represented organises a film festival as part of the Edinburgh International Festival.

Children and the Cinema

The Cinematograph Act 1952, which came into force in January 1956, provided for the making of regulations by the Home Secretary to protect the health and welfare of children attending film shows. Cinemas which give children's shows require a special licence from the licensing authority, which may impose conditions. There are about 900 children's cinema clubs which provide special programmes on Saturday mornings; they are organised by the cinema groups and have become very popular. An important contribution to these programmes is made by the Children's Film Foundation, which produces and distributes entertainment films specially designed for children and publishes at intervals a list of films particularly suitable for children and for exhibition at children's matinées. The Foundation is a non-profit-making body set up by the British film industry in 1951 and, under the Cinematograph Films Act 1957, it receives grants from the British Film Fund Agency.

10
THE NATIONAL ECONOMY

BACKGROUND

Britain ranks about 75th in size among the countries of the world, with about 0·18 per cent of the world's land area. In population, approaching 2 per cent of the world's inhabitants, it ranks tenth. In density of population it is fourth: of the major countries, only Japan, Belgium and the Netherlands are more crowded; and there are nine times as many people to the square mile in the United Kingdom as in the United States. In world trade, it ranks third, accounting for nearly one-tenth of the total. It takes about a fifth of the world's exports of primary products, and provides about one-sixth of the world's exports of manufactured goods.

Britain, from its own soil, provides only about half of the food it needs, and—apart from coal and low-grade iron ore—it has few natural resources; thus it is the world's largest importer of such products as wheat, meat, butter, fodder grains, citrus fruits, tea, tobacco, wool, and hard timber. In return, it is one of the world's largest exporters of aircraft, motor vehicles, electrical equipment, chemicals, textiles and most types of machinery. No other country has such a small proportion of the working population engaged in agriculture (only about 3½ per cent).

The United Kingdom is also the central banker of the sterling area, an area with a quarter of the world's population. Many countries outside the sterling area use sterling in their international transactions, and it is the currency in which about one-third of the world's trade is conducted.

The Economy before 1939

During the nineteenth century Britain secured a leading position as world manufacturer, merchant, carrier, banker, and investor and so was able to support a rapidly increasing population at a rising standard of living. During the period from 1870 to 1890 British industrial expansion had the clearest lead over that of other countries. Between 1890 and 1914 growing industrial competition from Europe and North America began to make itself felt, but its effects on Britain's staple export industries, particularly cotton textiles and coal, were offset by the general rise in world trade, by the continued demand for British textiles from India and other eastern countries, and by the continued high level of overseas investment.

The new problems confronting British industry and trade in the twentieth century became apparent after the first world war. Textiles from India and Japan, where labour was cheaper, established themselves firmly in the large eastern markets, to a great extent replacing the more expensive and often higher quality British products. The extension of the world demand for coal was slowed down by the increasing use of oil, while coal from the newer European mines competed keenly with British coal.

In the old-established branches of the vehicles and engineering group of industries (for instance, locomotives, ships and textile machinery) world demand fell away after a brief post-war boom, and Britain failed at first to gain a compensating share of the expanding world trade in the new types of

engineering products (for example, vehicles and electrical goods). Most countries were tending towards self-sufficiency, and some sought deliberately to protect nascent and even established industries by tariffs and (later) quotas and exchange restrictions.

Income from overseas investments and a substantial improvement in the terms of trade (the price of exports relative to the price of imports) cushioned the effect of a fall in the volume of exports, and imports remained high. The loss of export markets led, however, to a contraction of Britain's staple industries—coal, cotton, iron and steel, and the older branches of engineering. The result was heavy unemployment, the general rate of which averaged 14 per cent of the working population in the years 1921–39, reaching a peak of 22 per cent in 1932, when the slump in world trade was at its worst. In districts relying mainly on one or other of the staple industries, the rate was much higher.

After 1932 an improvement in the levels of production and employment took place, stimulated by an increase in home investment which was aided by the policy of cheap money, by some revival in world trade and, after 1935, by the armament programme. The decade saw a strong expansion in the vehicles, electrical, chemicals and aircraft industries, while the construction of 3 million houses brought about a large growth in the building and ancillary industries. By 1937 average real income per head was about 14 per cent higher than in 1929.

Effects of the Second World War

The second world war is estimated to have run down British domestic capital by about £3,000 million, through shipping losses, bomb damage, and arrears of industrial maintenance and replacements. Some £1,000 million worth of overseas investments were sold, nearly half in North America, and new external debts of £3,000 million were accumulated. By 1944 exports had fallen to less than one-third of their 1938 volume as a result of the war effort.

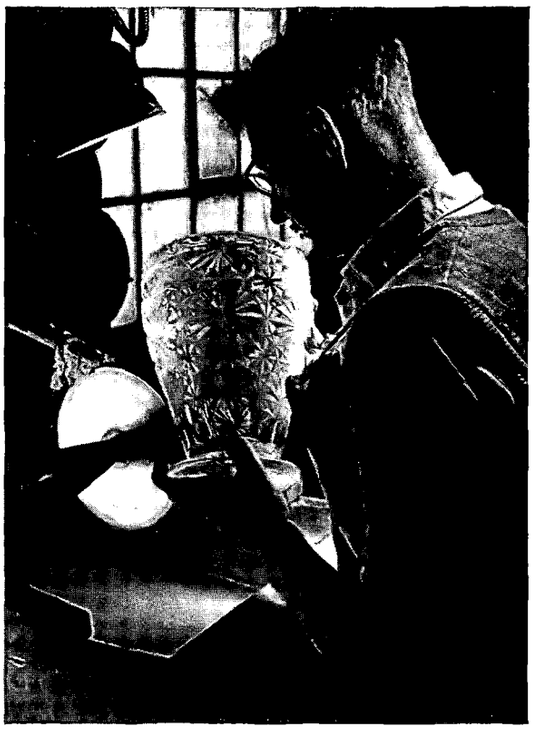
Period since 1945

In the two decades since 1945 Britain has experienced, with few interruptions, a steady growth in output of goods and services and a high level of employment. New inventions and technological advances and shifts in world demand have altered radically the character of British industry. Industries in which new techniques have predominated, notably electronics, aircraft, motor and chemicals industries, new branches of machinery construction, and petroleum are contributing a significantly larger share of the total output and of total exports and providing wider employment opportunities for an increasingly skilled labour force. Expenditure on industrial and scientific research is increasing steadily and facilities for technological education have been greatly enlarged.

At the same time, Britain has had to deal with some persistent economic problems; in particular, to fulfil its overseas obligations and to maintain its traditional role in world commerce and finance, it has needed to achieve and maintain a substantial balance of payments surplus. While exports of both goods and services have maintained an upward trend, in some years the rate of increase has been insufficient to pay for a rising volume of imports (almost all quantitative restrictions on imports having been removed), to meet defence commitments abroad and to provide for overseas investment and economic assistance to developing countries.

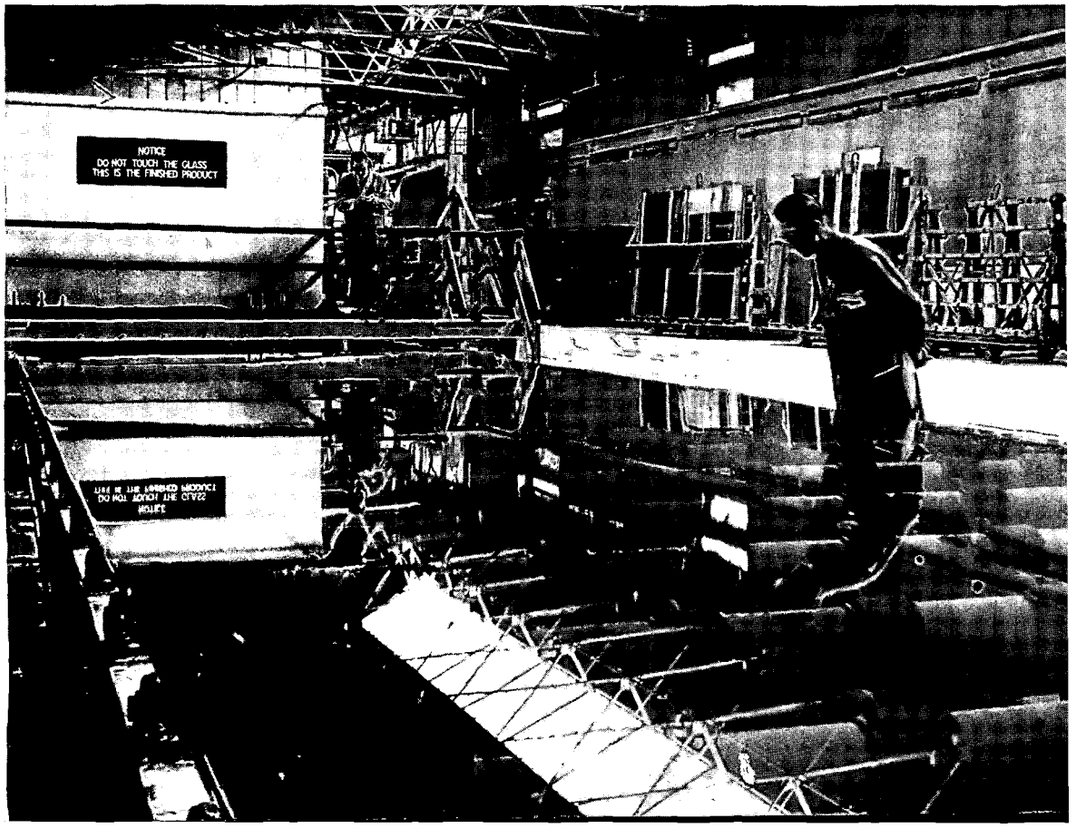
The persistent rise in prices, a continuing problem shared with most other countries, has been a central factor in the framing of economic policies.

Craftsman putting the final cuts into a full-lead English crystal vase.



UNIVERSITY OF NORTH BENGAL
LIBRARY
RAJARAMMOHUNPUR

A 130-inch ribbon of float glass at Pilkington's factory, St. Helens.







Autopilot gyro units being assembled at Cheltenham, Gloucestershire.

Left:
Nylon stocking knitting machines at Newtownards, Northern Ireland.



Engraving a sousaphone at a musical instrument factory at Edgware, London.

During some periods it stemmed from an excessive pressure of demand—exports, investment at home and abroad, personal consumption, defence and other public expenditure both at home and overseas—on the nation's resources, but more recently the tendency for money incomes to rise faster than production, thus raising costs, has been a more dominant influence. The Government is, therefore, increasingly directing its efforts towards working out policies for relating increases in money incomes to the rate of economic growth and evolving machinery for longer-term planning of the economy.

THE STRUCTURE OF THE ECONOMY

The following sections sketch briefly the salient features of the national income and expenditure of Britain in recent years. The source of Tables 9 to 12 is *Preliminary Estimates of National Income and Balance of Payments 1959 to 1964* (Cmnd. 2629).

Output and Employment

In 1964 Britain's gross national product at factor cost (the measure of the value of total goods and services produced at home and net income from abroad) is estimated to have totalled £28,691 million. In real terms, that is after allowing for price changes, the increase over the ten-year period to 1964 has amounted to about 30 per cent. In terms of national income per head the United Kingdom ranks appreciably below the United States and Canada and slightly below Australia, New Zealand, Sweden and Switzerland, and about on a par with France and the German Federal Republic.

The working population has been rising relatively slowly; in the ten years to the end of 1964 it increased by about 2½ million (or some 6 per cent) to about 26 million, of whom two-thirds are males. The expansion of the national income over the same period has, therefore, been mainly the result of higher productivity. Unemployment over the past two decades remained very low, on average less than 2 per cent of the working population being out of work, compared with 14 per cent between the two world wars. Apart from the severe winter of 1962–63, when it rose to over 950,000, and for a brief spell in 1958, the total in the last 15 years has never exceeded 500,000.

A decline in some of the staple industries, notably coalmining and shipbuilding, has given rise in some areas to rates of unemployment considerably above that for the country as a whole; averaging 3·7 per cent in Scotland, 3·5 per cent in north-east England and 6·6 per cent in Northern Ireland in 1964. Assistance, both fiscal and administrative, has been given by the Government to promote additional employment in those districts where new opportunities for work are needed (see p. 270).

TABLE 9
DISTRIBUTION OF TOTAL SUPPLIES OF GOODS AND SERVICES

Percentages

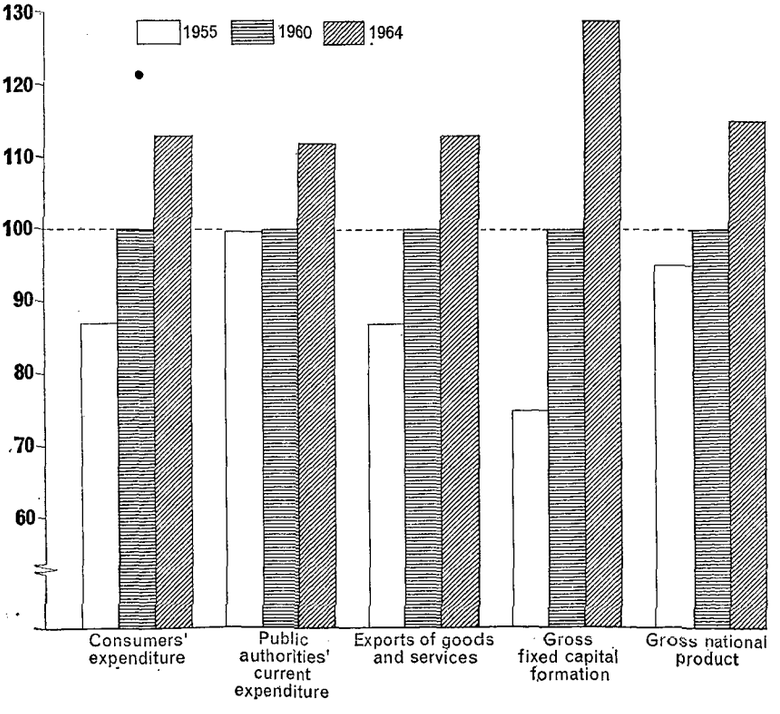
(At 1958 prices)	1950	1955	1960	1964
Consumers' expenditure	58·1	55·2	54·9	54
Public authorities' current expenditure	14·5	14·6	12·7	14
Gross fixed capital formation	11·0	11·9	13·6	14
Investment in stocks	−1·1	1·2	1·9	1
Export of goods and services	17·5	17·1	16·9	17
• TOTAL FINAL EXPENDITURE	100·0	100·0	100·0	100

Table 9 shows the distribution of total supplies of goods and services since 1950, at 1958 prices, divided between consumers, public authorities, investment and exports; the diagrams below and on p. 249 show changes in national expenditure between 1955 and 1964 (at 1958 prices) and trends in the gross domestic product, output and prices since 1900.

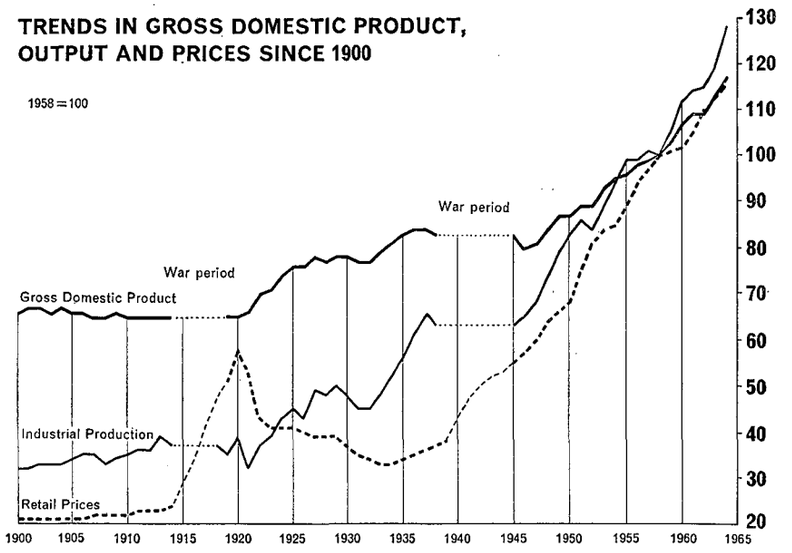
Manufacturing industry contributes about 35 per cent to the total output of goods and services, and together with mining and quarrying, construction and public utilities (gas, electricity and water) makes up just under half of the total; agriculture, forestry and fisheries account for just under 4 per cent and transport and communications, together with the distributive trades, for 20 per cent. The remainder, just over one-quarter of total output, includes public administration, education, health and financial services. Over the past ten years the only marked change has been the decline in the proportion contributed by agriculture (though agricultural output is still rising).

Defence expenditure has made heavy calls upon resources, especially in the engineering industries, at certain periods; in peak years in the early 1950s it absorbed over 10 per cent of the gross national product, but by the end of the 1950s the proportion was about 7½ per cent; in 1964 it was just under 7 per cent.

CHANGES IN NATIONAL EXPENDITURE 1955 TO 1964 1960=100



TRENDS IN GROSS DOMESTIC PRODUCT, OUTPUT AND PRICES SINCE 1900



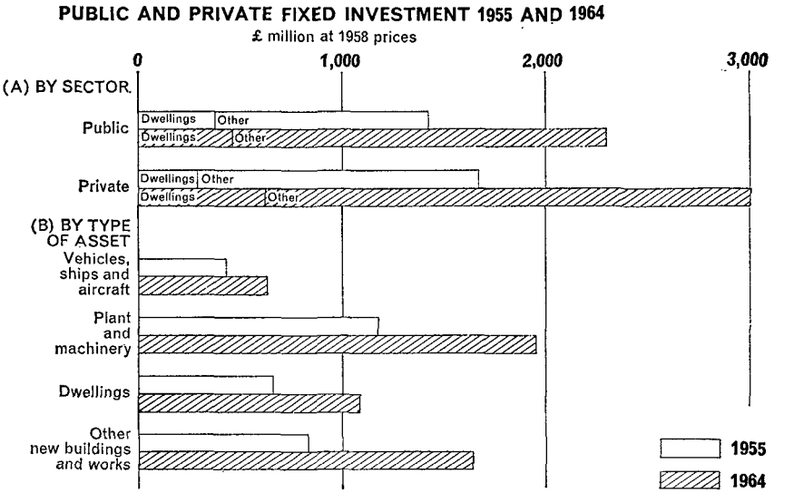
Source: *The British Economy; Key Statistics 1900-1964*

In real terms, between 1955 and 1964 gross fixed capital formation rose by 70 per cent; exports of goods and services and consumers' expenditure both went up by nearly 30 per cent; public authorities' current expenditure was up by 12 per cent, the increase having been concentrated in the period since 1960.

Investment

Gross fixed investment has risen markedly in the last 15 years. In 1948 fixed investment in the United Kingdom was about 14 per cent of the gross national product; it has been maintained at a high level in recent years, reaching 20 per cent in 1964. In some years, such as 1951, 1960 and 1964, the level of economic activity has been influenced by a high and rising investment in stocks and in work in progress. Fixed investment in manufacturing reached a peak of £1,239 million (27 per cent of the total) in 1961. It fell to £1,067 million in 1963, partly as a result of the completion of large programmes in the motor vehicle and steel industries, but recovered to £1,236 million in 1964 (21 per cent of the total). Chemicals and electronics are other manufacturing industries in which investment has been especially high. Housing received a substantial share of capital resources in the early part of the 1950s, but as a proportion of total investment tended to decline until 1958; since then it has risen in real terms by 84 per cent and a further big expansion in house-building is planned for the second half of the 1960s. Electricity generation and transmission and the distributive trades are other sectors in which investment has been at particularly high levels.

Except in 1961, more than 40 per cent of total fixed investment over the years 1951 to 1964 has been carried out by the central Government, the local authorities and the public corporations, the last accounting for an average of



45 per cent of public investment over the period, and the central Government for about 15 per cent. Public investment in 1964 amounted to £2,604 million, an increase of £456 million over 1963, reflecting increased expenditure on education, hospitals, roads, electric power supplies and other services. Table 10 shows the division of gross fixed investment in 1955 and 1964 by sectors and the diagram above shows the division between public and private investment and the pattern of investment according to type of asset in the same years.

TABLE 10
GROSS FIXED INVESTMENT (AT 1958 PRICES)

Sector	£ million		Changes in volume 1955 to 1964
	1955	1964	Per cent
Dwellings	666	1,088	+ 63
Manufacturing	792	1,112	+ 40
Gas, electricity and water ..	382	703	+ 84
Transport and communications ..	323	461	+ 43
Distribution, agriculture and other industries[a]	520	1,130	+ 117
Other	432	820	+ 90
TOTALS	3,115	5,314	+ 70

[a] Includes road goods transport.

An assessment of the value of the stock of fixed capital in the United Kingdom at the end of 1963, made by the Central Statistical Office, gives a

total of £97,000 million at 1958 prices (new). This is about 50 per cent higher than in 1948, on the same basis of calculation. About 30 per cent of the £97,000 million was attributable to dwellings and 22 per cent to assets in manufacturing and construction.

Savings and the Financing of Investment

The marked growth of investment has been greatly facilitated by a substantial increase in personal savings (see Table 11). Personal savings in 1964 amounted to £1,922 million, having risen by £199 million over the previous year. As a proportion of disposable income (8 per cent) personal savings were below the 1961 level of 9 per cent; total savings, however, were more than double the level in 1955.

TABLE 11
SAVINGS IN THE UNITED KINGDOM[a]

£ million

	1955	1960	1964
Personal	570	1,370	1,922
Companies	1,835	2,635	3,168
Public corporations	166	309	593
Central Government and local authorities	614	431	788
TOTALS	3,185	4,745	6,471

[a] Gross saving, i.e. before providing for depreciation and stock appreciation and for tax, dividend and interest reserves.

The rise in personal savings has taken various forms. There has been increased investment by the personal sector itself in new dwellings and fixed assets. Life assurance premiums and other forms of contractual savings, such as superannuation funds, have grown almost without interruption for many years and now contribute about half the total. National Savings have also increased since the early 1950s, although the improvement in 1964 to £357 million still fell short of the record peace-time total of £390 million in 1959. Building societies are able to attract considerable sums of personal savings, which reached a peak of £514 million in 1964.

The largest contribution to savings comes from companies, which up to 1959 provided about half the total, but there was a fall in company profits in 1961 and 1962 compared with 1960 and only in 1963 did their savings pass the 1960 total; in 1964, they increased by about 20 per cent and accounted for about 45 per cent of total savings.

Public corporations, as part of the policy of financing a larger share of their investment needs from their own resources, have raised their savings total considerably since 1959 and the 1964 figure was about a tenth of total savings.

Public Authorities

Current expenditure, i.e. excluding public investment but including interest paid on debt, by the central Government (including the national insurance funds) and the local authorities, has for some years been about one-third of the gross national product, though after falling to a relatively low level in the mid-1950s the proportion has been rising again. It amounted to about 37 per cent in 1964. The main causes of this rise have been the continuing growth of the social services, and especially education, and (since 1960) in

defence expenditure, which accounted for 18 per cent of the total current expenditure of the public authorities in 1964 (compared with a peak of 27 per cent in 1953). Total expenditure by the public authorities rose by a third between 1960 and 1964.

The expansion of the national income has enabled central government tax revenue to increase by about 30 per cent since 1960, despite several reductions in taxation rates. Revenue from the taxes on income in 1964 accounted for 39 per cent of central government receipts, and taxes on expenditure for 37 per cent. National insurance and health contributions accounted for 16 per cent and the remainder was from rent, dividends and interest, and trading income. Receipts from taxes on expenditure, a large part of which were at the higher rates imposed in the 1964 Budget, increased by about 10 per cent in 1964, while receipts from taxes on income rose by only 4 per cent. Revenue from rates imposed by local authorities rose by over 40 per cent from 1960 to 1964. Rates account for 38 per cent of the latter's total receipts, including grants from the central Government.

Table 12 shows how the public authorities collected and spent their revenue, including national insurance and health contributions, in 1960 and 1964.

TABLE 12
COMBINED CURRENT ACCOUNTS OF PUBLIC AUTHORITIES IN 1960 AND 1964

Revenue	1960	1964		Expenditure	1960	1964	
	£ *million*	£ *million*	*Per cent*		£ *million*	£ *million*	*Per cent*
Taxes on income and capital	2,725	3,530	33·4	Central Government current expenditure on goods and services:			
Taxes on expenditure —alcohol, tobacco, purchase tax, etc...	2,623	3,365	31·9	Military defence ..	1,579	1,921	18·2
National insurance and health contributions	913	1,443	13·7	Health services ..	745	940	8·9
Rates	771	1,098	10·4	Other	538	664	6·3
Rent, dividends, interest, etc.[a] ..	672	1,036	9·8	Local authorities' current expenditure on goods and services	1,310	1,906	18·1
Gross trading income	181	85	0·8	Subsidies	498	522	4·9
				Grants and national insurance benefits..	1,751	2,548	24·1
				Debt interest[a] ..	1,033	1,268	12·0
				Surplus	431	788	7·5
TOTALS	7,885	10,557	100·0	TOTALS	7,885	10,557	100·0

[a] Excluding interest on central government loans to local authorities.

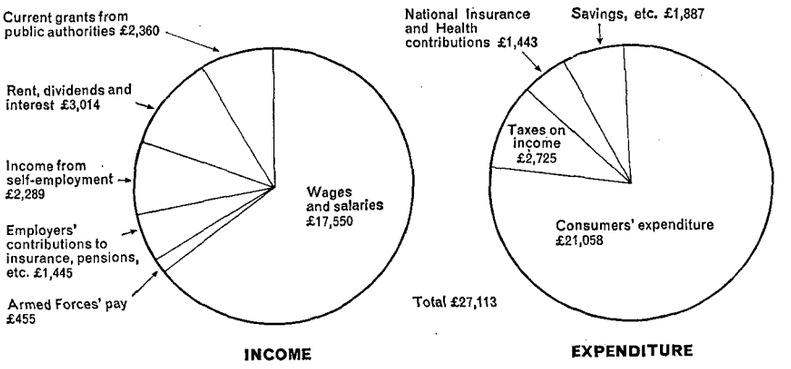
Personal Incomes and Consumer Expenditure

Incomes from employment in 1964 totalled £19,450 million and accounted for nearly three-quarters of total personal incomes (against 60 per cent in 1938). The diagram on p. 253 shows the composition of personal income and expenditure in 1964.

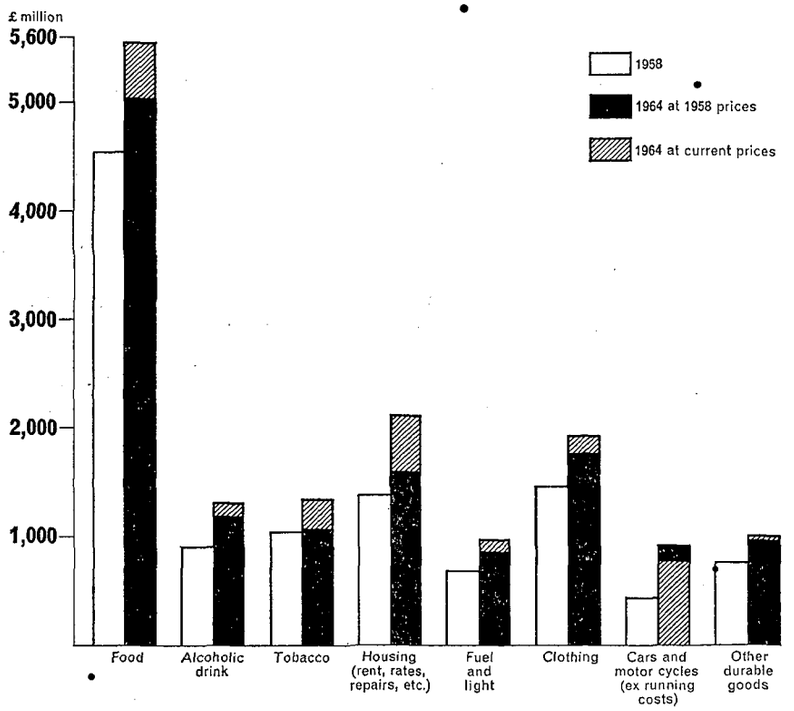
After payment of income tax and surtax, income is fairly evenly distributed. Of a total of 27·2 million incomes in 1962, there were only about 23,000 incomes of more than £6,000 a year. Fewer than a quarter (6·5 million) of incomes after tax were in the £250–500 range and 6·1 million were in the next range of £501–750. The number of incomes of £1,000 a year and above rose from 0·86 million in 1954 to 4·5 million in 1962. Just over 64 per cent

PERSONAL INCOME AND EXPENDITURE, 1964

(In £ million at current prices)



CONSUMERS' EXPENDITURE IN 1958 AND 1964



of the yield from income tax and surtax came from persons with annual incomes in this latter category, although the total incomes before tax of this group accounted for only about a third of all personal income.

The ownership of property and personal assets tends to be more concentrated than income after tax. Estimates made by the Board of Inland Revenue indicate that, in 1963, 78 per cent of net personal wealth (including landed property), amounting to about £63,700 million, was owned by 4,240,000 individuals, 8 per cent of the population.

While consumer expenditure rose by over 60 per cent between 1955 and 1964 to reach a total of £21,038 million, in real terms (i.e. after discounting the effect of price changes) the increase was only about 30 per cent. The proportion devoted to food has been falling slightly each year and now accounts for under 27 per cent (1955, 30 per cent); outlay on tobacco and alcoholic drinks is about 12 per cent of consumer expenditure. Housing absorbs 9 per cent of total expenditure. Spending on motor cars and other personal transport has shown a steep rise for several years, particularly in 1963 and 1964. There has also been a substantial growth in spending on household electrical equipment, fuel and light, and clothing. Outlays on running costs of vehicles have risen from £254 million in 1955 to £666 million in 1964. In general the pattern of consumer spending reflects the social changes and other developments outlined in Chapter 1. The diagram on p. 253 shows the change in consumers' expenditure in real terms since 1958 and at current prices.

Incomes and Prices

As noted earlier, the economy has been greatly affected by an almost uninterrupted upward trend in prices; and the periods of price stability have been of short duration, such as between 1953 and 1954 and again between 1958 and 1960. The main immediate cause has been the tendency for money incomes to rise faster than the long-term rate of increase of national production at a time of full employment, and a very high level of utilisation of productive resources. Since 1953 the average annual rate of increase of domestic incomes has been about 6 per cent, while the increase in the gross domestic product per head of the labour force has been only between 2 and 2½ per cent.

Retail prices rose by 28 per cent between January 1956 and December 1964; over the same period average weekly earnings of manual workers went up by 53 per cent. Company profits are subject to large cyclical swings but since 1955, and especially since 1960, they have increased more slowly than incomes from employment.

Measures taken by the Government to check gradual inflation have included the prevention of excessive demand by monetary and fiscal measures—bank rate, bank advances, hire purchase controls, taxation changes—and efforts to promote voluntary restraint in increases in money incomes of all kinds.

A general prohibition of resale price maintenance has been imposed under the Resale Prices Act 1964 (see p. 277) and legislation was introduced in 1965 to strengthen the Government's powers to deal with monopolies, restrictive practices and, for the first time, mergers. The legislation is intended to encourage competition and thus contribute towards greater stability of costs and prices.

Balance of Payments

A strong balance of payments is vital to Britain because of its exceptionally high degree of dependence on international trade, its many overseas commitments, and its position as banker to the sterling area.

In normal times it is necessary for Britain to earn a substantial surplus on current account in order to finance a capital outflow in the form of private

investment and government grants and loans. There are also, however, important commitments which Britain has to meet within the current account. The most important of these are the costs of overseas military expenditure, which rose from £167 million in 1959 to £275 million in 1964, and economic grant assistance to less developed territories, mainly the dependent territories, which totalled £82 million in 1964; in addition, there is multilateral assistance, in the form of contributions to international agencies, such as the International Development Association.

Britain also has to make repayments of capital and interest on post-war loans from the United States and Canada, the servicing of which requires about £67 million a year. In addition, there has been a substantial increase in recent years in government loans to developing countries. (Total official aid from Britain to overseas countries, including gifts, loans, and subscriptions to international organisations rose from about £130 million in 1959 to just under £300 million in 1964.)

On capital account, the largest component is generally private investment abroad (net of disinvestment) and over the last five years the outflow has averaged well over £300 million a year. A considerable proportion of this outflow has been to the less developed countries and has thus maintained the traditional role of Britain as a source of finance for overseas development. At the same time there is a steady flow of private capital to Britain from overseas, mainly from the United States. In recent years the net capital movement has been outward; it was estimated to amount to £251 million in 1964.

Britain's overseas short-term liabilities in the form of net sterling balances and claims in sterling held by other countries and non-territorial organisations are substantial, amounting to £4,050 million at the end of 1964. Gold and foreign currency reserves at the end of August 1965 stood at £923 million. As a second line of reserves, the United Kingdom has a substantial portfolio of dollar securities of which the market value has recently averaged about $1,250 million. In addition, Britain has drawing rights on the International Monetary Fund (IMF) which it has exercised on four occasions, in 1947, 1956, 1961 and 1965.

Estimates of Britain's total external assets and liabilities show that the United Kingdom is on balance a net creditor country. At the end of 1964 the United Kingdom had a total stock of long-term assets of about £11,000 million. Of this, over £1,000 million were official assets, £4,000 million were private holdings of overseas portfolio securities at market values and about £6,000 million were direct investments of all kinds.

(For a fuller account of the balance of payments, see Chapter 15.)

ECONOMIC PLANNING

In recent years the main objective in government economic policies has been the achievement of faster economic growth. A framework of longer-term economic planning and consultation is being evolved within which the aim is for increases in productivity, industrial efficiency and real incomes to be reconciled with a high and stable level of employment, a favourable balance of payments and the promotion of social justice. A new government department, the Department of Economic Affairs (see p. 256), was set up in October 1964 to be responsible for economic planning. It works in close consultation with the Treasury and other government departments. A Ministry of Technology (see p. 59) was set up at the same time, to stimulate a more

rapid application of scientific and technological advances in British industry. A number of other bodies dealing with economic planning and consultations have been in existence for some years; they include the National Economic Development Council (NEDC), the National Joint Advisory Council (NJAC) and organisations dealing with the special problems of Scotland, Wales and the English regions.

The Department of Economic Affairs

The Department of Economic Affairs has been given the responsibility of framing and supervising the plan for economic development and for the general co-ordination of action to implement the plan, including, in particular, policies for industry, the regions, incomes and prices, and economic growth. It works with representatives of both sides of industry directly and through the National Economic Development Council.

The department is organised into four inter-related groups: an Economic Planning Division concerned with the preparation of medium-term, long-term and very long-range forecasts of the development of the economy; an Industrial Policy Division which is closely linked with the NEDC's Economic Development Committees (see below), and considers and reports on the problems and obstacles to growth in individual industries; an Economic Co-ordination Division, concerned with the application of prices and incomes policy, the relationship of public expenditure programmes to the use of resources and economic growth and efficiency, and the implementation of the growth plan; and a Regional Policy Division responsible for regional policies and planning.

The National Plan, covering all sectors of the economy and prepared in consultation with both sides of industry, was published in September 1965. Its aim is to increase the gross domestic product by 25 per cent between 1964 and 1970. At 1964 prices, the production of goods and services should, therefore, go up by £8,000 million a year by 1970. It will be necessary to increase productivity by 3·4 per cent a year, investment by 5½ per cent a year and exports by 5¼ per cent a year over the plan period. Four essentials to the plan are a sound balance of payments, improved efficiency in industry, a balanced regional development and increased investment.

National Economic Development Council

The National Economic Development Council (NEDC) was set up in February 1962, originally to examine the economic performance of the nation with particular concern for plans for the future in both the private and the public sector, to consider uses of national resources and to seek agreement upon ways of increasing the rate of sound economic growth. The NEDC was reorganised in November 1964. The principal responsibility for preparing a national economic plan was taken over by the Department of Economic Affairs but the NEDC is the designated body for the discussion of policies and through which the involvement of both sides of industry in the formulation and implementation of the plan is secured.

The chairman of the NEDC is the Secretary of State for Economic Affairs. Other members are the President of the Board of Trade, the Minister of Labour, the Minister of Technology, the Chief Industrial Adviser, a number of representatives from both sides of industry, and several well-known economists. The Council, which meets at frequent intervals, has its own permanent staff (not members of the Civil Service) under a Director-General. By mid-1965 it had published a number of reports on factors affecting the rate of growth of the economy, including the results of inquiries into the prospects for growth of a cross-section of industry. To assist it in this aspect

of its work a series of economic development committees have been formed. They are concerned with particular industries and consist of representatives of management, trade unions, government departments and others with special experience.

Long-term Planning of Public Expenditure

Long-term planning of public expenditure, with regular surveys for periods of years ahead, has been much developed by consecutive governments in recent years (see p. 399). In December 1963 the first White Paper was published giving estimates of total public expenditure for five years ahead on the basis of policies and programmes then current. In February 1965 the Government's decision was announced of relating the growth of public sector expenditure between 1964–65 and 1969–70 (excluding the nationalised industries) to the prospective increase in national production. In present circumstances this means limiting the average increase in public sector expenditure, taking one year with another, to $4\frac{1}{4}$ per cent a year at constant prices.

Incomes Policy

In recent years it has become increasingly recognised that a generally stable price level combined with sustained economic growth can only be achieved within the framework of an incomes policy, designed to keep the rise in money incomes broadly in line with the long-term rate of growth in national production.

The incomes policy of the Labour Government, which took office in October 1964, has been developed in three stages in consultation with representatives of management and workers. The Joint Statement of Intent on Productivity, Prices and Incomes, signed in December 1964, formulated the lines of action to be taken by the Government and by management and workers. The Government's tasks are primarily concerned with the working out of a general plan for economic development and specific measures to improve industrial efficiency and raise productivity, as well as to set up machinery to keep a continuous watch on prices and money incomes. The trade unions and the four organisations representing management, the Federation of British Industries, the National Association of British Manufacturers, and the British Employers' Confederation (now merged into the Confederation of British Industry, see p. 267), and the Association of British Chambers of Commerce, for their part have undertaken to work vigorously for higher standards of efficiency and performance and to co-operate in practical measures in the operation of an effective prices and incomes policy.

The next step was the announcement, in February 1965, of the setting up of a National Board for Prices and Incomes. The Board sits in two divisions: a Prices Review Division and an Incomes Review Division. The former division may investigate any price or group of prices of goods and services in private or nationalised industry. The Incomes Review Division may investigate claims or settlements throughout the economy relating to wage and salary increases and changes in conditions of service. The Government retains direct responsibility for all references to the Board. Reliance is being placed on the pressure of public opinion to ensure that compliance with recommendations of the Board is obtained; the Government has made it clear that if the voluntary method is not successful it will have to consider other methods.

The third stage was the publication of a White Paper, *Prices and Incomes Policy* (Cmnd. 2639) setting out considerations which should guide all concerned with prices and incomes policy. General guidance is given on the

cases in which it would be appropriate to raise or reduce prices. It also indicated a 'norm' of 3 to 3½ per cent as an average rate of annual increase of money incomes per head, which is consistent with stability in the general level of prices. The incomes policy generally is within the framework of the Government's plan for economic development (see p. 256).

Prior to the setting up of the National Board for Incomes and Prices, the National Incomes Commission had been set up in 1962 to give impartial and authoritative advice on important or difficult pay questions. It issued several reports on matters referred to it by the Government before it was abolished in 1965.

Regional Economic Planning

Policies for the regions of Britain aim to bring about a more even spread of economic stability throughout the country; to maintain the individual character of the regions; and to modernise and improve the environment. Detailed studies of the regions have therefore been put in hand by successive governments.

The regional development programmes published in 1963 for central Scotland and north-east England seek to stimulate industrial diversification and growth by the modernisation of the regions, including the identification of 'growth zones' in each region, i.e. areas where the factors for rapid and substantial economic growth are most favourable. Extra public service investment on housing, roads and other services is being concentrated on these focal points. A study of south-east England, which concentrated on housing and land use problems, was published in March 1964. Its proposals for dealing with the expected population increase there over the next 20 years are under review by the Government.

Regional Economic Planning Councils and Boards

The Government has established a wider system of regional councils and boards to provide effective machinery for regional economic planning. The councils are concerned with the broad strategy of regional development and the best use of the regional resources. Economic Planning Councils were set up in February and March 1965 for Scotland, Wales and the northern, north-west, Yorkshire and Humberside, east Midland, west Midland and south-west regions of England and two further councils were announced in August for East Anglia and south-east England. Each council consists of about 25 part-time members widely representative of experience in the regions. The councils have no executive powers; they assist in the formulation of the regional plan.

The Regional Economic Planning Boards consist of civil servants representing the main government departments in each region. In the English regions the chairman is an official of the Department of Economic Affairs. In the case of the Scottish and Welsh Boards the chairmen are officials of the Scottish and Welsh Offices. The task of the boards is to prepare draft plans for the region and to co-ordinate the work of the various government departments in implementing the final plan.

11
INDUSTRY

ORGANISATION AND PRODUCTION

The United Kingdom was the first country in the world to become highly industrialised, and today fourteen people work in mining, manufacturing and building for every one in agriculture. It is the world's third largest exporter of manufactured goods and the range of its industrial manufactures reflects its position as one of the most important workshops of the world.

Location

The factors that have influenced the location of industry in Britain are many and various. During the rapid industrialisation of the nineteenth century one of the most important influences was the proximity of coal, the major source of power, particularly when it was associated with ease of access to other raw materials such as iron ore in the West Midlands and salt (for chemicals) in Cheshire, and to the coast, which in turn offered easy access to imported raw materials and a quick outlet for exports. In the course of the past hundred years, the pull exercised by coal has been progressively weakened as improved means of communication and an alternative source of power in electricity have been developed and have enabled advantage to be taken of other sites—for example, those near to big consumer markets and plentiful supplies of labour. The main areas of industrial concentration are still, with one exception (London), the areas which saw the beginning of Britain's industrial greatness and which, with two exceptions (London and Belfast), are on or near coalfields; but many smaller and more widely dispersed centres of industry have grown up, notably in southern England.

During the inter-war period there was a tendency for the 'new' industries, such as those manufacturing motor vehicles, electrical goods and rubber products, to develop rapidly in the south (especially in and around Greater London) and in the Midlands. On the other hand, this period was one of acute depression and mass unemployment for the older industrial areas which specialised in the great staple industries—coalmining, steel, shipbuilding, marine engineering and cotton manufacture. These conditions prompted official action aimed at encouraging the development and diversification of industry in the areas where labour and other unused resources are to be found and discouraging further industrialisation in congested areas.

A brief description follows of the location of British industry, grouped according to broad geographical areas.

Greater London and the South-eastern Region

London, situated at the head of ocean navigation on the Thames estuary, is Britain's capital and main communication centre, probably still the world's most important financial centre, one of the world's three largest cities (with Tokyo and New York) and one of the world's three largest ports (with New York and Rotterdam). Greater London (see p. 70), including the urbanised fringe areas within 50 miles of Charing Cross, has a working population of over six million, of whom over a third are in manufacturing industry. London is the main centre in Britain of the clothing and food and drink industries, of printing, of cinema film production, and of the manufacture of furniture, materials for the arts, precision instruments and many other

specialised products. Small firms predominate in many of these industries and the average size of manufacturing firms (particularly in the County of London) is well below the national average. London, especially its outer ring, is also an important area for light engineering, chemicals and consumer goods and has some heavy engineering plants and a number of important research establishments. Towards the periphery of the London conurbation and in the new urban development outside it, industry, particularly the electronics and a variety of consumer goods industries, has been expanding rapidly; some of the largest aircraft plants are in these areas, for example at Weybridge and Hatfield, as well as the factories, at Dagenham, Luton and Dunstable, of two of the five main motor vehicle manufacturers. Along the lower Thames and Medway estuaries there are large oil refineries as well as some smaller shipyards, a variety of engineering works and an important concentration of the paper and pulp and cement industries.

The South Coast

The Channel coast has been much developed for tourist traffic and as a place for retirement. A great part of the coast eastwards from Bournemouth (population 65,000) consists of built-up areas, which from Brighton (163,000) eastwards are partly dormitories for people working in London. Portsmouth (227,000) is a naval port and has some shipbuilding and general manufactures. Southampton (207,000) is the largest port in Britain for ocean-going liners and its industries include ship repairing, oil refining, cable-making, electronics and synthetic rubber. Dover, Folkestone and Newhaven are packet ports.

South-west England

Devon and Cornwall have a considerable tourist trade and some popular retirement areas. Bristol, the largest city of the south-west (434,000), is a leading port and commercial centre with aircraft, aero-engines, tobacco, food processing, paper, printing and other industries and nearby, at Avonmouth, are important non-ferrous metal and basic chemicals plants. Gloucester (71,000), originally an inland port and commercial town, Cheltenham (74,000), originally a resort town, and the area between and adjacent to them produce a variety of manufactures, including machinery, instruments and accessories and the well-known West of England cloth. Swindon (95,000), besides its railway workshops, has important engineering works. Bath (82,000), originally a resort town and the centre of an agricultural district, has become noted for engineering and other manufacturing.

East Anglia and Lincolnshire

Besides being one of the most productive agricultural regions, the eastern counties possess some sizeable towns. Ipswich (119,000) and Grantham (25,000) are noted for agricultural machinery and implements, and Norwich (120,000) for footwear and food manufacture. Food canning and freezing, based mainly on locally grown produce, have developed rapidly. Scunthorpe (69,000) in Lincolnshire, is an important steel-making centre, and the ports of Great Yarmouth (53,000) and Grimsby (97,000) have extensive fish processing plants, the latter also having a growing chemicals industry.

Midlands

The main industrial area of the Midlands—the West Midlands conurbation—stretches from Birmingham (1,116,000) through the Black Country to Wolverhampton (150,000) and includes portions of Staffordshire, Worcestershire and Warwickshire. It has an unusually wide variety of industry, including notably the manufacture of metals, electrical and engineering products of all kinds, and also jewellery, rubber products, chemicals and domestic metalware. The largest concentrations of motor vehicle manufacture, including components and accessories, in the United Kingdom are situated in the Midlands, at Coventry (314,000) and Birmingham and, farther to the south, at Cowley,

near Oxford (107,000). The smaller conurbation of North Staffordshire, centred on Stoke-on-Trent (266,000), is devoted chiefly to the manufacture of pottery and china and to coalmining, although other industries are growing in importance, while Stafford (48,000) has heavy electrical and other engineering works.

Industrial cities and towns lying outside the main industrial area include Leicester (270,000) noted for hosiery and knitwear, boots and shoes and machinery for making these products; Derby (132,000) for general engineering, aero-engines and man-made fibres; Nottingham (315,000) for hosiery, cycles and a variety of other engineering products, lace, pharmaceutical products, tobacco; Rugby (54,000), electrical engineering; Northampton (105,000), footwear, engineering; Worcester (67,000), machinery; Burton-on-Trent (51,000), brewing and rubber; Chesterfield (68,000), engineering; and Kidderminster (43,000), carpets. Corby (41,000), a new town in Northamptonshire, has a steel industry originally based on local deposits of iron ore, and at Peterborough (64,000) there are several large engineering works. The richest and most highly mechanised coalfield in Britain lies in the north-east of the area and continues into Yorkshire. Some of the towns on the coalfield, such as Mansfield (54,000), have important manufacturing industries, particularly textiles.

Lancashire and North-west England

Manchester (655,000) is the commercial hub of the cotton and man-made fibre textiles industries, a very important financial and commercial centre and a major port. It is also one of the chief centres for electrical and heavy engineering and the production of machine tools, petro-chemicals, dyestuffs, and pharmaceutical goods, while it has a wide range of other manufactures. Most of the cotton and other yarns are spun in Bolton (160,000), Oldham (114,000), and Rochdale (86,000), and at Stockport (in Cheshire) (143,000); farther to the north lie the weaving towns of Burnley (80,000), Nelson (32,000), Blackburn (105,000), Accrington (39,000) and Darwen (29,000); Preston (112,000) and Bury (62,000) both have spinning and weaving plants. In the majority of these towns engineering industries, notably the manufacture of printing, paper making, textile and electrical machinery and heavy commercial vehicles (especially in the Chorley–Leyland area) are, however, more important than cotton, which has been declining for some years. The Lancashire coalfield also lies in the Manchester–Wigan area.

The Manchester Ship Canal, which carries a substantial volume of overseas trade, links Manchester with Merseyside. It passes through the important industrial towns of Warrington (76,000) with its metal industries (such as wire-drawing), Widnes (54,000) with its chemicals, and Ellesmere Port (47,000) with its oil refinery installations, before reaching the Mersey estuary. St. Helens (107,000), to the north of the canal, is famous for glass manufacture. Liverpool (740,000) is the second port of Britain, a great commercial and insurance centre and, after London, the greatest centre for processing imported foodstuffs and raw materials, being noted especially for flour milling, soap manufacture, sugar refining and rubber products. Among its older industries is ship repairing; shipbuilding is a major industry across the river at Birkenhead (144,000). Many new industries, including electrical engineering, the manufacture of other heavy industrial equipment and, more recently, motor vehicle manufacture, have been established in the Liverpool area. Barrow (65,000), in the north-west corner of Lancashire, is a well-known shipbuilding and marine engineering area. Blackpool (181,000) is Britain's most popular holiday resort.

Yorkshire

Most of the county's industry is located in the West Riding, where about three-quarters of the United Kingdom's worsted and woollen industries are found. Bradford (297,000) is the commercial centre of the wool trade and important for worsted; Morley (42,000) and Leeds (514,000) have specialised in cheaper cloths, and Batley (40,000), Dewsbury (54,000) and Spenborough (37,000) in heavy cloth, but their production is becoming more diversified. Huddersfield (132,000) has a reputation for fine woollens and worsteds and Halifax (96,000) for carpets. In most of the larger centres of the wool industry a variety of engineering products are manufactured. Leeds, the commercial capital of the area, has a large ready-made clothing industry and important engineering plants. Farther south is the heavy engineering centre of Sheffield (495,000), famous for its high quality steels, cutlery and tools. The area's extensive coalfields provide nearly a quarter of Britain's coal; Doncaster (86,000), also with tractor and nylon manufacturing, and Barnsley (75,000) are the largest towns on the coalfield. York (104,000), noted for chocolates and confectionery manufacture and with important railway workshops, and Hull (301,000), one of the world's largest fishing ports and with many manufacturing industries, including engineering, vegetable oil processing, paints and sawmilling, are important industrial towns in the East Riding of Yorkshire.

Northern England

The greater part of this region (Northumberland, Cumberland, Westmorland, Durham and the North Riding of Yorkshire) is an area of mountains, lakes and moors and is relatively thinly populated. Most of its population of 3·2 million is concentrated in the coastal strip about 20 miles deep and 45 miles long, from the coalfields north of the Tyne to the Tees. Within this area the main centres are Tyneside (935,000), including Newcastle upon Tyne (267,000), Gateshead, Tynemouth, South Shields, Wallsend and Jarrow; and Tees-side (545,000), including Middlesbrough (158,000) and West Hartlepool. Other large towns are Sunderland (190,000), Darlington (84,000), and Carlisle (71,000).

The whole region is more dependent than other parts of England on traditional heavy industries, notably coalmining, iron and steel manufacture, shipbuilding and repairing and chemicals (the complex of chemical plants on both banks of the Tees is probably the most extensive in Europe), which together employ nearly a third of the male workers. This proportion has been falling steadily as the result of the establishment of industrial estates and other government measures to attract new types of enterprise and promote the diversification of industry. A comprehensive plan for north-east England, to accelerate industrial growth and diversification and the modernisation of the whole environment, is now being implemented (see p. 258). Other manufacturing industries include mining and other machinery, rolling mill plant, earth-moving equipment, machine tools, ropes, glass, clothing and scientific instruments.

Wales

Nearly two-thirds of the population of Wales and Monmouthshire (2·65 million) live in the two counties of Glamorgan and Monmouthshire. In this area are the coal mines which, though long worked and operating at increasing depths, still produce nearly all Britain's anthracite and much of its steam and other specialised coals, and still employ more workers than any branch of manufacturing industry. Rhondda (106,000) and Merthyr Tydfil (59,000) are the largest towns in the coalmining area. The steel industry, with some of the most modern plants in Europe, supplies almost all Britain's output of tin plate and a large proportion of its sheet steel. In the past 30 years many new industries have been established, often located on government industrial

estates; they include plastics, synthetic fibres, clothing, electronics, motor vehicle components and light engineering.

The main urban centres are also the three major ports—Cardiff (261,000), Newport (109,000) and Swansea (170,000). Milford Haven, a magnificent deep-water harbour until recently little developed, has two major oil refineries.

In North Wales a number of light industries, notably man-made fibres, are located in the seaside resorts and other towns, particularly Wrexham (36,000).

Scotland

About three-quarters of Scotland's population (5·2 million) is concentrated in the central Lowlands, a belt some 65 miles wide and 15 to 30 miles deep between the Firth of Clyde and the Firth of Forth. The principal cities in this area are Glasgow (1 million) and Edinburgh (473,000). Clydeside, which includes the city of Glasgow, is the United Kingdom's largest shipbuilding and marine engineering centre; it also has a great variety of general engineering enterprises and other industries. The steel industry, sited mainly in north Lanarkshire, produces a wide range of products. The electronics equipment industry is represented by a growing number of firms in such widely dispersed centres as Glasgow, north Lanarkshire, Dundee and central Fife, as well as in Edinburgh, where this and other modern industries are expanding alongside the long-established engineering, printing and brewing industries. The new towns of East Kilbride, Cumbernauld and Glenrothes have growing concentrations of modern industry, while an entirely new motor car industry has recently been established in Renfrewshire and in West Lothian there has been a major expansion of commercial vehicle building. A fourth new town, Livingston, was designated in 1962.

Outside the central Lowland belt there is considerable industrial concentration in the vicinity of Dundee (185,000) and in Aberdeen (186,000), and a number of towns outside these areas have been attracting light industries in recent years. Dundee's traditional manufacture is jute, but office machinery, clocks and watches and refrigerators are now also made there, while in north-east Scotland is the largest concentration of whisky distilleries.

Most of northern Scotland is mountainous and much of southern Scotland is hilly and rugged. These regions are sparsely populated, but the Scottish Highlands possess significant resources of hydro-electric power (see p. 289). There are high-quality tweed and knitwear industries in the valley towns of the southern uplands and in the Highlands and Islands of Scotland respectively.

Northern Ireland

Although the area is relatively small and lacking in minerals, there is substantial and growing industrialisation, particularly in and around the capital city of Belfast (410,300). The largest single shipyard in the United Kingdom is sited in Belfast and other long-established activities include the manufacture of marine engines, ropes, twine, tobacco and clothing. Northern Ireland has also long been an important centre for textiles; it is particularly well-known for linen but the textile industry is now extensively diversified. Northern Ireland is one of the most important areas in Europe for man-made fibre production and provides about one-fifth of Britain's production. There has also been extensive development in aircraft construction, automobile components, oil-well equipment, electronic instruments, telephone switchgear equipment, toys, shoes, carpets and synthetic rubber.

The Structure of Industry

The pattern of ownership and organisation in industry is varied. Personal, corporate, co-operative and public enterprise all assume a number of different forms, and all are important in the economy. Industrial enterprises vary

from the many small workshops to vast organisations such as the National Coal Board, a public corporation with about 575,000 employees; Imperial Chemical Industries Ltd., a limited liability company which, with its subsidiaries, employs over 100,000 persons in the United Kingdom; and the Co-operative Wholesale Society Ltd., a co-operative society with about 54,000 employees.

Role of Public Enterprise

Throughout the first half of the twentieth century the growth of the social services, especially health, education and housing, led to the progressively greater influence of the public sector of the economy. There was also an increase in the State's direct participation in productive and commercial activities, particularly in the decade 1940–50. State participation is effected mainly through special statutory bodies set up to deal with a particular activity. Such bodies, though not part of a government department, are under a considerable but varying degree of public control (see p. 272). The most important of these statutory bodies are the public corporations which operate major industries and services in the public interest. Altogether over 9 per cent of the labour force works for these bodies, while another 14 per cent is almost equally divided between central and local government.

The public corporation today is, generally speaking, a public body having a clearly defined and specific task. Its managing board and its staff are chosen for their experience and competence in a particular field; they are not civil servants, and although they are accountable to Parliament for their actions in a variety of ways, it is they and not the ministers of the sponsoring departments who are responsible for the management of the corporations. Certain of the corporations are self-supporting; others receive Exchequer grants to help them in carrying out the duties with which they have been charged.

Before the second world war, a number of public corporations were established[1] in those industries and services where it was considered that the national interest required co-ordination or control by a public authority. Their constitutions had no standard pattern and their governing bodies differed in the method of appointment and in composition.

Immediately after the second world war, the nationalisation Acts set up public corporations to run certain major industries and services, including coalmining, inland transport, gas supply, electricity generation and supply, and civil air transport. These post-war corporations are less varied in the structure of their governing bodies, which are appointed by the responsible minister.

The following corporations, the organisation and functions of which are described in later chapters, are now operating or controlling large-scale industries or services:

[1] The principal corporations appointed before the second world war were: (1) the Central Electricity Board, established by the Electricity Supply Act 1926, to rationalise electricity generation and build and operate a main transmission system; (2) the British Broadcasting Corporation, established in 1927 by Royal Charter to provide a national broadcasting service; (3) the Electricity Board for Northern Ireland, established by the Electricity (Supply) Act (Northern Ireland) 1931, to develop electricity supplies in Northern Ireland outside the two county boroughs, Belfast and Londonderry; (4) the London Passenger Transport Board, established by Act of Parliament in 1933, to operate the public transport system of the London metropolitan area; (5) the Northern Ireland Road Transport Board, established by the Road and Rail Transport Act (Northern Ireland) 1935, to acquire public road transport services in Northern Ireland outside the county boroughs; (6) the British Overseas Airways Corporation, established by the British Overseas Airways Act 1939, to take over the operation of the two main existing air transport companies—Imperial Airways and British Airways.

Atomic Energy: The United Kingdom Atomic Energy Authority.

Aviation: The British Overseas Airways Corporation, British European Airways, The British Airports Authority.

Banking: The Bank of England.

Broadcasting: The British Broadcasting Corporation, the Independent Television Authority.

Coal: The National Coal Board.

Electric Power: The Electricity Council, the Central Electricity Generating Board, the Area Electricity Boards, the North of Scotland Hydro-Electric Board, the South of Scotland Electricity Board, the Electricity Board for Northern Ireland.

Gas: The Gas Council, the Area Gas Boards.

Transport: The British Railways Board, the British Transport Docks Board, the British Waterways Board, the London Transport Board, the Transport Holding Company, the Ulster Transport Authority.

Mining and Quarrying

Much the most important of the British extractive industries is coalmining. The coalmining industry of Great Britain (see p. 280) is operated as a single co-ordinated enterprise under the direction of the National Coal Board.

Nearly all other mining and quarrying (iron ore, sand, gravel, chalk, limestone, salt, tin, slate, oil shale and china clay) is undertaken by private enterprises, usually owned and operated by limited liability companies. About 67,000 workers are employed in mining and quarrying, excluding coalmining.

Manufacturing

Most manufacturing is in the hands of private enterprise. Exceptions include fissile materials and radioactive isotopes made by the Atomic Energy Authority, locomotives and rolling-stock built in the workshops of the Railways Board, a considerable quantity of arms and military equipment made in Royal Ordnance factories and other factories operated by the Ministry of Defence (Army Department) and the Ministry of Aviation, and some fighting ships built in naval dockyards operated by the Admiralty Board. Staff of the Stationery Office do some printing and bookbinding, while the repair, and to a limited extent the construction, of post office equipment is carried on in factories run by the Post Office. Certain factories giving employment to the severely disabled are operated by Remploy Ltd., a non-profit-making public company financed on the Vote of the Ministry of Labour, which appoints the directors (see p. 460). The equity of one large iron and steel company, Richard Thomas and Baldwins, is still held by a government agency, the Iron and Steel Holding and Realisation Agency (see p. 302). The Government also holds 51 per cent of the equity of a major oil company, British Petroleum Limited, and has a controlling interest in a few other companies. It is also prepared in special circumstances to make loans to private companies when the public interest may require such assistance.

Surveys of the size of all manufacturing establishments employing more than 10 persons are made periodically by the Ministry of Labour; the results of the most recent of these surveys, based on returns rendered by employers in June 1961, show that nearly a third of all employees in such establishments are in those employing from 100 to 499 persons, while slightly over a third are in establishments employing 1,000 or more persons. A high proportion of the biggest establishments are in the heavy industries, while the average size of establishments in industries making consumer goods is smaller than in manufacturing industries as a whole. Comparisons with results obtained

in earlier surveys on similar lines suggest that there is a slow but significant trend towards an increase in the average size of manufacturing establishments: in 1961, establishments with 1,000 or more employees were found to employ 2,821,000 persons, over 25 per cent more than in 1953 and more than 2½ times as many as in 1935. In addition, there are a very large number of manufacturing establishments with fewer than 11 employees and in these a total of about 750,000 workers are estimated to be employed.

The size of establishments is not in itself an indication of the size of manufacturing enterprises, as a single enterprise may own several establishments, not all of them necessarily engaged in the same or similar activities. The most recent analysis of manufacturing enterprises by size (employment) is provided by the Report of the Census of Production for 1958. An enterprise, as defined in the Census, normally consists of either a single firm or a holding company together with its subsidiaries. Just over half of all employment in British manufacturing industries in 1958 was accounted for by about 950 large private enterprises employing 1,000 or more people, the largest 70 or so accounting roughly for a quarter. A further indication of the size of companies is the value of net assets. Those of the largest, the Imperial Chemical Industries group, total over £950 million, while there are nearly forty companies registered in Britain with net assets of over £100 million.

In some industries a small number of big companies and their subsidiaries are responsible for most of the total production. Examples are oil refining, steel making, non-ferrous metal smelting, the manufacture of motor vehicles and components, aircraft and aero-engines, heavy electrical equipment, bicycles, tobacco, cement, and basic chemicals. Shares in these companies are usually distributed among a great number of holders and it is rare for a few large holders to have a controlling interest. For example, five of the largest public companies each have more than 100,000 shareholders. In recent years there has been a relatively large number of mergers, leading to larger units of control; and in some industries, notably brewing, pharmaceuticals, aircraft, textiles, electrical products and newspaper and magazine publishing, there have been increases in concentration. There has also been a growth of large industrial holding companies, controlling a wide range of subsidiary companies with a diversity of industrial interests.

The way in which the work of production is divided within and between different firms varies from industry to industry and is determined by the most economic methods of production and distribution. In the cotton industry, for example, it is usual for different firms to undertake the various main processes of production (spinning, weaving, finishing), while in the woollen section of the wool textile industry all these processes are commonly undertaken within the same firm. Some of the leading establishments in the vehicles group of industries are primarily engaged on the assembly of parts, many of which have been manufactured for them under contract by specialist firms.

An account of some of the principal manufacturing industries is given on pp. 300–326.

Building and Civil Engineering

In building and civil engineering, large-scale work is usually carried out by private contractors, although the Ministry of Public Building and Works is the largest single employer of building labour while nearly 45 per cent of the industry's output is for public authorities.

Building firms may be divided into those undertaking general building and civil engineering work and those concerned with highly specialised work, many of which operate outside as well as inside the building industry.

Building is an industry of small firms; more than three-quarters of the firms employ fewer than 20 employees. For a fuller account of the building and civil engineering industries, see p. 297.

Industrial Association

From the middle of the nineteenth century, private industrial undertakings have increasingly entered into voluntary association for a number of different purposes. Some of the more important of these purposes may be classified as follows:

1. The provision of common services, the exchange of information, liaison with the Government, and representation of their members' point of view.
2. The regulation of trading practices, sometimes including the regulation of prices (see p. 276).
3. Negotiation with trade unions on wages and conditions of work.

Associations for the first and third of these purposes cover, with varying completeness, most of British industry, but there are wide sectors of industry where there are no collective agreements to regulate trading practices. Employers' organisations which deal with labour matters usually consist of firms engaged in the same type of operation or manufacturing process. Trade associations mainly concerned with representations to the Government, provision of common services or the regulation of trading practices are built up round a product or an allied group of products. In an industrial sector concerned wholly with an allied group of products, a single association may undertake all the required functions.

There are about 80 national federations and probably altogether about 1,500 employers' organisations (mostly regional or local, and members or branches of the national federations) all concerned with negotiation of wages and conditions of work. The number of manufacturers' associations concerned with providing common services is not known precisely, but according to a survey carried out between 1953 and 1956 by Political and Economic Planning (an independent research organisation) some 1,300 were in existence, varying greatly in importance, structure and activities.

The central body representing British industry nationally is the *Confederation of British Industry* (CBI), incorporated by Royal Charter in July 1965. This was established by the amalgamation of three former bodies, the *British Employers Confederation* (BEC) which used to represent employers on labour questions, the *Federation of British Industries* (FBI) formerly the chief spokesman on economic, commercial and production matters, and the *National Association of British Manufacturers* (NABM) representing mainly industrial firms of small or medium size. The CBI is recognised by the Government as a channel for consultation between government departments and representatives of private employers as a whole. It acts as an advisory and consultative body for its members, providing them with information and statistics, ascertaining their collective views and representing them nationally to the Government and the public and also internationally, for example in the Council of European Industrial Federations. CBI representatives sit on a number of government advisory committees, on other statutory bodies and on voluntary bodies concerned with matters affecting industry.

The CBI membership consists of approximately 13,000 individual firms and 280 trade associations and upwards of 50 employers' organisations. Nationalised industries are entitled to apply for a form of association. The CBI has a regional organisation in the United Kingdom and is widely represented abroad.

In matters of common concern the CBI often acts jointly with the Chambers of Commerce. These bodies are open to all kinds of producers and traders and exist to promote the interests of local industry and commerce. The *Association of British Chambers of Commerce*, founded in 1860, is the central organisation to which 101 local chambers of commerce (together with 22 British Chambers of Commerce operating in foreign countries) are affiliated. In Scotland there is an additional central organisation, the *Council of Scottish Chambers of Commerce*, and in Northern Ireland, the *Association of Northern Ireland Chambers of Commerce.*

Relations with Government

The Government can influence industrial development in a number of ways—through fiscal and monetary policy, through the level of public expenditure, through the policies of publicly owned enterprises, by physical controls, by inducements, by exhortation and by the provision of services, information and advice. There are relatively few physical controls over industry: the chief ones, apart from labour legislation and certain export and import controls over a small range of products, derive from powers to stop new building or changes in the use of land and from certain powers to investigate and forbid monopolies and restrictive practices.

A system has grown up whereby a particular government department acts as the main point of contact, or 'production department', for each major industry.

The department through which the Government's relations with trade and industry are chiefly conducted is the Board of Trade (which has regional offices in the principal industrial centres) and its responsibilities cover a wide range of industries and materials. Certain industries and services, however, are the responsibility of other departments, as production departments:

Ministry of Aviation	Aircraft, aero-engines and civil aviation.
Ministry of Technology	Electronics, computers, machine tools and telecommunications.
Ministry of Agriculture, Fisheries and Food	Farming, horticulture, and fisheries in England and Wales; food processing in Great Britain.
Ministry of Power	Coal, oil, gas, electricity (including nuclear power), iron and steel.
Ministry of Transport	Transport services (excluding air transport), roadmaking, and certain sections of the quarrying industry.
Ministry of Public Building and Works	Building, civil engineering and building materials.
Ministry of Housing and Local Government	Housebuilding in England and Wales.
Ministry of Health	Medical and surgical goods.
Department of Agriculture and Fisheries for Scotland	Agriculture and horticulture in Scotland; Scottish fisheries.

Scottish Development Department	Scottish economic development generally (including industry, electricity, roads, housing) in conjunction with the Department of Economic Affairs, the Board of Trade and other departments covering the whole of Great Britain.

The Department of Economic Affairs, set up in 1964, is responsible for framing plans for economic development, policies affecting the growth of the economy and regional development (see p. 256). It has close links with industry through the National Economic Development Council. The DEA works in close association with the Treasury, which remains responsible for fiscal and monetary policy, and with the other departments concerned with economic development. The Ministry of Labour is the channel through which manpower policy is conducted. The Department of Education and Science is responsible for the promotion of education and for civil science, operating in the main through the research councils. The Ministry of Technology was set up in 1964 to promote the application of advanced technology and new processes in industry.

There are separate departments of the Northern Ireland Government for matters within the competence of the Northern Ireland Parliament. The Ministry of Commerce deals with industry, especially the encouragement of industrial development.

Statistical Services

The Central Statistical Office, which is attached to the Cabinet Office, was established in 1940 to provide a comprehensive statistical service to assist the authorities in framing economic and financial policy. Although departments themselves compile statistics relating to their particular responsibilities, and may publish them in their own standard publications, the comprehensive statistical publications are prepared by the Central Statistical Office, which collects the main departmental statistics and compiles its own series from departmental and other information. Statistics relating to industrial and economic affairs may be found in its regular publications: the *Monthly Digest of Statistics*, the monthly *Economic Trends* which also provides a quarterly summary of the balance of payments, *Financial Statistics* (monthly), the *Annual Abstract of Statistics*, the *Preliminary Estimates of National Income and Balance of Payments*, published annually before the Budget, and the fuller *National Income and Expenditure* Blue Book issued later in the year. A general survey is also provided in the annual *Economic Report*, also published shortly before the Budget. *Statistics on Incomes, Prices, Employment and Production*, compiled by the Ministry of Labour to provide factual information for those engaged in wage negotiations, is published quarterly. The *Digest of Scottish Statistics* is published half-yearly by the Scottish Statistical Office, a *Digest of Northern Ireland Statistics* at half-yearly intervals by the Economic Section of the Cabinet Offices of the Northern Ireland Government, and an annual *Digest of Welsh Statistics* by the Office of the Secretary of State for Wales.

In the last seven years there have been considerable improvements in the scope and presentation of official statistics. A much wider range of information is collected and, additionally, the data are often shown at constant prices and in the case of important short-term statistics are seasonally adjusted.

Control and Stimulations of Industrial Expansion

While the Government has no power to direct an individual firm to set up a new factory or plant in any particular area or site, it has sought, on both economic and social grounds, to control the expansion of industry in some areas and to encourage it in others.

One object has been to try to limit the expansion of industry in congested areas, such as Greater London or Birmingham; and the other to induce movement of expanding industry to areas of high unemployment or, secondarily, to new or expanded towns taking population from congested areas. The negative powers required derive from the Town and Country Planning Acts in conjunction with the Control of Office and Industrial Development Act 1965. Under these Acts the consent of the local planning authority is, in general, necessary for any new building, any extension of a building or any change in the use of an existing building. Where industrial floor space of more than 5,000 square feet is to be created (1,000 sq. ft. in the congested Midlands regions and in south-east England), or more than 2,500 sq. ft. of office development in the Metropolitan region (extending 40 miles from the centre of London), such consent cannot be sought without a certificate from the Board of Trade that the development is consistent with the proper distribution of industry.

Assistance for areas of high unemployment began to be given in 1934 (when the inter-war depression was at its worst) and has been given ever since under successive Acts. The main legislative basis of the Government's present positive powers is provided by the Local Employment Acts 1960 and 1963. Under the 1960 Act, the Government's powers of assistance were centred in one department, the Board of Trade, which can name as 'development districts' places where high and persistent unemployment exists or is expected, and can offer a number of inducements to industrialists to settle or expand there. Specifically, the Board can build factories for leasing at favourable rents or sale on deferred terms; make a capital grant towards the cost of an industrialist's own factory or for unusual initial expenses arising solely from the choice of a development district; and make loans towards working capital or for acquiring premises or equipment. The appropriate government departments can also make grants to local authorities for clearing derelict or neglected sites and for improving basic services.

Under the Act, the government-controlled industrial estate companies, which under the Distribution of Industry Acts had run the industrial estates in the development areas, were replaced by three Industrial Estate Management Corporations, one each for England, Wales and Scotland. These corporations are controlled and financed by the Board of Trade.

The rise in unemployment during the severe winter of 1962–63 was particularly marked in Scotland, north-east England and Merseyside. The Government accordingly increased public expenditure particularly in these areas, strengthened its powers under the Local Employment Acts and took certain other measures. To stimulate industrial expansion generally, investment allowances were increased in November 1962. Under the Finance Act 1963, a new business in a development district was allowed to write off its investment in plant and machinery at any rate which it chose (thus postponing tax liability). The Local Employment Act 1963, enhanced the Board of Trade's powers by enabling it to offer standard grants of 25 per cent of building costs and 10 per cent of plant and machinery costs to businesses setting up or expanding in development districts.

Northern Ireland

The Local Employment Acts do not apply to Northern Ireland. The matters with which the Acts deal are the concern of the Northern Ireland Parliament

but the provision of the Finance Act 1963, which gives an industrial undertaking freedom to write off for tax purposes the cost of new fixed plant and machinery at any rate it chooses ('free depreciation'), applies to Northern Ireland as well as to the Development Districts of Great Britain. Under the Industries Development Acts (Northern Ireland) 1945 to 1953, a comprehensive and flexible scheme of assistance (which can include the tenancy or purchase on favourable terms of a government-built factory, together with a grant towards the cost of plant and machinery and the cost of transferring equipment from a factory outside Northern Ireland) can be offered to projects which appear likely to make a desirable contribution to the economy of Northern Ireland. Grants and loans can also be offered to the appropriate authorities for the improvement of basic services if these should be considered inadequate for a given development. Firms which are assisted under the Industries Development legislation are expected to undertake a specific development which will employ an agreed number of persons within a given period. Under the Capital Grants to Industry Acts (Northern Ireland) 1954 to 1962, manufacturing enterprises in Northern Ireland are entitled to claim outright grants of $33\frac{1}{3}$ per cent of their annual expenditure on plant and machinery and industrial building, subject, in the case of firms new to Northern Ireland, to a maximum grant of £200,000 in any one year. This assistance, which is largely unconditional, is intended primarily to encourage modernisation and capital investment.

Since 1945, 186 new firms have been established in Northern Ireland and 150 schemes of expansion carried out with government assistance, developments which at present are employing some 55,000 persons. The Ministry of Commerce is the Northern Ireland government department concerned with the administration of the Industries Development and Capital Grants legislation.

Rural Industries

Encouragement is given to the development of rural industries. In England and Wales there is the Rural Industries Bureau, which, on the recommendation of Rural Community Councils, provides technical advice and instruction to craftsmen and small rural businesses; it also provides loans from the Rural Industries Loan Fund, started in 1940, for the acquisition of equipment and the purchase or improvement of workshops. In Wales the Development Commission[1] has financed small factories to stimulate rural industries and prevent rural depopulation. In Scotland the Scottish County Industries Development Trust, founded in 1935, exercises local and national responsibilities for the development of rural industries, and in Northern Ireland the Rural Industries Development Committee is run with government assistance under the auspices of the Northern Ireland Council of Social Service.

Councils to Promote Industry

In Scotland and Wales there are national organisations devoted to encouraging the expansion and diversification of industry. The Scottish Council (Development and Industry), with a wide membership including local authorities, trade associations, trade unions, chambers of commerce, co-operative societies and banks, is concerned with the economic development of Scotland. It assists the expansion of existing industry, fosters the growth of new industries, especially in areas requiring development, encourages exports, organises

[1] The Development Commission approves and administers advances by grants or loans from the Development Fund, established by the Development and Roads Improvements Fund Acts 1909 and 1910. At the present time the Fund may be used to help and expand agriculture and rural industries and also to promote the development and improvement of fisheries.

exhibitions and publicises Scottish trade and industry. The special problems of the seven crofting counties of Scotland (see p. 343) are the concern of a public authority, the Highlands and Islands Development Board. This was set up to formulate programmes of work and execute any approved proposals; as well as giving advice or financial help, it can acquire land and start businesses. There are several voluntary associations concerned with the needs of Welsh industry as a whole, but the most similar in aims and constitution to the Scottish Council is the Development Corporation for Wales, founded in 1959. In Northern Ireland the Northern Ireland Economic Council was set up in 1965 to assist in furthering economic growth. The chairman is the Minister of Commerce and the membership includes representatives of industry, commerce and the trade unions.

In England certain regions and cities have established industrial development associations which are concerned with studying local industrial needs and with trying to attract suitable industry. These associations are sponsored mainly by local authorities and trade associations, but may also include firms, financial and commercial interests, and individuals in their membership.

Government and the Nationalised Industries

The extent to which the responsible minister has power over the working of the boards which have been set up to run the nationalised industries varies from industry to industry, but two features are common to almost all of them. First, the minister appoints (and may dismiss) the chairman and members of each board, and secondly, he has power to give general directions as to how the industry should be run, but does not interfere in day-to-day management. It is usually also laid down that the board shall give to the minister any information, statistics and financial accounts which he may require. In practice, as the responsible minister is kept fully informed and major policy decisions are reached in consultation with him, there is very seldom occasion for him to issue a formal directive.

The minister also has financial powers and responsibilities. The usual statutory requirement is that the board is required to conduct its business so that receipts at least balance outgoings taking one year with another. The responsible minister is usually empowered (subject to Treasury approval) to say what shall be done with any surplus revenues which may accrue. As regards finance of capital expenditure, the present system is that such finance as cannot be met from internal sources is mainly provided, in the form of interest-earning loans, by the minister from the Exchequer, bank advances being used only for normal requirements of short-term capital.

The minister responsible for each nationalised industry must take steps to see that the interests of the industry's customers are protected. This is usually done by the establishment of representative consumers' councils to consider complaints and suggestions made to them, and to advise the board or the minister on the changes they think desirable.

Government policy towards these industries is subject to the approval of Parliament. Opportunities for parliamentary discussion are afforded by debates, including debates on their annual reports and accounts, and by answers to parliamentary questions, which, in principle, are admissible only if concerned with policy rather than details of administration.

In a White Paper (*Cmnd.* 1337) issued in April 1961 the Government outlined certain general principles which it believed had to be applied for the administration of the nationalised industries to be efficient. Among them were a balancing of revenue accounts over a five-year period, a closer definition of the financial and economic obligations of the industries, and greater freedom

in price policies. In accordance with these principles, financial objectives for the nationalised fuel and power industries and for BEA, the Post Office and the London Transport Board have since been announced.

In order to ensure that parliamentary discussion of the nationalised industries is informed and effective, a House of Commons Select Committee on the Nationalised Industries was established in 1957 to examine the reports and accounts of the nationalised industries and to report to Parliament. Reports issued by the committee have so far dealt specifically with the two Scottish electricity boards, the National Coal Board, the airways corporations, British Railways, the gas industry and the electricity supply industry. These reports have discussed problems of ministerial control, organisation, finance and general policies. A report published in February 1962 reviewed the action taken by the corporations and the Government in the light of the committee's recommendations.

Production and Productivity

Production Trends

Industrial production (mining and quarrying, manufacturing, construction, and gas, electricity and water) was in the first half of 1965 some 4 per cent higher than a year previously, about 32 per cent more than in 1958 and about double the pre-war level. The course of production and the employment from 1959 to 1964 is shown in Table 13.

TABLE 13
PRODUCTION AND EMPLOYMENT IN INDUSTRY, 1959–64 (1958=100)

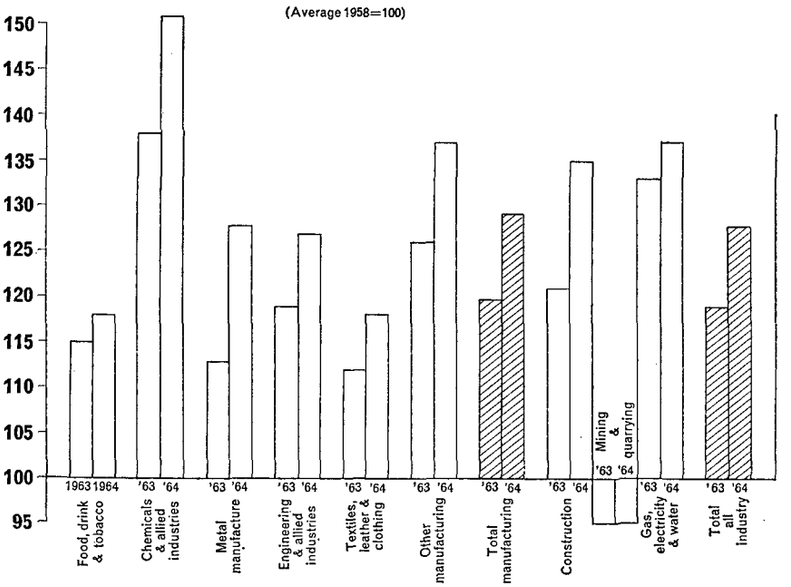
Year	Industrial Production		Employment in Industry
	All Industries	Manufacturing Industries	
1959	105	106	100
1960	112	115	102
1961	114	115	104
1962	115	115	103
1963	119	120	102
1964	128	129	104

Between 1958 and 1964 output in the chemical industry rose by 53 per cent; in engineering and electrical goods by 37 per cent; in metal manufacture by 28 per cent; in vehicles (including aircraft) by 26 per cent; in paper, printing and publishing by 39 per cent; in clothing and footwear by 26 per cent (see diagram on p. 274).

The increases in production since 1958 have been due partly to an increase in the labour force but mainly to a variety of factors influencing productivity, including technical advances in products, machinery and processes; the high and increasing rate of fixed capital formation; more intensive sales promotion and improvements in the management of particular undertakings.

Gross fixed capital formation at home has continued to increase steadily even in periods when demand as a whole was slowing down. In 1964 it amounted to about 20 per cent of the gross domestic product and was estimated to be about 53 per cent greater than in 1958. Part of this rising investment is linked with the introduction of new techniques and equipment and in particular of machines and instruments which lessen the demand for human skill and supervision though they may require more skill from fewer people. All of this is part of the process known as automation, which is giving rise to far-reaching changes in the pattern of industry and in the internal organisation and labour requirements of business enterprises and has already been

INDEX OF INDUSTRIAL PRODUCTION



responsible for consequential increases in production and efficiency which, in the long run, are likely to be very large. Much investment, however, still consists of replacements, additions and improvements of a more traditional kind. In the short run, very large increases in output per man are sometimes achieved by such investment or simply by changes of policy, organisation or methods.

Productivity

Both the long-term and the short-term growth of productivity thus depend most directly on the decisions of individual undertakings, and the promotion of productivity is regarded as primarily a matter for industry though government departments and educational and research establishments also have their contribution to make. Government budgeting and financial policies also have a strong influence on the extent and direction of demand. These, therefore, are framed to a large degree on a realistic assessment of the possibilities of sustained economic growth.

Leading industrialists have been recruited as advisers in the Department of Economic Affairs to help overcome specific obstacles to efficiency and industrial expansion. They work principally through the Economic Development Committees (EDCs), which are offshoots of the National Economic Development Council. The Committees cover particular sectors of industry and bring together managements, unions and government representatives.

Employers' associations and trade unions are engaged in activities to raise industrial productivity. In signing a Joint Statement on Productivity, Prices and Incomes (see p. 257) representatives of trade unions and employers' organisations undertook 'to raise productivity and efficiency so that real national output can increase'. Employers' organisations often provide technical assistance, conduct market surveys, and support schemes of vocational education and training.

The trade unions in many industries organise special schemes for training young people, and also a variety of courses designed to give trade unionists

an understanding of modern management techniques. Private consultants specialising in management and work study are available to give advice to firms on measures to increase their productive efficiency; there are also many specialist institutions, both public and private, concerned with various aspects of productivity.

The British Productivity Council (BPC) was established by both sides of industry to stimulate interest in methods of raising productivity. It was set up in 1952 to continue and develop the work of the Anglo-American Productivity Council. It is an independent body on which are represented the Confederation of British Industry, the Trades Union Congress, the Association of British Chambers of Commerce, and the nationalised industries; its work is financed by contributions from these bodies and by a government grant-in-aid. Advisory committees have been set up to promote productivity in the building trades, in agriculture and in retailing. Much of the BPC's work is done through 130 local productivity committees and associations throughout the country. These local organisations arrange meetings, inter-factory visits, courses, conferences, film shows and exhibitions.

The British Standards Institution (BSI), is a voluntary non-profit-making body incorporated by Royal Charter. It prepares and promulgates standards in respect of, *inter alia*, quality, performance, dimensions, testing methods and codes of practice. Voluntary acceptance of such standards by manufacturers, buyers and sellers reduces unnecessary variety and simplifies the specification of requirements, thus promoting industrial efficiency. The BSI is governed by a council consisting of representatives of the main organisations of employers and workers, professional institutions and the larger government departments.

The Board of Trade is the department responsible for general aspects of the promotion of productivity and it administers the government grants to the BPC, the BSI, and the Council of Industrial Design. The Ministry of Technology, however, is charged with the function of extending the introduction of automatic control systems and advanced techniques into industry and provides technical advisory services. It is also concerned directly with research into such factors as productivity measurement techniques, production engineering and fatigue among operators.

A number of other departments have responsibilities which bear on productivity. The Ministry of Labour has an Industrial Relations Service, which advises firms on personnel management and industrial relations. The Department of Education and Science and the Scottish Education Department are responsible for the technical colleges, at which courses are available in such subjects as work study and industrial engineering. The Ministry of Public Building and Works provides a Technical Information Service for the building industry; and the Ministry of Power and the British Productivity Council sponsor the National Industrial Fuel Efficiency Service. The Ministry of Agriculture, Fisheries and Food provides a number of advisory services which aim at encouraging the efficiency of the farming industry in England and Wales; similar services are provided by the three Scottish agricultural colleges.

Management

During the present century and particularly during and since the second world war, the increasing pace of technical organisational and social change has made the successful conduct of enterprises dependent on knowledge of, and practice in, a complex of managerial techniques for dealing with technical and human problems. In Britain, as elsewhere, there is a growing awareness

of the importance of management as a subject requiring special skills and knowledge. This has been reflected both in a change in the general educational qualifications of recruits to management and in the spread of systematic education and training for management.

The British Institute of Management (BIM) is the central national management body for the study and promotion of scientific management throughout industry, commerce, and public administration. It is entirely financed from industrial and professional subscriptions. The main objects of the BIM are to undertake research into, and provide information on, management practices and techniques, and to encourage the development of education and training for management on a national scale. Management studies and education for management are expanding rapidly in Britain and have become a recognised feature of higher education (see p. 170).

Training courses for higher management are held at a few universities, notably Bristol; by some firms of management consultants; and at the Administrative Staff College at Henley-on-Thames (normally of somewhat longer duration) and Ashridge, Berkhamsted. The larger firms, especially those with wide-ranging responsibilities, often provide general management courses for the training of senior executives, and systems of informal training within an organisation are numerous. There are also various bodies concerned with specialised branches of management, for example the Institute of Personnel Management, the Institution of Works Managers, the Institute of Office Management and, on the sales side, the Institute of Marketing and Sales Management.

The growing number of professional personnel working as management consultants—now probably over 2,000—and the use of the services of independent management selection firms in the appointment of senior staff are indications of the interest in the science of management in Britain.

Monopolies and Restrictive Practices

Legislation in force in the United Kingdom for dealing with restrictions in trade and industry, either by agreements (formal or informal) between suppliers, or by monopolies which dominate the market, is described below.

The Restrictive Trade Practices Act 1956 provides for the registration and judicial examination of restrictive agreements. It requires the entry in a public register of the particulars of a wide range of restrictive agreements (including those relating to common prices, approved lists of dealers and the limitation of production) which affect the supply or processing of goods for the United Kingdom market. The Registrar of Restrictive Trading Agreements is responsible for keeping the register and for bringing the agreements before the Restrictive Practices Court set up under the Act. The Court, which includes laymen but is presided over by one of Her Majesty's judges, is, in effect, responsible for deciding whether or not an agreement is in the public interest. If the parties to an agreement fail to satisfy the Court that any restriction in their agreement produces one or more of seven beneficial effects set out in the Act, and that the restriction is not unreasonable, having regard to the balance between the benefit it confers and any public detriment likely to result from its operation, that restriction must be found contrary to the public interest. Agreements are void in respect of restrictions so found. The Court can make orders preventing the parties from operating their agreement, or from making new arrangements having the same effect. Agreements relating exclusively to exports are not subject to this procedure but have to be notified to the Board of Trade. The first full hearing before the Court took place in October 1958. By the end of December 1964 the Register

contained particulars of 2,505 agreements. Of these, some 1,650 had been abandoned, had expired or had had all restrictions removed from them; and 138 agreements had been the subject of decisions of the Court.

Monopolies and kindred arrangements (except those within the scope of the Restrictive Practices Court) in the circumstances indicated in the Monopolies and Restrictive Practices (Inquiry and Control) Act 1948 may be referred by the Board of Trade to the Monopolies Commission for investigation and report. Production departments take appropriate action on the basis of these reports but no order can be made without the approval of Parliament. The 1956 Act excluded from the scope of the Commission's work agreements which had to be registered under the new legislation. It is now mainly concerned with the investigation of monopolies. Since 1948 the Commission has presented some 26 reports.

In a White Paper published in March 1964 the Government announced proposals for strengthening and extending the legislation on monopolies and restrictive practices. The Monopolies and Mergers Act, passed in 1965, reorganises and enlarges the Monopolies Commission; provides for the investigation of services and of proposed or recently completed mergers at the reference of the Board of Trade; makes special provision for newspaper mergers; and improves and extends the Government's powers for taking action on the basis of the Monopolies Commission reports including new powers to prohibit mergers and break up undesirable monopolies and mergers.

Under the 1956 Act collective enforcement of resale price maintenance was prohibited, but individual suppliers remained free to enforce resale prices in the courts. The Resale Prices Act 1964 makes minimum resale price maintenance unlawful, except in respect of classes of registered goods for which temporary exemption has been sought under the provisions of the Act. Where resale price maintenance is prohibited, it is also unlawful to notify to dealers prices stated or calculated to be understood as the minimum price which may be charged on the resale of goods in the United Kingdom, or to seek to maintain such prices by withholding supplies. Suppliers may continue to practise resale price maintenance on registered goods, pending a decision by the Restrictive Practices Court as to whether a case for exemption has been made out against the criteria in the Act.

FUEL AND POWER

The main primary sources of energy currently used in Britain are coal, petroleum and, to a small extent, water power, nuclear energy and natural gas; secondary sources produced from these are electricity, gas and coke.

Coal, mined within the country, supplies slightly under two-thirds of primary energy and it will remain the principal source for many years to come. For supplies of crude petroleum Britain is virtually dependent on imports. Water power resources are small. A large-scale programme is in hand for the construction of nuclear power stations.

The pattern of primary energy consumption has changed appreciably in recent years, as shown in Table 14 and in the diagram on p. 279. While the proportion of total energy supplied by coal has tended to fall, that by oil has risen from under 20 per cent in 1958 to 27 per cent in 1961 and 33 per cent in 1964. Of the primary fuels consumed in 1964, 62 per cent of the coal and nearly 16 per cent of the oil were converted into secondary fuels.

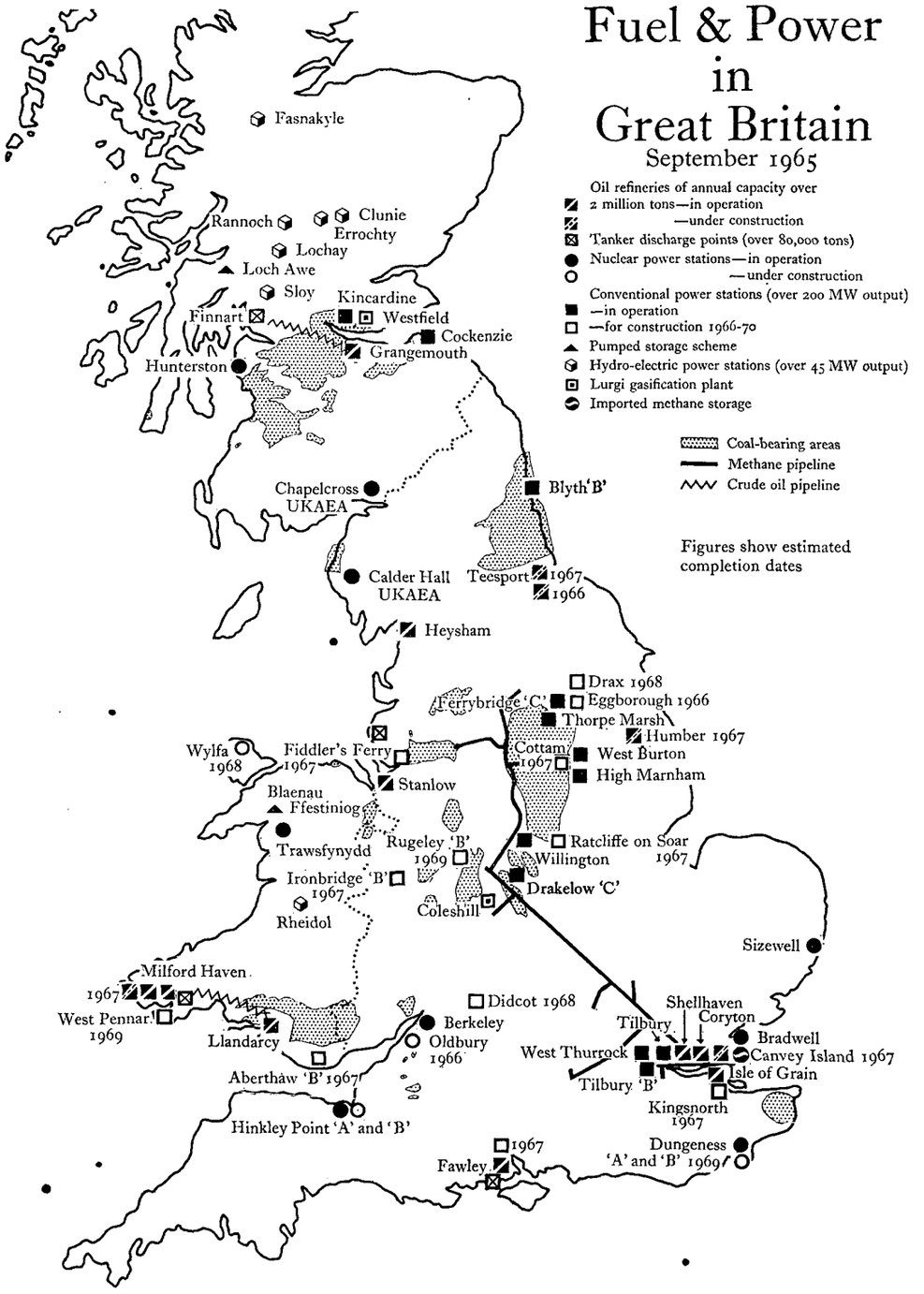

Fuel & Power in Great Britain
September 1965
Oil refineries of annual capacity over
2 million tons—in operation
—under construction
Tanker discharge points (over 80,000 tons)
Nuclear power stations—in operation
—under construction
Conventional power stations (over 200 MW output)
—in operation
—for construction 1966-70
Pumped storage scheme
Hydro-electric power stations (over 45 MW output)
Lurgi gasification plant
Imported methane storage
Coal-bearing areas
Methane pipeline
Crude oil pipeline
Figures show estimated completion dates
Fasnakyle
Rannoch
Clunie
Errochty
Lochay
Loch Awe
Sloy
Kincardine
Finnart
Westfield
Cockenzie
Grangemouth
Hunterston
Chapelcross
UKAEA
Blyth 'B'
Calder Hall
UKAEA
Teesport
1967
1966
Heysham
Drax 1968
Ferrybridge 'C'
Eggborough 1966
Thorpe Marsh
Humber 1967
Wylfa
1968
Fiddler's Ferry
1967
Cottam
1967
West Burton
High Marnham
Stanlow
Blaenau Ffestiniog
Trawsfynydd
Rugeley 'B'
1969
Ratcliffe on Soar
Willington
1967
Ironbridge 'B'
1967
Drakelow 'C'
Rheidol
Coleshill
Sizewell
Milford Haven
1967
West Pennar
1969
Didcot 1968
Berkeley
Oldbury
1966
Shellhaven
Coryton
Tilbury
Bradwell
Llandarcy
West Thurrock
Canvey Island 1967
Isle of Grain
Aberthaw 'B' 1967
Tilbury 'B'
Kingsnorth
1967
Hinkley Point 'A' and 'B'
1967
Fawley
Dungeness
'A' and 'B' 1969

TABLE 14
INLAND CONSUMPTION OF FUEL AND POWER (IN TERMS OF PRIMARY SOURCES OF POWER)

Million tons coal equivalent

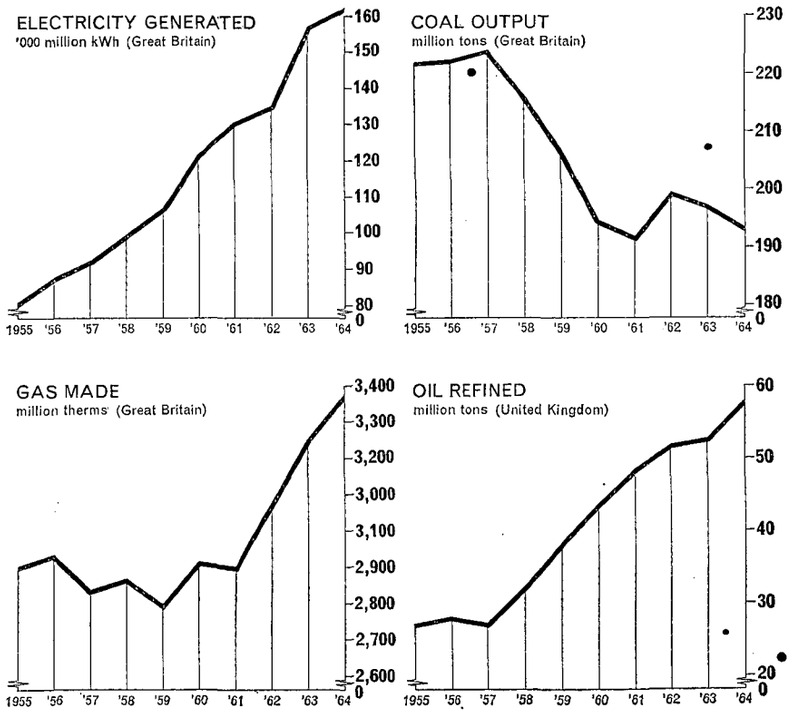
	1959	1960	1961	1962	1963	1964
Coal (net)[a] ..	186·6	195·5	190·0	190·9	193·8	186·6
Oil	56·1	65·5	71·0	78·6	85·3	93·3
Hydro-power ..	1·5	1·7	2·1	2·1	1·8	1·9
Nuclear energy ..	0·5	0·9	1·1	1·5	2·5	3·2
Colliery methane ..	0·1	0·1	0·1	0·1	0·2	0·3
TOTAL ..	244·8	263·7	264·3	273·2	283·6	285·3

Source : *Ministry of Power.*

[a] Gross consumption adjusted for exports and stock changes of coke and manufactured fuel.

The fuel and power industries, with the exception of petroleum, are under public ownership. General responsibility for ensuring the effective and co-ordinated development of fuel and power resources lies with the Minister of Power, who in 1965 appointed an Energy Advisory Council to assist him; on the Council are representatives of the fuel and power industries, major

ENERGY TRENDS 1955 TO 1964



industrial consumers and trade unions. Fuel research is undertaken by the fuel and fuel-using industries. The Minister of Power also has an Advisory Council on Research and Development.

In general, fuel and power industries require heavy capital investment in long-term projects and both internal resources and borrowing are used to raise the large sums needed. Until 1956 long-term borrowing by the corporations was mainly through the issue of stock, except in the case of the coal industry, which borrowed direct from the Exchequer. Under the Finance Act 1956 all the corporations were given power to raise money by means of Exchequer advances from the responsible minister with the approval of the Treasury. These powers were extended and amended by the Finance Act 1958 and by other Acts. Since 1956 all the corporations have obtained their long-term capital by loans from the Exchequer and issues of stock have been suspended.

Investment requirements of the nationalised fuel and power industries in 1965–66 is expected to amount to over £930 million[1]. In 1964 these industries accounted for over one-third of public investment and over one-eighth of all fixed investment.

The responsible ministers—the Minister of Power in England and Wales and the Secretary of State in Scotland—are required by statute to set up consultative councils to ensure the protection of the interests of consumers of fuel. Councils were established for coal in 1947, for electricity in 1948 and for gas in 1949. The councils each consist of a chairman and from 20 to 30 unpaid members. These are appointed by the minister from nominations put forward by interested bodies selected by the minister as representing consumers. In the electricity and gas supply industries councils and committees have been formed on an area and district basis; for coal there are councils at national level only.

COAL

Coal has been worked in Britain for over 700 years and an organised coal-mining industry has been in existence for over 300 years, some 200 years longer than in any other country. British coal exports dominated the world market until about 1910. By 1913—the peak production year—the industry was producing 287 million tons of coal, exporting 94 million tons and employing over a million workers.

The very fact that the British industry was developed so early has meant that many of the best seams of coal are now worked out; every year coal has to be mined from deeper and thinner seams and productivity can be maintained only by a high level of re-equipment and constant modernisation.

Attempts to secure economies through amalgamation date from the Sankey Commission of 1919. In 1930 a Coal Mines Act established commissioners to bring about the formation of larger and more efficient units. The Coal Act of 1938 transferred ownership of mineral coal royalties to the State. During the second world war the industry was under government control.

The National Coal Board

The Coal Industry Nationalisation Act 1946 brought the industry under public ownership; by this Act, all its assets—coal mines, mineral rights and ancillary undertakings—were vested on 1st January, 1947, in the National Coal Board (NCB), which became responsible for the industry's management, compensation being paid to the former owners. Under the Coal Industry Act 1949 the Board, which is appointed by the Minister of Power and is

[1] *Loans from the Consolidated Fund*, 1964–65. *Cmnd.* 2624.

responsible through him to Parliament, consists of a chairman and not fewer than eight or more than 11 other members.

The National Coal Board has the exclusive monopoly to mine coal in Great Britain, though it may license privately owned undertakings to work small mines not employing more than 30 underground workers, and also to work open-cast sites where the total output is not expected to exceed 25,000 tons.

The NCB is responsible for its own regional organisation. The main collieries, numbering 545 at the beginning of 1965, are grouped into 40 areas which are the basic units for commercial management; their size varies according to geological, geographical and other technical considerations. The areas are grouped into eight divisions which roughly correspond to the main coal-bearing regions. A divisional board for each division supervises and co-ordinates the work of the areas (except in the small south-eastern division, which is administered by a general manager), formulates divisional policy, and is answerable to the NCB, which is responsible for questions of national policy, finance and the co-ordinating of major schemes of development. The day-to-day work of running the collieries is under the direction of colliery managers. The NCB, however, has no monopoly of sales or distribution. It makes some direct sales to large consumers and also retail sales in a few areas. Most retail distribution is in the hands of private firms.

The NCB has made surpluses in some years and deficits in others. In certain areas, such as Scotland, Lancashire and South Wales, deficits have been persistent, and profits from areas of high productivity, for instance the East Midlands, have not been sufficient to cover the losses. The Board's aim is to break even, after paying interest and making proper provision for depreciation. By April 1965 the cumulative deficit amounted to £90·8 million. The decision by the Government to write down the total capital debt to the Exchequer (see p. 283) will make an appreciable reduction in the annual interest charges now borne by the Board.

Production and Manpower

It has been estimated that Britain's workable reserves of coal will last for about 200 years at current rates of consumption.

The main coal-bearing areas are: (1) the Yorkshire, Derbyshire and Nottinghamshire field, which produces about 48 per cent of the total output, (2) the Durham and Northumberland field, (3) the South Wales field, and (4) the Scottish field. Other important coal-bearing areas are those of Lancashire and the West Midlands (Staffordshire and Warwickshire). Prospecting for coal continues both inland and off the north-east coast of England.

The main trends in coal production and manpower since 1947 are shown in Table 15.

In addition to exploration for new workings, forward planning lays emphasis on the need for further mechanisation and the reorganisation of the haulage system. With machinery rapidly replacing manpower, productivity rose by 23 per cent between 1961 and 1965. At mechanised faces average output per manshift is 6·5 tons, compared with 3·75 tons at non-mechanised faces, the average for all mines being about 5 tons. In 1964 output per manshift at NCB mines rose by 4·2 per cent to 5·4 tons with 26,000 fewer workers.

Consumption and Overseas Trade

Coal consumption in Britain increased by an average annual rate of nearly 4 million tons between 1947 and 1956; inland sales fell sharply between 1956 and 1959 and large stocks of coal accumulated at pit heads. Growing competition from oil, increasing efficiency in the use of coal and reduced requirements

TABLE 15
COAL INDUSTRY STATISTICS, 1947–64

	Unit	1947	1955	1963	1964
Total output	million tons	196·6	221·6	195·8	193·6
of which, open-cast ..	,,	10·0	11·4	6·1	6·8
Inland consumption ..	,,	184·5	215·2	194·0	187·1
Export (inc. bunkers) ..	,,	5·3	13·9	7·6	6·0
Output per manshift[a]:					
coal face	tons	3·02	3·37	4·87	5·12
overall	,,	1·09	1·24	1·65	1·72
Workers at coal face (average)[a]	persons	270,500	278,800	191,900	181,300
Labour force (average)[a] ..	,,	701,500	698,700	523,800	497,800
Percentage of output[a] mechanically:	per cent				
loaded	,,	2·4	9·9	66·7	73·0
cleaned	,,	48·3	57·9	61·2	61·8

Source : *National Coal Board.*

[a] N.C.B. mines only.

by the gas and iron and steel industries have largely contributed to the fall in demand for coal. In 1963 the Board's stocks at collieries and open-cast sites were reduced by 5·7 million tons but a marked fall in demand in 1964, partly attributable to mild weather, led to a further small rise in both distributed and undistributed stocks.

Over one-third of total output is consumed by the electricity authorities and over one-quarter by domestic and industrial users together. Coke ovens and the gas industry are other large users. Consumption by the electricity industry has increased by nearly 50 per cent since 1958, whereas the requirements of all the other main classes of consumer have declined. For domestic users this fall has been slightly offset by increased purchases of solid smokeless fuels.

Coal exports have fallen heavily in relation to pre-war levels, due, at first, partly to increased internal consumption and, more recently, to keener competition. Strenuous efforts have been made to recover overseas markets and in 1963 exports of coal, coke and briquettes rose to 10 million tons, falling back in 1964 to 7·4 million tons, valued at £37 million. The principal markets are the Netherlands, France, Denmark, Norway, Belgium, the German Federal Republic and the Irish Republic.

Capital Investment and Development

The National Coal Board raises capital by borrowing directly from the Exchequer. At present there is a statutory limit of £750 million on such borrowing, but borrowing above £700 million must be authorised by Order in Council. In addition the Board may, with the permission of the Minister of Power, borrow temporarily (by way of overdraft or otherwise) up to £20 million. The greater proportion of investment, however, is financed from internal resources.

Capital expenditure by the industry totalled £462 million from 1947 to 1955 and about £790 million in the nine years 1956 to 1964. At the end of 1964–65 financial year the total capital debt to the Exchequer amounted to about £960 million; but a substantial proportion of this sum (estimated at about £400 million) represented the undepreciated book value at notional cost of

the mines which had closed or were scheduled for closure during the present decade. In July 1965 the Government announced that a fresh study was being made of the NCB's capital structure as the industry appeared to be considerably overcapitalised. Legislation is to be introduced before the end of 1965 to effect a capital reorganisation, including the writing off of about £400 million of the existing debt.

About three-quarters of coal output will come from new and reconstructed collieries by 1966; many will have a daily output of up to 6,000 tons while a few will be capable of up to 8,000 tons. Horizon mining methods are being extended, lay-outs for pit-bottoms, new designs for loading stations and mechanical handling methods are being widely introduced. Remotely operated longwall faces are operating successfully at two collieries and experiments are being extended to others. The Bevercotes colliery in the East Midlands is the first in the world to be fully mechanised and automated from the coal face to the surface; it commenced operations in the second half of 1965. Exploration of coal reserves is being intensified and boring for coal under the sea has been completed in the Firth of Forth and is in progress off the Durham coast.

Research

The NCB has three research organisations: a Coal Research Establishment, at Stoke Orchard, near Cheltenham, Gloucestershire, providing facilities for fundamental research; a Mining Research Establishment, for the investigation of underground problems, at Isleworth, Middlesex; and a Central Engineering Establishment for developing new machines and testing equipment, near Bretby, Derbyshire. In 1959 the Board set up a new department concerned primarily with the further development of new processes for making smokeless fuels. In 1947 the NCB took over the Coal Survey, a national organisation for surveying coal resources within Britain; it has 70 laboratories in the various coalfields.

A number of autonomous research associations receiving grants from the NCB and the Ministry of Technology include the British Coal Utilisation Research Association, the British Coke Research Association and the Coal Tar Research Association. Much of the work of other bodies, such as the Safety in Mines Research Establishment (SMRE), is closely related to the Board's problems; the SMRE carries out research on explosions and fires, pneumoconiosis, engineering and metallurgy.

PETROLEUM

The petroleum industry in Britain dates back to 1850, when Dr. James Young, a Glasgow chemist, succeeded in obtaining lamp oil and lubricants from natural mineral oil occurring in the Derbyshire coal measures. The Scottish shale deposits, yielding similar products, were first worked in 1858 and ceased production in 1962.

Indigenous Production

Sources of crude oil within Britain meet only 1 ton in every 600 of total United Kingdom requirements, the remainder being imported from overseas. Annual production of crude oil from indigenous oilfields now totals nearly 130,000 tons.

Prospecting for crude petroleum has so far led to the establishment of several small oilfields, notably in Nottinghamshire (Eakring, Egmanton and Bothamsell), in Leicestershire (Plungar), in Lincolnshire (Gainsborough), in Lancashire (Formby) and in Dorset (Kimmeridge).

Seismic prospecting in the North Sea has been going on since 1962. Under the Continental Shelf Act 1964, the Minister of Power, by a system of licensing for exploration and production, controls those activities in the areas

over the Shelf appertaining to the United Kingdom. Britain's share of the North Sea shelf amounts to about 100,000 square miles. In September 1964 production licences covering nearly 32,000 square miles were issued to 23 concerns; in August 1965 a further 36,000 square miles of new areas (in addition to the areas not previously taken up) were made open to offer. Besides the North Sea, these new areas are along the south coast of England, around the Orkney and Shetland Islands, and in the eastern half of the Irish Sea (including the coastal waters of the Isle of Man). Drilling is now in progress but positive results are not expected for some time.

International Trade

British and British-Dutch oil companies have been responsible for developing the oil resources of many countries to mutual advantage, especially in the Middle East, Far East and Caribbean areas.

Today these companies produce about one-third of all oil entering into international trade, with a tanker fleet (partly owned by them and partly on charter) amounting to nearly a quarter of the world's tanker tonnage. (United Kingdom registered tanker tonnage is nearly one-seventh of the world's total.)

In 1964 the United Kingdom imported 59·5 million tons of crude oil valued at £410 million, the largest single item among imported products; approximately 30 per cent came from Kuwait, the other largest suppliers being Iraq, Libya, Venezuela, Iran and Nigeria, in that order.

Consumption

Deliveries of petroleum products for inland consumption in 1964 totalled slightly over 61 million tons, having risen by one-third in three years. An outstanding feature has been the continued rapid advance in use of black oils. Fuel oil consumption has been rising at the rate of over $1\frac{3}{4}$ million tons a year since 1960 and totalled over $24\frac{3}{4}$ million tons in 1964. Demand for gas and diesel oils (excluding that used in road vehicles) rose to 6 million tons in 1964. Sales of motor spirit in recent years, after expanding by half a million tons annually for some years, rose by nearly 1 million tons in 1964 to 10 million tons.

A more detailed analysis of deliveries of gas and diesel oils for 1964 shows that their most important uses were for non-industrial central heating, agricultural tractors and the railways. Electricity generation accounted for about 22 per cent of total fuel oil consumption, excluding that used in oil refineries; the steel industry accounted for 16 per cent and non-industrial central heating for a further 11 per cent. Of the remainder, the largest users were the cement, paper-making, general chemical, glass, non-electrical engineering and fishing industries. Demand for most other products increased in 1964 but the use of high octane gasolines and certain minor products, notably kerosene and vaporising oil, showed a further fall.

Refineries

Before 1939 three-quarters of the United Kingdom's supply of petroleum products was refined overseas, as it was considered more economical to refine at the source of production. Since the second world war, however, the industry has come to favour the siting of refineries in the consuming areas.

By mid-1965 rated refinery capacity in the United Kingdom amounted to over 69 million tons a year. Of the 19 refineries in operation, five have a capacity of under 0·2 million tons. The six largest are situated at Fawley, near Southampton (11·3 million tons); Stanlow, in Cheshire (10·4 million tons); Isle of Grain (10 million tons) and Shellhaven (9·5 million tons), both on the Thames Estuary; and two at Milford Haven, in Pembrokeshire (6·3 million tons and 4·6 million tons). Other important refineries are located

at Belfast, in South Wales (Llandarcy), and on the Firth of Forth (Grangemouth). These, and other projects in hand or planned, will bring Britain's total capacity to about 99 million tons a year by the end of 1968.

Output of refined products (excluding refineries' own consumption) has risen steadily; from 4 million tons in 1948 to 25½ million tons in 1954, 40 million tons in 1960 and the record total of 54 million tons in 1964. There is a substantial external trade in refined products which tends to follow trading and seasonal requirements and the commercial arrangements of the oil companies. Exports from Britain, mainly in the form of heavier products to European countries, were valued at £100 million in 1964; imports of refined products including liquefied gases amounted to £174 million.

Oil Pipelines

Three major oil pipelines are at present in operation in Britain. Two of these—one in Scotland (from Finnart on Loch Long to Grangemouth) and one in South Wales (from Angle Bay, Milford Haven, to Llandarcy)—carry crude oil from harbours capable of berthing very large tankers to refineries; and one, from Walton-on-Thames to London Airport, carries aviation fuel. Pipelines carry refined products from refineries to major marketing areas, where the volume transported is sufficient to justify the capital cost; for example, one runs between Stanlow, Cheshire, and Urmston, near Manchester, and another, 78 miles along, takes petroleum feedstock from Fawley refinery to the £100 million petroleum chemicals project at Severnside, near Bristol; a third carries refined products from Fawley to west London and London Airport. Advanced surveys are at present in hand for the construction of a system of pipelines linking the Midlands with refineries and installations on the Thames and Mersey and with a connection from the Fawley–west London pipeline. There are also projects for linking the Tees with the Mersey. Meanwhile, parts of the system of pipelines laid during the second world war are being used by the petroleum distributing companies. The Pipelines Act 1962 is designed to secure the orderly development of privately-owned industrial pipelines.

Research

Research into problems of petroleum technology is carried out mainly by the leading oil companies, which have also endowed research at the universities on a substantial scale. Research centres are situated at Sunbury-on-Thames (the British Petroleum Company), Thornton, in Cheshire, and Woodstock, in Kent (Shell), and Abingdon, in Berkshire (Esso). The first of these covers the full range of petroleum research and development, from geology and production to product utilisation and petroleum chemicals. In general, the remainder are concerned with the evolution of new and improved lubricants and the development of new uses for oil and of new products based on oil, especially chemicals.

ELECTRICITY SUPPLY

A public supply of electricity was first provided in Britain in 1881, at Godalming, Surrey. From its earliest days a measure of public control has been a feature of the industry and the Electric Lighting Act 1882 authorised the Board of Trade to grant licences for the establishment of electricity undertakings by local authorities or by companies (which the local authorities might compulsorily purchase after a given period of time) to supply consumers in given areas. By the turn of the century a variety of independent supply systems had grown up all over the country. In 1919 the Electricity Commissioners were set up as a supervisory body and to promote reorganisation on a national scale through voluntary agreement. In 1926 the Central Electricity

Board was established to co-ordinate more efficiently the generation of electricity.

Organisation under Public Ownership

Under the Electricity Act of 1947, a central authority, then known as the British Electricity Authority, and 14 Area Electricity Boards took over in April 1948 the assets of former municipal and private electricity supply undertakings throughout Great Britain, except in the area already served by the North of Scotland Hydro-Electric Board (see below). Under the Electricity Reorganisation (Scotland) Act of 1954, the authority's power stations and transmission lines in Scotland were taken over in April 1955 by the South of Scotland Electricity Board (see p. 287). The name of the authority was changed from British Electricity Authority to Central Electricity Authority.

On 1st January, 1958, under the Electricity Act 1957, the Central Electricity Authority was dissolved and replaced by two new bodies, the Electricity Council and the Central Electricity Generating Board.

The present organisation of the electricity supply industry, in which about 242,000 people (including 4,500 in Northern Ireland) are employed, is described below.

England and Wales

The *Electricity Council*, the central body of the industry, is composed of a chairman, two deputy chairmen, not more than three other persons, and the chairman and two other members of the Central Electricity Generating Board, and the 12 chairmen of the Area Electricity Boards. The main functions of the Council are to advise the Minister of Power on matters relating to the electricity supply industry. The Council is responsible for a number of common services, including capital financing and research.

The *Central Electricity Generating Board* (CEGB) consists of a chairman, deputy chairman and not fewer than six, nor more than eight, other members. The Board's primary functions are to generate or acquire supplies of electricity and to provide bulk supplies to the area boards.

The *Area Boards* (of which there are at present 12) are responsible for the distribution and sale of electricity. Each consists of a full-time chairman and deputy chairman and five to seven members (mostly part-time).

Area Consultative Councils were set up under the Electricity Act 1947 in the area of each board to represent the interests of consumers; their chairmen are *ex officio* members of their respective Area Boards.

The Minister of Power in England and Wales appoints the chairmen, deputy chairmen and members of the Electricity Council, the Central Electricity Generating Board, the Area Boards and the Consultative Councils; approves each Board's capital development programmes and the industry's research programme; and approves, in consultation with the Treasury, the boards' borrowing requirements.

The Central Electricity Authority (and its successors the Electricity Council and the Central Electricity Generating Board) together with the Area Boards, have made a surplus on revenue from their operations in each of the years since they were established. Up to and including the financial year 1964–65, these balances of revenue amounted in the aggregate to nearly £370 million. Under the 1957 Act, each electricity board, not merely the industry as a whole, must pay its way, taking one year with another.

Scotland

The *North of Scotland Hydro-Electric Board* (NSHEB) was set up in 1943 as a public corporation to develop the water-power resources of the Highlands and Islands and to distribute electricity in the more sparsely populated parts of Scotland not covered by existing undertakings. The Board consists of a

chairman, and not less than four nor more than eight other members, of whom one or more may be appointed deputy chairman. Since 1948 the Board has been solely responsible for all generation and distribution in the area, which covers that part of Scotland north and west of a line running roughly from Dumbarton on the Firth of Clyde to Newburgh on the Firth of Tay.

On 1st April, 1955, the *South of Scotland Electricity Board*, answerable to the Secretary of State for Scotland, took over the then British Electricity Authority's functions in Scotland, and also the functions of the two area boards in the south of Scotland, which were dissolved. The Board consists of a chairman, and not less than four nor more than eight other members, of whom one or more may be deputy chairmen.

A consultative council to represent the interests of consumers has been appointed for the district of each board by the Secretary of State. The Secretary of State appoints the chairmen, deputy chairmen and members of the Scottish Electricity Boards; approves their capital development and research programmes; and, in consultation with the Treasury, their borrowing requirements.

Northern Ireland

In Northern Ireland electricity is generated at power stations in Belfast and Londonderry and at Ballylumford and Coolkeeragh. Those in Belfast and Londonderry are owned and operated by the city corporations and the remainder by the *Electricity Board for Northern Ireland*. Generation at these stations is co-ordinated by the *Northern Ireland Joint Electricity Committee*, set up by statute in 1948, which purchases their output and resells it to distributors—the Belfast Corporation, for Belfast and district, the Londonderry Corporation for the City of Londonderry, and the Electricity Board for the rest of Northern Ireland.

Generation

As Britain has abundant supplies of coal, together with good rail and water transport for moving it, most of its electricity is produced by coal-fired steam generating stations. The development of hydro-electricity on any scale is comparatively recent, water power resources being relatively small and in remote areas, but nuclear energy is now contributing an increasing volume.

The output capacity of the generating stations of the electricity boards in Great Britain at the end of 1964 totalled 37,120 megawatts (MW), an increase of about 25 per cent since 1960.

In the years 1960 to 1964 an annual average of nearly 2,000 MW of generating capacity was installed, but it is expected that capacity of over 20,000 MW in England and Wales will be commissioned in the period 1965–68 inclusive. In the north of Scotland it is planned to increase capacity from 1,221 MW at the end of 1964 to 1,660 MW by 1970. The South of Scotland Electricity Board's proposals provide for its total installed capacity of 2,785 MW at the end of 1964 to be increased to 5,752 MW by 1970.

Sales of electricity in Northern Ireland (where, of the total installed generating capacity of 737 MW, 180 MW is in oil-fired and the remainder in coal-fired thermal stations) amounted to 2,050 million kilowatt-hours in 1964.

Generation by the public supply in Great Britain exceeded 162,000 million kilowatt-hours in 1964: conventional power stations provided 96 per cent of the total and hydro-electric and nuclear stations about 2 per cent and 3 per cent respectively. The high rate of expansion of output, which has been a feature of the industry since its earliest years, has been maintained. Total production increased by nearly 65 per cent between 1958 and 1964; during the severe winter of 1962–63 peak demand reached 35 million kilowatts, so far the heaviest load imposed on the system.

Generation of electricity outside the public supply system is relatively small—about 18,000 million kilowatt hours in 1964. The major sources outside the fuel industries themselves are the iron and steel and paper industries and the nuclear power stations of the AEA.

An analysis of electricity generation in Great Britain is given in Table 16.

TABLE 16
ELECTRICITY GENERATION FOR PUBLIC SUPPLY IN GREAT BRITAIN, 1964

	Output capacity		Electricity sent out	
	MW		million kWh	
Central Electricity Generating Board ..	33,411		138,439	
South of Scotland Electricity Board ..	2,499		9,979	
North of Scotland Hydro-Electric Board	1,210		2,933	
		37,120		151,351
Steam	34,494		143,175	
Oil engines	106		146	
Hydro plant	1,644		3,406	
Nuclear plant	876		4,624	
TOTAL		37,120		151,351

Source : *Ministry of Power.*

In the mid-1950s, when a coal shortage seemed likely, programmes for oil-firing at conventional thermal stations and for generating from nuclear energy were introduced. There are thirteen oil-burning power stations, or parts of stations, operating in Great Britain. They are mainly situated on river estuaries and thus able to be fed conveniently from oil refineries.

Conventional Thermal

The electricity authorities are the largest consumers of primary fuel in Britain and, although most of their electricity generation is based on coal, oil consumption rose from a negligible quantity in 1955 to over 5·5 million tons in 1962 falling back to 5·3 million tons in 1964. Average thermal efficiency of conventional steam stations in England and Wales (i.e. the ratio of power output to the fuel consumed) rose from 20·75 per cent in 1947 to 27·67 per cent in 1964 as new plant was brought into use. The twenty most efficient stations, containing much of the newest plant, had an average efficiency of 33·19 per cent in that year.

The largest generating sets in operation are the 550 MW set at Thorpe Marsh, near Doncaster, which came into operation in 1963, and sets of 350 MW capacity at Blyth 'B' station in Northumberland and Drakelow 'C' at Burton. These large machines show substantial economies in capital cost, in fuel consumption and in operating costs. Larger sets, of up to 660 MW capacity, are planned. Station capacities are also increasing: the largest stations under construction in England and Wales include ten with individual capacities of 2,000 MW (from four 500 MW generating sets) at West Burton, Ratcliffe and Cottam in Nottinghamshire; Ferrybridge 'C' and Eggborough in Yorkshire; Fawley in Hampshire; Fiddler's Ferry in Lancashire; Kingsnorth in Kent; Pembroke; and Didcot in Berkshire. These stations will come into service between 1965 and 1968. Ministerial consent has been given for a station of 3,000 MW (possibly 4,000 MW) capacity at Drax, in Yorkshire, and for a 1,000 MW station at Rugeley 'B', in Staffordshire. In Scotland a 1,200 MW station is under construction at Cockenzie and a 2,400 MW station at Longannet.

Hydro-Electric

The setting up of the North of Scotland Hydro-Electric Board in 1943 marked the beginning of an era of intensive water-power development in the Highlands of Scotland. A development scheme drawn up by the Board in 1944, showing the water-power resources which it proposed to examine, listed 102 hydro-electric projects with an estimated annual output of 6,274 million units of electricity. In 1964, 2,550 million units were generated by the North of Scotland Board from water-power, compared with 322 million in 1949. At the end of 1964 there were 54 main hydro-electric stations in operation in the north of Scotland with a total installed capacity of 1,047 MW and the largest—the Loch Sloy station—had a capacity of 130 MW; the Cruachan pumped storage section of the Awe scheme, with an installed capacity of 400 MW, was nearing completion (it is expected to be ready before the end of 1965) and a further 1,849 MW, including 1,200 MW of pumped storage, were under consideration. The Board also had 175 MW of coal and diesel-fired capacity. In addition, there are stations generating electricity by water-power in the south of Scotland (123 MW) and in Wales (472 MW, including the 360 MW of pumped storage at Ffestiniog).

Nuclear Power Stations

As an extension of its experimental work and to produce plutonium, the Atomic Energy Authority (AEA) has two major stations also producing electricity, of which the output capacity has been raised to over 200 MW each —Calder Hall, Cumberland, began operating in May 1956 and Chapelcross, Dumfriesshire, in February 1959. Altogether, the AEA's nuclear power stations are supplying some 3,000 million units of electricity annually for the national grid.

The commercial stations under the Government's nuclear power programme are being built for the electricity authorities by groups of engineering firms specially organised for the construction of nuclear power plants. All the stations are based on the gas-cooled reactors of the Calder Hall type, fuelled by natural uranium with graphite as a moderator.

Special factors have to be taken into account in the siting of the nuclear power stations, notably the need for firm foundations to bear the weight of the reactors and their supporting structure, a location distant from heavily built-up areas, and plentiful supplies of water for cooling. Great care is taken to preserve amenity and landscape beauty.

Of the ten commercial stations planned under the current nuclear power programme, due for completion in 1969, seven were in operation by the end of 1965. These are situated at Berkeley, in Gloucestershire (276 MW output capacity) and Bradwell, in Essex (300 MW), both of which were commissioned in 1962; Hunterston, in Scotland (300 MW), commissioned in 1964; Hinkley Point 'A', in Somerset (500 MW) and Trawsfynydd, in Wales (500 MW), commissioned in 1965; Dungeness 'A', in Kent (550 MW) and Sizewell, in Suffolk (580 MW), to be in operation by the end of 1965. Oldbury, in Gloucestershire (600 MW), Wylfa, in Anglesey (1,180 MW), and Dungeness 'B' (880 MW) are due to reach completion in 1966, 1968–69 and 1969–70 respectively. Wylfa is at present the most powerful nuclear station under construction in the world.

The present output of these nuclear stations is double that of the rest of the world together. Accumulated experience in the design and operation of these stations has led to a reduction in capital cost in relation to output. The Berkeley station's capital costs, for example, were £186 per kilowatt sent out; those of Wylfa are estimated to amount to only £100.

In the White Paper, *The Second Nuclear Power Programme* (Cmnd. 2337) of April 1964, the Government announced that the CEGB was to plan on the

basis of a nuclear power programme of 5,000 MW for commencing between 1970 and 1975. Following examination by the CEGB, in conjunction with the AEA, of tenders based on various types of reactors, it was announced in May 1965 that the Government had accepted their joint recommendations that an advanced gas-cooled reactor of the kind developed by the AEA should be used for the first station, Dungeness 'B', in the second programme.

Pumped Storage

To provide a type of energy storage to even out the variation of demand, the Generating Board has built a pumped storage scheme which is now in full operation, and others are contemplated.

In these schemes, electricity generated in off-peak periods is used to pump water to higher levels from which it descends at peak periods to operate turbo-generators. The CEGB's 360 MW pumped storage station at Blaenau Ffestiniog, near Trawsfynydd in North Wales, started operating in 1961 and was completed in 1963; suitable sites for other schemes are being investigated. The first large-scale pumped storage works in Scotland, comprising a 400 MW combined pumping and generating plant, forms part of the Loch Awe project and came into operation in 1965.

Transmission and Distribution

Main electricity transmission lines—the National Grid—supply most of the country. By 31st March, 1964, those of the Central Electricity Generating Board totalled some 8,397 route miles (14,301 circuit miles), of which 1,914 miles were operated at 275,000 volts, 6,183 miles were operated at 132,000 volts and the remainder at 66,000 volts and below. In Scotland there were 3,892 circuit miles of main transmission lines at the end of 1964, of which 1,044 circuit miles operated at 275,000 volts and the remainder at 132,000 volts. Energy movements on the grid in England and Wales are controlled through the seven operational areas, set up for that purpose and distinct from the regions in which the generating side of the industry is organised; each area has a separate control, and the operations are co-ordinated by a National Control in London. The grid in Scotland is operated from the control centres at Pitlochry (North of Scotland) and at Kirkintilloch (South of Scotland).

Most of the new 'supergrid' of main transmission lines now operating at 275,000 volts is to be up-rated to operate at 400,000 volts, starting in 1965. This is being done to reduce the number of new transmission lines needed to meet the country's increasing power demands. The development of the grid system has made the British system the most closely integrated power network in the world. Twin cross-Channel cables laid between Dungeness and Boulogne, costing £4½ million, and capable of transmitting up to 160 MW at 200,000 volts (direct current) have been in operation since 1961; by this means advantage is taken of the differences between France and Britain in the timing of peak loads.

In England and Wales the Area Electricity Boards distribute to consumers electricity acquired mainly from the Central Electricity Generating Board, supplemented from other sources, such as industrial plants and the nuclear power stations of the AEA. There are nearly 17 million consumers. Industrial concerns are the biggest users of electricity and their demands are increasing rapidly. The principal domestic uses of electricity are for lighting, cooking and for space and water heating, but the demand for numerous other domestic purposes is rising steadily.

The North of Scotland Hydro-Electric Board has also pressed ahead with the distribution of electricity to consumers in the north of Scotland. At the end of 1964 it had over 421,000 consumers of electricity, many of them in remote areas, and well over four-fifths of the farms and crofts had a supply of

electricity. At the same date the South of Scotland Electricity Board supplied 1·4 million consumers, including over 97 per cent of the farmers in the area.

Capital Investment

Nearly 11 per cent of the annual gross fixed capital formation of the United Kingdom in 1964 was attributable to the electricity supply industry. The industry has hitherto based its capital needs for five years ahead on an increase in demand averaging about 7½ per cent; its plans for the future are based on an average annual growth of 9 per cent.

Capital expenditure of the electricity supply industry has been expanding very rapidly: from £242 million in 1956 it rose to £378 million in 1961 and an estimated £640 million in 1964. About two-fifths of the industry's capital requirements have been financed from internal resources. The aggregate outstanding borrowing of the industry in Great Britain is limited to £4,980 million. The industry (other than the NSHEB) is required to aim at a gross return of 12½ per cent on its net assets.

Research

The Electricity Council, in consultation with the Minister of Power, is responsible for drawing up a general programme of research, comprising: direct research carried out by the Electricity Boards themselves; sponsored research undertaken for the supply industry by universities and colleges; and co-operative research with other organisations, in particular the industrial research associations, such as the British Electrical and Allied Industries Research Association, to which the supply industries subscribe. The Council itself is empowered to conduct research. It is advised by the Electricity Supply Research Council.

The main research establishments of the industry are run by the Central Electricity Generating Board and comprise the Central Electricity Research Laboratories at Leatherhead, Surrey, the Berkeley Laboratories in Gloucestershire, concerned with nuclear problems, and the Engineering Laboratories at Marchwood on Southampton Water. In 1965 the Electricity Council decided to establish a laboratory at which intensive research will be undertaken on distribution problems (to supplement the work undertaken at the Central Electricity Research Laboratories) and on appliances and methods of electricity utilisation.

Both Scottish electricity boards are empowered to carry out research and experimental work either on their own or in co-operation with other electricity authorities. The North of Scotland Hydro-Electric Board undertakes a wide range of research and development work, both independently and in conjunction with the British Electrical and Allied Industries Research Association, colleges of science and technology, universities and manufacturers. The South of Scotland Electricity Board has recently extended its own research activities and is associated with those of the Electricity Council and Central Electricity Generating Board in England.

GAS SUPPLY

Public supply of gas in Britain dates from 1807, when Pall Mall, London, was first lighted with gas. In 1812 the London and Westminster Gas Light and Coke Company received a Royal Charter to supply gaslight in London. In the early years of the industry gas was used almost exclusively for lighting and was provided by a growing number of company and municipal undertakings.

The gas industry in its present form developed in the main during the period between the two world wars when increasing competition from

electricity had to be met, and by 1939 the industry had become mainly a supplier of heating rather than lighting.

Organisation under Public Ownership

The Gas Act of 1948 brought the industry in Great Britain, in which about 125,000 persons are at present employed, under public ownership and control on 1st May, 1949. The assets of 991 undertakings, of which 269 belonged to local authorities, were vested in 12 Area Gas Boards. The central body is the *Gas Council*, appointed by the Minister of Power. It is both a co-ordinating council and, since the enactment of the Gas Act 1965, a trading body, consisting of a full-time chairman and deputy chairman, the 12 chairmen of the area boards and up to three other members. Its general duties are to advise the Minister on questions affecting the industry and promote the efficient performance of their duties by the area boards. It has also specific duties relating to finance, labour relations and research.

The *Area Gas Boards*, which have a large measure of financial and operational responsibility and are similar in most respects to the central bodies of the other publicly owned corporations, are responsible for manufacturing gas and distributing it to consumers. Each of the Area Gas Boards, appointed by the Minister of Power, consists of a full-time chairman and deputy chairman, in some cases one or more full-time members, and usually five or six part-time members, including the chairman of the Area Consultative Council. There is no common pattern of organisation; each board is fully independent and has devised its own subordinate structure. Each is required to pay its way, taking one year with another. The operations of the area boards have resulted, in the 15 years up to 31st March, 1964, in an aggregate disposable surplus of approximately £44·9 million, before taxation.

When the industry came under public ownership, a link between it and the consuming public was established by the creation of a *Consultative Council* in each board area. These councils consist of not fewer than 20 and not more than 30 members, of whom between 50 and 75 per cent are chosen from panels of persons nominated by the local authority associations.

In Northern Ireland the gas supply industry remains in the hands of a number of municipal undertakings and statutory and non-statutory companies.

Production

The chief method of gas production in Britain is still by carbonising coal but oil-based production is expanding markedly; one-quarter of gas supplied in 1964 was derived from oil, and 1·5 million tons were used, double the amount in 1963. The gas industry used just over 20 million tons of coal (25 million tons in 1958) and another 25½ million tons were carbonised in coke ovens other than those of the gas industry. About one-third of the output of gas from coke ovens is sold to gas undertakings for general distribution; the remainder is mainly consumed at the ovens or at steelworks.

There are about 13 million consumers, the total having shown no significant change since 1955. Manufactured gas and gas acquired from coke ovens and other sources for distribution exceeds 600,000 million cubic feet annually.

In 1964 the quantity of gas produced in Northern Ireland was about 7,000 million cubic feet, most of it for household use.

Consumption

Half of all gas is sold by gas boards for household use and the remainder for industrial and commercial purposes. Total consumption has been rising at an average rate of over 3 per cent per annum since 1961, after a period when growth was almost negligible. During the very cold winter of 1962–63 the rate was even higher. It reached a level of about 3,350 million therms in 1964.

Domestic Use

About 50 per cent of the domestic load is used for cooking and about 25 per cent for space heating, the remaining 25 per cent being spread over water heating and other installations. Most homes in Britain are supplied with gas, except in some rural areas where, owing to difficulties in storage and transmission, gas is not economic. Bottled gas, derived from petroleum, is used in rural areas.

Industrial and Commercial Use

Gas is used extensively in industries which require the control of temperatures to a fine degree of accuracy, for example, in the pottery industry and in certain processes in the manufacture of iron and steel products. In 1963–64 sales of gas to industry totalled 861 million therms.

Coke and By-products

Production of coke at gas works in 1964 was 8·8 million tons, and at coke ovens 16·9 million tons, reflecting on the one hand the increasing use of oil and on the other a higher level of activity in the steel industry. The gas industry and coke ovens jointly produce about 3 million tons of crude coal tar and over 100 million gallons of crude benzole a year. These latter by-products yield materials widely employed in the newer branches of the chemical industry.

Capital Investment

Under the Gas Act 1948, borrowing by the Gas Council and the Area Gas Boards was limited to £250 million. In 1954 the industry's borrowing powers were increased to £450 million, in 1960 to £525 million, in 1963 to £650 million and in 1965 to £1,200 million.

The industry had been spending about £50 million a year on capital investment in the period 1955 to 1961 but since 1961–62 expenditure has increased sharply; in 1964–65 it reached £89 million and £117 million has been approved for 1965–66. Between vesting day (1st May, 1949) and the end of March 1965, about £850 million had been invested in fixed assets.

Lines of Development

Considerable integration, by the linking of works for the transmission of gas through gas grids and long-distance mains, has enabled production to be concentrated in the most efficient units.

To maintain its competitive position, the gas industry has investigated new and more economic methods of production and new sources of gas supply. Although two plants which use the Lurgi method for the complete gasification of inferior grades of coal have been commissioned, their capital cost is high. More significant have been the developments in the gasification of oil. In the 1950s these plants were largely to meet peak-load needs, with the exception of the large installation of the South Eastern Gas Board at the Isle of Grain, Kent, and they used mainly heavy oils as feedstock. More recently the introduction of processes using light distillates has permitted even greater savings to be made in both capital and running costs.

The work done in the Gas Council's Midlands Research Station led to the introduction of two new methods of manufacture, the Gas Recycle Hydrogenator and the Catalytic Rich Gas processes, both of which enable a high calorific value gas to be manufactured entirely from light distillate feedstock without the need for enrichment from any outside source. The first plants incorporating these processes were put on stream in 1965. Gas made from oil and gas purchased from refineries now amounts to nearly one-third of the total supply available and the proportion is steadily increasing.

As a result of successful trial shipments of liquid natural gas in 1958 and 1959, the Gas Council in 1961 signed a 15-year contract for the purchase of natural gas from the Sahara in specially constructed insulated tankers.

Deliveries started in 1964 and during 1965 reached the full rate of 35,000 million cubic feet of gas annually, equivalent to some 10 per cent of total consumption. A pipeline system distributes the gas from the Canvey Island terminal.

The Gas Council expects gas consumption to increase by about 7 or 8 per cent a year up to 1970 and therefore substantial expansion in gas-making capacity is required. The need to provide additional storage capacity, particularly in underground reservoirs of porous rock (regulated under the Gas Act 1965), and the strengthening of the distribution system will also mean substantial investment.

Research

The Gas Council has a research committee which advises on the initiation and implementation of research policy. Research organisations comprise three stations (two in London and one at Solihull) and a 'basic' research group, in addition to Watson House at Fulham, London, for the design, testing and development of appliances. Research is also carried out on behalf of the Gas Council at Leeds University and at other universities and colleges.

FUEL EFFICIENCY

Efficiency in the use of fuel, among both industrial and domestic users, has been assisted by various bodies representing producers and consumers and by the technical advisory services of the fuel and power industries.

The *Coal Utilisation Council* consists of representatives of the National Coal Board, solid fuel distributors and appliance manufacturers and distributors. Originally formed in 1932, it informs and advises domestic users on the best use of solid fuel, including the choice of installation and the operation of solid fuel appliances.

A non-profit-making company, the *National Industrial Fuel Efficiency Service*, was formed in 1954 and sponsored by the fuel and power industries to promote fuel saving in industry. It provides advice and services to all non-domestic fuel users in a variety of forms, from 'spot' inspection to full-scale heat and power surveys and regular visits on a contract basis.

WATER SUPPLY

Britain's water resources are, with progressive development, sufficient for domestic and industrial requirements. The sources of water are often distant from the areas where supplies are needed, however, and water undertakings are therefore mainly concerned with abstraction, storage, treatment and distribution. Supplies are obtained partly from surface sources such as mountain lakes, streams impounded in upland gathering grounds and river intakes, and partly from underground sources by means of wells, adits and boreholes. Unlike other public services in Great Britain, such as electricity and gas, water supply remains in the hands of a large number of undertakings. On taking up office in October 1964 the Government announced its intention of reorganising the water supply industry under full public ownership; the Minister of Land and Natural Resources was made responsible for formulating long-term plans to give effect to this general policy. Ministerial responsibility in England and Wales is shared by the Minister of Housing and Local Government, the Minister of Land and Natural Resources and the Secretary of State for Wales; in Scotland it lies with the Secretary of State for Scotland; and in Northern Ireland with the Minister of Development.

Organisation of Water Supply in England and Wales

It was not until the nineteenth century that the provision of water supplies became a general public service and then only after long and bitter controversy. It was largely due to the efforts of Edwin Chadwick and his colleagues, who demonstrated the dangers arising from inadequate water supply and sanitation, that the Public Health Act 1848 became law in England and Wales and laid the basis for a long series of statutes dealing with public health. From the middle of the nineteenth century onwards a number of water undertakings were set up to provide water to the expanding urban population, and the water supply system developed rapidly, although in piecemeal fashion and with some overlapping and waste.

Local authorities have a duty as sanitary authorities to ensure that water supplies are adequate for the needs of their areas, and they may do this either by operating water undertakings themselves or by ensuring that other bodies are providing adequate supplies. Over one-fifth of the water consumed is supplied by statutory water companies. The householder receives his domestic water supply at a comparatively small charge, varying in different areas, which he usually pays by way of a water rate levied, like other rates, on the value of his house. Industrial users are charged according to consumption as recorded by meter.

The Minister of Housing and Local Government and the Secretary of State for Wales have a duty to promote the conservation and proper use of water supplies in England and Wales and to formulate a national water policy. A statutory Central Advisory Water Committee advises the Minister on general questions relating to water and organisation of supplies. Since the passing of the Act, some 790 smaller water authorities in England and Wales have been absorbed by larger authorities or by the creation of joint boards in order to improve the efficiency of the water supply industry. In March 1965 there were in England and Wales 210 local authority water undertakings, 103 joint water boards (including bulk supply boards) and 6 joint water committees, 45 statutory water companies, 9 non-statutory water companies, and one private proprietor with statutory powers. A number of private proprietors without statutory powers also provide small supplies.

The *Metropolitan Water Board*, which is probably the largest single water undertaking in the world, supplies over 350 million gallons daily to the $6\frac{1}{4}$ million people in the London area. It consists of 88 part-time members who are the elected representatives of the various local authorities within the Board's area of operations, together with one representative each from the Thames and Lee Conservancies.

Present Supplies in England and Wales

Today, piped water reaches over 95 per cent of the total population of England and Wales and about 90 per cent of the rural population.

Capital expenditure by water undertakers amounts to between £40 million and £50 million a year. Interest, together with running costs, is largely met from annual income.

The provision of piped supplies for rural districts has been assisted by grants under the Rural Water Supplies and Sewerage Acts 1944 to 1961. By March 1965 schemes costing over £94 million had been completed or were in progress with the aid of grants under these Acts.

The growth of towns in England and Wales has meant increased demands for water, the needs of industry having grown so much that in many areas they now exceed domestic demand. The use of water in irrigation of farm land is also growing. In order that the country's water resources should be developed to meet these growing requirements the Water Resources Act 1963

provided for a new administrative structure consisting of 27 river authorities and a central Water Resources Board; the Act came into full operation in April 1965. The 27 new river authorities, the Thames Conservancy and the Lee Conservancy Catchment Board have a majority of members appointed by the county and county borough councils in their areas. The remainder are appointed by ministers for their knowledge of land drainage, fisheries, the public water supply, and water in use in industry and in agriculture. The authorities manage the water resources of river basins, taking over the functions of the 30 former river boards in respect of land drainage, flood control, administration of fisheries and prevention of pollution. They are responsible for assessing water resources and requirements, controlling and developing resources and securing regulation by a system of licensing. Special arrangements exist for the Greater London area, where the full range of river authority control is not necessary. The work of the river authorities is co-ordinated by the Water Resources Board, an expert advisory body which reports to the Ministry of Land and Natural Resources. Its duties include the review of national water resources and requirements, the encouragement of the transfer of water between areas according to need, the co-ordination of proposals of river authorities for capital investment and the initiation of research. Water conservation is to be financially self-supporting after an initial period of about five years, the cost being met from charges made to abstractors and users of water.

Water Supply in Scotland and Northern Ireland

In Scotland public water undertakings are carried on entirely by local authorities, either separately or in combination with each other; they supply about 97 per cent of the total population. The water problem in Scotland is broadly similar to that in England and Wales except that there is not the same need to allocate water between competing interests and less reliance needs to be placed on underground sources. The Water (Scotland) Acts 1946 and 1949, among other provisions, impose a general duty on the Secretary of State to promote the conservation of water resources in Scotland; require local authorities to provide supplies of wholesome water everywhere in their districts, where this can be done at reasonable cost; and provide for a uniform system of rating for water throughout the country. The Scottish Water Advisory Committee advises the Secretary of State on general questions relating to resources and supplies. The Rural Water Supplies and Sewerage Act 1944, as amended, makes available to Scottish local authorities grant assistance up to a maximum of £45 million towards the cost of water supplies and sewerage schemes in rural areas. By December 1964 the total value of work done on new and improved water supplies since 1945 amounted to £79·1 million, of which £37·6 million represents works aided by grants under these Acts.

Northern Ireland has abundant supplies of water for both domestic and industrial consumption. The Water Supplies and Sewerage Act (Northern Ireland) 1945 made it obligatory for water supply authorities to provide a supply of wholesome water to houses and schools in their areas where this could be done at reasonable cost, and also empowered the then Ministry of Health and Local Government to make grants towards the costs of schemes undertaken by these authorities. Before 1945 only the more densely populated areas had a piped supply, but progress has been such that even in the thinly populated rural districts most households have now been, or soon will be, connected to a piped supply. By 31st March, 1965, about £28·5 million had been expended, including grants totalling £13·5 million.

Measurement of Water Resources

Information on the yield, behaviour and quantity of the nation's surface water resources is provided in the *Surface Water Year Book of Great Britain*, published annually by Her Majesty's Stationery Office. This publication contains particulars of the run-off and related rainfall from a large number of rivers, streams and reservoired areas. The Water Resources Board is responsible for the gauging, collation and publication of hydrological information: the field work of surface water measurement is done by river authorities, water undertakings and other bodies. Detailed studies of the resources and use of water in specified areas have been published in the series of Hydrological Surveys which cover approximately half of England and Wales. General information on rainfall, published annually in *British Rainfall*, is the responsibility of the Meteorological Office, while advice on ground water is the responsibility of the Water Resources Board. The Hydraulics Research Station of the Ministry of Technology at Wallingford and the Water Research Association's station at Medmenham carry out research into problems of the design and calibration of gauging weirs and flumes for the measurement of surface water, and into other hydraulic problems.

Water Pollution

Each river authority is responsible for the prevention of pollution of rivers and certain tidal waters in its area and its approval must be sought before polluting effluents are discharged. Control of pollution in the tidal Thames is exercised by the Port of London Authority (see p. 364). In Scotland nine river purification boards have been set up; north and west of the Caledonian Canal and in parts of the counties of Angus and Kincardine the county councils and town councils of large burghs are the river purification authorities. The Secretary of State receives advice from the Scottish River Purification Advisory Committee on questions affecting the cleanliness of Scottish rivers, which he has a duty to promote.

The Water Pollution Research Laboratory of the Ministry of Technology investigates problems connected with the treatment of polluted waters, the treatment and disposal of sewage and industrial waste water, and the effects and prevention of pollution of surface water and underground water. Research is carried out with general supervision and advice from the Ministry's Water Pollution Research Board.

CONSTRUCTION

The construction industries include firms engaged on the construction, alteration, repair and maintenance of buildings, highways, airfields, drainage and sewerage systems, waterworks, docks, harbours and canals, sea defence works, electrical wiring, heating and other installation work, open-cast coal prospecting and mining, and structural work connected with thermo-electric, hydro-electric power stations and telecommunications. The industries employ about 1¾ million persons, including all grades. Allowing for new work only, and excluding work carried out on repairs and maintenance, they provide nearly 10 per cent of the gross domestic product.

To meet a growing demand for constructional work arising from plans for large scale expansion and modernisation, it is estimated that the industries will need to increase output by about 50 per cent over the next decade. This will have to be achieved, in the main, by improvements in productivity as any great increase in labour resources to meet these demands is unlikely.

Structure

Constructional work is carried out both by private contractors and by public authorities who employ their own labour. Nearly five-sixths of the work is done by private firms, which range from the very large, employing over 20,000 men, to one-man businesses. Although there are about 90,000 firms in the industry, about 16 per cent of the operatives are employed by the 80 largest firms, each employing more than 1,000 persons.

Public authorities as a whole employ nearly 370,000 operatives but a very large proportion of these are engaged on repair and maintenance work which local authorities, for example, carry out with their own labour.

Of the total labour force, nearly a million are skilled operatives who have been trained under the apprenticeship scheme, taking four to five years to qualify. About one-third of these skilled men are employed on repair and maintenance work.

Some firms are vertically integrated, owning quarries and workshops, mechanised plant and standard builders' equipment; some undertake responsibility for projects from initial design to finished building. All but the smallest projects are generally carried out under professional direction, either by architects or, in the case of the more complicated civil engineering projects, by consulting engineers. The functions of the latter, acting on behalf of a client, embrace advice on the feasibility of projects, the drawing up of plans and the supervision of the constructional work by the contractor. There are over 250 firms of consulting engineers in the United Kingdom.

The Ministry of Public Building and Works (see p. 58) is responsible for all the construction programmes undertaken directly by the Government (except for roads), including work for the armed services, both at home and overseas. It is also responsible for co-ordinating research and development throughout the government service and seeks to influence methods and techniques in the building industry as a whole. In 1963 it set up a Directorate-General of Research and Development, consisting of four directorates, concerned respectively with long-term planning, management, research and development.

The Government set up a National Building Agency in 1964, a limited company, financed initially from government funds. The Agency offers advice to clients, contractors, materials producers and the building professions on the most modern ideas and techniques and brings clients' demands together so that industrialised methods can be more widely used.

Output

The value of output of the industry has been rising fairly steadily since 1954, when building controls ended; by the end of 1964 it was running at an annual rate about 45 per cent higher than ten years earlier. The value of work done in 1964 amounted to £3,614 million, of which £522 million represented work carried out by the men employed directly by public authorities. Private contractors carried out the remaining £3,092 million (£2,467 million on new work and £625 million on repair work).

During the period 1954 to the end of 1964 the number of operatives employed increased by about 9 per cent and average output per operative increased by about 35 per cent. (If new work alone is considered, the increase was about 50 per cent.)

Housing

Some 5 million houses have been built in Great Britain since 1945; about 3 million on behalf of public authorities, mainly for renting, and about 2 million for private owners, mainly for sale. About 426,000 houses were started in 1964 and some £995 million of housing work was carried out by

private firms, a record for the total volume of housing work. Of this, about £571 million, or 57 per cent, was for private owners and the remaining £424 million for public authorities.

Civil Engineering Projects

Britain was the first country to develop civil engineering as a large-scale modern industry and the first to provide techniques, finance and equipment to carry out major civil engineering projects throughout the world. Prominent figures in the early development of civil engineering included John McAdam, pioneer in road construction; Thomas Telford, builder of roads, canals, docks and railways; George and Robert Stephenson and Isambard Kingdom Brunel, pioneers of railway building.

Among important construction projects in hand in the United Kingdom in 1965 were a drainage and sewerage scheme in Glasgow, costing £3·5 million, and another at Davyhulme, costing £6·4 million; the Loch Awe hydro-electric and pumped storage scheme in Scotland, costing £7 million; eight major conventional power stations and several nuclear power stations (see p. 288); the £5 million river Trent tidal reach improvement scheme; the 10-mile Victoria Tube line in London, costing £57 million; and the Great Ouse water supply scheme, costing £52 million. Projects for road construction, bridges and tunnels included a further 129 miles of motorways under construction (see p. 373), major road bridges over the river Severn and the Firth of Tay, and the £12·6 million tunnel under the river Tyne.

Overseas Constructional Work

British constructional firms have been as active overseas as in the United Kingdom. British consulting engineers, in particular, have built up a tradition of knowledge and integrity which has caused their standards to become international practice and their services to be in world-wide demand.

Among important construction projects by British contractors in hand in overseas countries during 1965 were: a new township for the Government of Bahrein, costing £6 million; the £10 million restoration of the Hejaz railway in the Middle East; electrification projects on the Indian railways (£6 million); and a £2 million ocean terminal at Hong Kong. British consulting engineers were engaged on a number of projects where British contractors were not commissioned for the construction work. Notable examples were an airport at Baghdad, costing £12·5 million; a £6·5 million main drainage scheme for Benghazi; construction of two water barrages in West Pakistan (£27 million); water supply schemes for Hong Kong (£19 million) and Libya (£6·3 million); a £16 million iron and steelworks in Tunisia; and construction of a dam and tunnel for the Tehran water board (£14 million). On certain projects both the consulting engineers and the contractors were British, examples being the second stage in the port of Tema construction in Ghana (£11 million); and the 12-mile Accra–Tema motorway (£3·3 million).

It has been estimated that the total value of work carried out during the year ending in March 1965 by over 60 British contractors, operating in 81 countries, was £160 million, compared with £123 million in the previous year, and that the value of new contracts obtained was £198 million, compared with £118 million in the previous year. Consulting engineers had projects worth about £1,060 million in hand on 1st January, 1965.

Research

The Directorate-General of Research and Development in the Ministry of Public Building and Works is responsible for co-ordinating research and information services to increase efficiency in the building industry.

Some of the research establishments of the Ministry of Technology (see

p. 59) deal with subjects relating to the construction industries. The *Building Research Station* which was set up in 1921, thus making Britain the pioneer of organised building research, is concerned with research into all aspects of building. The *Hydraulics Research Station* studies such subjects as hydraulic structures for hydro-electric projects and research on timber is undertaken at the *Forest Products Research Laboratory*. The *Road Research Laboratory* of the Ministry of Transport carries out research on road construction and traffic problems.

The Heating and Ventilating Research Association, an industrial organisation, deals with problems of heating and ventilation of large buildings. Large manufacturing firms have laboratories, some of the work of which is concerned with construction, and the major construction firms have research departments working on plant, materials and methods. Other bodies concerned with research include the universities and colleges of technology. Most of the producers of primary building materials have trade associations which maintain research institutions chiefly devoted to seeking new and more efficient uses for their materials: the Timber Research and Development Association and the Cement and Concrete Association are examples.

In 1960 a Civil Engineering Research Association was set up on the initiative of associations of civil engineering contractors and consulting and civil engineers in consultation with representatives of private firms in the industry. The Association is financed by grants from the Ministry of Technology and contributions from the industry; its function is to promote the carrying out of research on appropriate problems in civil engineering, making use of existing research facilities of all types.

A working party set up jointly by the Minister of Public Building and Works and the building industry recommended in 1964 that research on construction should be organised by a body representative of the industries, the Government and academic experts and should be carried out in future at an annual rate starting at £0·5 million in the first year, rising in two or three years to £5 million, and should be financed mainly by a levy on the industries.

MANUFACTURING INDUSTRIES

Britain's manufacturing industries supply a wide range of products, many of which are of major importance in world trade. Output has increased by over 29 per cent since 1958, and in 1964 was nearly 8 per cent higher than the previous year. In 1964 this sector spent £1,236 million on fixed capital equipment, including £349 million on building work and £805 million on plant and machinery. The number of employees in manufacturing industry (including the unemployed and those absent from work through sickness and other causes, but excluding employers and the self-employed) was nearly 9 million in June 1964, 38 per cent of the total number of employees.

The employment and sales figures listed in Table 17 give an indication of the relative importance of broad sectors of manufacturing industry. Expansion has been particularly rapid in electronics, in the newer branches of mechanical engineering, most branches of the chemical industry and man-made fibres. The diagram on p. 274 shows the changes in production between 1958 and 1964 in the major groups of industry.

In the subsequent sections, statistics relating to firms are those of enterprises given in the Censuses of Production for 1958 and 1962, statistics of employees refer to numbers at June 1964, and export statistics are taken from the *Accounts Relating to Trade and Navigation in the United Kingdom.*

TABLE 17
INDUSTRY GROUPS: SALES AND WORK DONE, PRODUCTION, EMPLOYMENT AND CAPITAL EXPENDITURE

Industry Group	Sales and Work Done in 1962[ab]		Index of Industrial Production 1964	Number of Employees (thousands)	Fixed Capital Expenditure at current prices 1964
	£ million	Percentage of total	1958 = 100	June 1964	£ million
Food, drink and tobacco	4,834·3	19·1	118	842·0	173·9
Chemicals and allied industries	2,870·6	11·4	151	515·3	220·0
Metal manufacture ..	2,086·3	8·3	128	626·8	114·3
Engineering and electrical goods	4,685·3	18·5	137	2,225·2	367·7
Shipbuilding and marine engineering	414·6	1·6	75	227·2	
Vehicles	2,324·4	9·2	124	882·9	
Metal goods (not elsewhere specified) ..	1,449·8	5·7	121	575·2	
Textiles, leather and clothing	3,040·9	12·0	118	1,467·9	139·5
Paper, printing and publishing	1,542·3	6·1	139	632·1	88·9
Other manufacturing industries	2,051·4	8·1	n.a.	986·1	139·2
TOTAL: all manufacturing industries ..	25,299·9	100·0	129·2	8,980·7	1,243·5

[a] The most recent year for which figures are available.

[b] Including all sales made by business firms covered by the 1962 Census of Production and any new building work, machinery or other capital items produced within the firm for its own use.

METAL MANUFACTURE

The metal manufacturing industries employed 627,000 persons in June 1964. Of these, 357,000 were in the iron and steel industry, 125,000 in the manufacture of iron castings, 57,000 in the manufacture of light metals, and 87,000 in the copper, brass and other base metal industries. Exports of iron and steel products and non-ferrous metals in 1964 had an aggregate value of £356 million.

Iron and Steel

Britain pioneered the application of coal to the smelting of iron ore from the seventeenth century onwards and British inventors were responsible for the discovery of the processes which led to the great expansion of steelmaking in the second half of the nineteenth century. Today Britain is the world's fifth largest steel producing nation. Output of crude steel in 1964 (a 53-week year) totalled 26·2 million ingot tons, 14·7 per cent above the comparable 1963 total and well above the previous record level of 24·3 million tons in 1960. Capacity utilisation in 1964 was 88 per cent compared with 79 per cent in 1963. Between 1960 and 1964 total capacity increased by about 4 million tons. Pig iron production in 1964 amounted to 17·3 million tons.

Net deliveries of finished steel amounted to 20·3 million tons in 1964 and the 3·8 million tons of iron and steel products which were exported had a value of £217·7 million; the United States (£15 million), Sweden (£12·9 million),

Canada (£11·3 million) and India (£10·5 million) were the main overseas buyers; exports to Europe totalled £95·4 million.

The main producing districts are: South Wales (24 per cent of total crude steel output); the north-east of England (18 per cent); Lincolnshire (12 per cent); Sheffield and district (12 per cent); Scotland (11 per cent); and Lancashire (10 per cent). Other important areas are Staffordshire, Northamptonshire, and the north-west coast of England. South Wales concentrates mainly on the manufacture of flat products, especially sheet steel and tinplate; the output of the north-east coast and Scotland is predominantly of heavy steel products (plates, sections and rails); Sheffield is responsible for two-thirds of Britain's alloy steel production.

During the period 1950–64 about £1,320 million was spent on major development schemes. The industry now has sufficient capacity available to meet all foreseeable demands, and the emphasis in its development plans is on improving efficiency; capital expenditure is therefore expected to be less heavy in the next few years. Britain has some of the most modern plant in Europe and it is estimated that by 1965 steel produced in the new converter processes had increased from 8 per cent of total output in 1960 to about 24 per cent; the proportion of steel from electric furnaces had increased from 7 per cent to 13 per cent; and the share of the older open hearth process had fallen from 85 per cent to about 63 per cent.

Larger and more efficient blast furnaces have been installed and coke consumption has been reduced by improvements in the preparation of raw materials and by the practice of fuel injection, i.e. oil and powdered coal. Fundamental research is carried out by the British Iron and Steel Research Association and the industry as a whole now spends some £10 million a year on research.

Many companies have developments to improve the quality and range of finished products. Outstanding recent projects include wide strip mills at new integrated works at Newport (Monmouthshire) and at an existing works in Scotland; a new plant at Stoke-on-Trent, which is based entirely on continuous casting for supplies of semi-finished steel; an advanced unit for the mass production of alloy and special carbon steels and the world's largest electric furnace plant for the bulk production of carbon and low alloy steels, both at Sheffield.

The iron and steel industry has been subject to some form of public supervision since 1932. In February 1951 the greater part of the industry came under public ownership, but the Iron and Steel Act 1953 established an Iron and Steel Holding and Realisation Agency, with the duty of returning the companies to private ownership. Only one company remains under the control of the Agency.

In a White Paper, published in April 1965 by the new Government, proposals for bringing 13 major steel companies into public ownership were outlined. Their shares and securities would be vested in a National Steel Corporation and the Iron and Steel Board, set up under the 1953 Act to exercise a general supervision over the iron and steel industry, would be dissolved. Members of this Board are appointed by the Government and it is financed by levies which it has power to make on firms in the industry. The major trade association in the iron and steel industry, excluding iron and steel founding, is the British Iron and Steel Federation.

Iron Castings

Output of iron castings was 4·1 million tons in 1964, compared with 3·7 million tons in 1963 and 2·54 million tons in 1946. The main users of iron

castings are the general engineering industry, the motor vehicle industry, the building and associated industries, manufacturers of pressure pipes and fittings, and the steel industry. An important part of total output consists of grey and malleable iron castings for use in motor vehicles, tractors, machine tools, engines and all kinds of power units.

There are about 1,300 firms in the iron founding industry and the number of employees is about 125,000. Exports are included in the total of steel exports in the previous section.

Non-Ferrous Metals

The non-ferrous metals industry is the largest in Europe and as a consumer of aluminium, copper and lead Britain is second only to the United States among western countries. Output in 1964 included: aluminium, 32,000 tons of virgin metal and 169,000 tons of secondary metal; refined copper, 110,000 tons of virgin copper and 131,000 tons of secondary metal; lead, 57,000 tons of virgin metal and 121,000 tons of secondary metal; zinc, 109,000 tons of slab metal; and tin, 18,000 tons. Mining in Britain is confined to the working of lead and tin ores on a small scale, although detailed investigation is taking place into the possibilities of a considerable expansion of tin mining.

In 1964 exports of non-ferrous base metals were valued at £108·1 million. The main products exported, including semi-finished products, were copper and copper alloys (£40·4 million), aluminium and its alloys (£17·5 million), nickel and its alloys (£24·2 million), and tin and its alloys (£10·5 million). The German Federal Republic (£15·4 million), France (£8·1 million), the Netherlands (£7·7 million), the United States (£7·1 million) and Sweden (£7 million) were the largest purchasing countries. There were also substantial exports of finished products incorporating non-ferrous semi-finished products and non-ferrous metals in many finished forms.

Nearly half of the industry is situated in the Midlands; other centres include South Wales, London, Tyneside and Avonmouth. It consists of over 900 firms engaged in smelting, casting and fabrication by rolling, extrusion and drawing. The techniques of powder metallurgy and pressure diecasting are also employed. Some non-ferrous metals, such as nickel, molybdenum, tungsten and vanadium, are largely used in the making of high speed and other special steels. New uses for non-ferrous metals with special properties have emerged with the growth of new industries having particular requirements, as, for example, production of nuclear energy (uranium, zirconium), jet aircraft (niobium, magnesium, titanium) and electronic apparatus (selenium, silicon, germanium, tantalum).

MECHANICAL ENGINEERING

Mechanical engineering comprises a wide range of industries, including all types of machinery, machine tools, engineers' small tools, mechanical handling equipment, construction equipment, industrial plant, watches and clocks, and scientific instruments. Vehicle engines are included in the section on vehicles (p. 310). The volume of production from these industries rose by 33 per cent between 1958 and 1964, in which latter year £1,891 million was the aggregate value of the main products of all sections other than small arms, scientific instruments and watches and clocks. Exports of non-electric machinery were valued at £858 million in 1964. The number of employees was about 1·34 million.

Agricultural Machinery and Tractors

There are over 300 firms, employing 37,000 people, in the agricultural machinery industry but three enterprises employing over a thousand workers account for over half the net output of firms with more than 25 employees.

In 1964 output, excluding tractors, was valued at £62·2 million and exports were worth £29·3 million; the main overseas markets were France, the Irish Republic, Australia, the German Federal Republic, and Italy. The number of self-propelled combine harvesters, forage harvesters, pick-up balers and grain driers in use has increased in Britain in recent years and exports of dairy machinery are expanding. Deliveries in 1964 included 5,300 combine harvesters (the highest number since 1958), 5,100 milking machines, 15,300 pick-up balers and 1,700 grain and grass driers.

Tractors

The bulk of British tractor output and exports consists of agricultural tractors. Some 207,000 agricultural and industrial wheeled tractors were delivered in 1964, about 164,000 (79 per cent) for export. Deliveries also included 36,000 small market garden tractors of less than 10 belt-horse-power. Exports of agricultural and track-laying tractors had a value of £105·6 million in 1964. Agricultural tractor production is dominated by five large organisations, two of them producing about 80 per cent of output. Tractors are exhibited at the annual Royal Smithfield Show and Agricultural Machinery Exhibition in London.

Metal-working Machine Tools

Britain was the birthplace of the modern machine tool industry, and by the early 1830s had developed to an advanced stage the boring machine and screw-cutting lathe, as well as other machine tools. The industry's output today ranges from watchmakers' lathes weighing a few pounds to machines weighing hundreds of tons, including transfer lines for motor vehicle manufacture and electronically controlled machine tools giving accuracies of one ten-thousandth part of an inch.

The value of deliveries of metal-working machine tools rose by 6 per cent in 1964 to £121 million, compared with £114 million in 1963 and the peak total of £127 million in 1962. Exports in 1964 had a value of £46·1 million; and of the orders on hand at the end of December 1964 (£87 million), 34 per cent were for export. India (£6·2 million), Australia (£4·6 million) and South Africa (£3·3 million) were the main overseas markets in 1964.

There are about 350 separate firms making machine tools (including welding machinery), but over 40 per cent of net output is produced by 11 enterprises, each employing over 1,000 persons. The high degree of specialisation makes it possible for the small firm to flourish. The industry is centred mainly in the Midlands, Yorkshire and Lancashire, and to a lesser extent near London and Glasgow. About 88,000 persons are employed.

The Machine Tool Trades Association of Great Britain is the representative body of most manufacturers and importers, and is responsible for the International Machine Tool Exhibitions held in Britain every four years, the next being due in 1968. The industry is served by its own research body, the Machine Tool Industry Research Association.

Industrial Engines

Britain manufactures a wide range of industrial engines other than those for the vehicle construction industries (see p. 310). Deliveries of engines (including parts) had a value of £109·5 million in 1964 and exports (including marine and rail traction engines) were worth £24·5 million; in addition, parts exported were valued at £19·4 million. The total brake horse-power of the 374,000 internal combustion engines delivered was 10·6 million.

There are about 70 firms for whom industrial engines are their chief product. Production is concentrated among the large firms, and 10 of these, each employing over 1,500 persons, account for about five-sixths of the net output of larger firms. About 43,000 employees work in the industry.

Textile Machinery and Accessories

One of the oldest of Britain's mechanical engineering industries, the textile machinery industry, developed rapidly after the introduction of mechanical spinning and weaving towards the end of the eighteenth century. Its range of output embraces all stages in textile manufacturing processes. Deliveries in 1964 were valued at £99·8 million and exports (including products of some associated industries) at £67·1 million. Principal markets were India (£4·9 million), Pakistan (£4·7 million), the United States (£4·5 million), the Soviet Union and the German Federal Republic.

The industry, which has about 58,000 employees, comprises over 600 firms situated mainly in Lancashire, Yorkshire, Northern Ireland, Dundee, Leicester and Nottingham, making a wide range of machines and accessories for the manufacture and processing of yarns and fabrics from all types of natural and man-made fibres. In the case of bast and leaf fibre machinery the United Kingdom is still by far the world's largest supplier. Five enterprises, each with over 2,000 employees, produce over half of the output.

Mechanical Handling Equipment

Almost every industry makes use of mechanical handling equipment; the products of the industry range from individual units and accessories to complete operating systems. The value of deliveries in 1964 was £110·3 million, the main constituents being: cranes and bridge transporters, lifts, escalators, conveyors, elevators and hoists. In addition, British firms produced 12,400 powered industrial trucks, including 8,600 fork-lift trucks. Exports of mechanical handling equipment (including industrial and works trucks) in 1964 were valued at £32·5 million. There are about 270 firms in the industry but only 170 of these employ over 25 persons; in all, about 57,000 people are employed.

Contractors' Plant and Quarrying Machinery

Production of equipment extends to almost the whole range of plant required by the construction industry, including crawler tractors, motor graders, scrapers, trenchers, dozer equipment, dumpers, excavators and loading shovels and crushing, pulverising and screening plant.

The value of deliveries from the industry was about £142·7 million in 1964; by far the most important single item was earth-moving machinery with a value of £95·1 million. Exports of excavating and earth-moving machinery and road-rollers in 1964 totalled £51·2 million; France, Sweden, South Africa, Spain and the German Federal Republic were important markets.

Contractors' plant and quarrying machinery is manufactured by over 120 firms, and of the larger enterprises, 8 with over 1,000 employees account for about half of net output. The labour force numbers about 29,000.

Office Machinery

The office machinery industry has been expanding rapidly and is now second in size only to that of the United States. In 1964 the value of deliveries of office machinery (such as accounting machinery, punched-card machinery, typewriters, dictating machines, and duplicating machinery) was £96 million. Deliveries in 1964 included 105,000 standard typewriters and 155,000 portable typewriters. The value of deliveries of accounting and similar machinery was £40·8 million, of which £21·6 million was for export, and of other office machinery £43·5 million, of which £10·8 million was for export. Exports of all office machinery were valued at £40·1 million and the most important overseas purchasers were Australia, France, the United States and the German Federal Republic. British subsidiaries or associates of United States firms are prominent in the office machinery industry, in which there are about 80 firms. About 59,000 persons are employed.

Engineers' Small Tools and Gauges

The manufacture of engineers' small tools and gauges is an expanding industry and is the main branch of production for over 1,100 firms, of which 4 have over 1,000 employees. Deliveries increased in value from £55·1 million in 1959 to a peak of £81 million in 1964. The industry has a labour force of about 62,000 persons.

Industrial Plant and Steelwork

British industry manufactures almost every type of industrial plant and steelwork, and about 147,000 are employed in this branch. Of particular importance are steam-raising boilers, lime and cement kilns, gas and coke oven plant, sintering plant, metallurgical furnaces and plant, chemical and mineral oil refining plant, nuclear reactors, water and sewage treatment plant, and steelwork for bridges, buildings, etc. The industry is composed of over 800 firms, including several large-scale enterprises. Almost 60 per cent of the net output of larger firms comes from 29 firms with over 1,000 employees, and nearly one-third is accounted for by 7 firms with a labour force of over 3,000. In 1964 the aggregate value of deliveries was £357·3 million.

Boilers and Boilerhouse Plant

British companies delivered water tube boilers to the value of £63·1 million in 1964; shell boilers and other boilerhouse plant accounted for a further £32·6 million. Water tube boilers of advanced design and of large steam-raising capacity are produced for power stations, whereas shell boilers are used for steam-raising and heating in factories and buildings. Exports of vapour generating boilers in 1964 amounted to £13·9 million.

Iron, Steel and Non-ferrous Metal Works Plant

The modernisation and expansion of the British steel industry gave rise to the rapid development of the steelworks plant industry, which now provides, in association with firms producing rolling mills, almost all Britain's requirements as well as plant for export. The value of deliveries in 1964 was £37·6 million; rolling mills and ancillary equipment accounted for an additional £23·8 million. Exports of steelworks and non-ferrous machinery and similar equipment (including rolling mills) were worth £16·8 million in 1964.

This industry consists of a small number of firms, most of which are business associates or members of a consortium. Besides supplying the plant and equipment for steel and non-ferrous metal works, they undertake the planning, erection and supply of complete plants in any part of the world. Finland, India, Colombia and Australia are a few of the countries in which British firms are undertaking large-scale steelworks plant projects.

Chemical Plant and Mineral Oil Refining Equipment

The manufacture of specialised equipment for the chemical and oil refining industries has expanded rapidly in the last 15 years. Deliveries of chemical plant had a value of £53·7 million in 1964 compared with a peak of £63·8 million in 1961. Exports of mineral oil refining machinery came to £2 million in 1964. If the whole range of equipment manufactured by British firms for the petroleum industry is aggregated, Britain ranks second to the United States as a supplier. The range of chemical plant produced includes distillation columns, heat exchangers, high vacuum drying equipment, and plant for the manufacture of chemicals from all feedstocks including petroleum.

Nuclear Power Station Plant

Three major groups of firms, consisting of leading firms in the heavy electrical engineering, civil engineering, boiler, instrument, and associated industries, build nuclear power stations for the United Kingdom electricity authorities, and have built stations in Italy and Japan. The Atomic Energy Authority grants them non-exclusive manufacturing licences and is working in close collaboration with them in research and development.

Miscellaneous Non-electrical Machinery

In addition to the mechanical engineering firms described in preceding sections, there are about 1,750 enterprises whose principal product is a type of machinery not so far mentioned; about 900 of these firms have over 25 employees and some 60 have more than 1,000. Four firms have a labour force of over 4,000. The main products include: mining machinery, printing and book-binding machinery, refrigeration appliances, space heating, ventilation and air conditioning equipment, pumps and pumping machinery, industrial valves and cocks, compressors, scales and weighing machinery, portable power tools, food preparing machinery and many other types of equipment. The total value of deliveries in 1964 was some £665 million. About 354,000 workers are employed in these industries.

Refrigeration, Space Heating and Ventilation Equipment

This industry makes a wide range of equipment and appliances, extending from refrigerators of varying sizes suitable for domestic and commercial use to industrial refrigeration equipment for cold stores, manufacture of chemicals and other products, ice-making plant and refrigeration plant for ships. Important advances have recently been made in the development of accelerated freeze-drying equipment for the food industry and of refrigerated transport vehicles. Production of commercial and industrial refrigeration machinery was well established before the second world war, but the present large production of domestic refrigerators has been built up since 1946. Deliveries of refrigerating machinery in 1964 had a value of £51·5 million.

The value of deliveries of space heating, ventilating and air-conditioning equipment has been rising in recent years and in 1964 reached £66·5 million. Exports of air conditioning and refrigerating equipment in 1964 had a value of £7·7 million.

Pumps, Compressors and Industrial Valves

Industrial valves controlling the movement of liquids and gases are a vital component in many industrial processes, particularly in the chemicals, oil and electric power industries. The value of deliveries of pumps and valves in 1964 was estimated at £112·9 million and that of air and gas compressors and exhausters at £36·2 million. Exports of pumps and centrifuges were valued at £45 million and exports of industrial valves at £15·4 million.

Other Machinery

The value of deliveries of other major products in 1964 was: mining machinery, £55·2 million; food and drink machinery, £47·7 million; packaging machinery, £24·3 million; and other machinery, £270·7 million. Exports of food and drink preparation and sterilising machinery were valued at £15·9 million.

Scientific and Industrial Instruments and Apparatus

The industry comprises about 1,300 enterprises engaged in the manufacture of photographic, scientific, surgical and industrial instruments. It has a labour force of 132,000 persons. A rapidly expanding sector is that making industrial process measuring and control instruments—an essential element of automation in industry—deliveries of which amounted to £64 million in 1964, compared to £41·3 million in 1960. The value of deliveries of other broad categories was: optical instruments £10·4 million; electric, electronic, and nucleonic instruments £17·4 million; and nautical and aeronautical instruments £21·7 million. The total deliveries for 1964 amounted to £164·5 million.

Export deliveries of scientific instruments have been rising markedly, amounting to £44·7 million in 1964, compared with £27·9 million in 1960.

Clocks and Watches

Britain was at one time the world's leading producer of clocks and watches but by the end of the nineteenth century production had virtually died out. The present industry is largely a post-war development. It employs about

15,000 people, the great majority skilled craftsmen, and many of its factories are located on new industrial estates in the older industrial areas, particularly in Scotland. Sales in 1964 included clocks to a value of £7·4 million and watches worth £4·9 million; exports were valued at £4·3 million.

General Mechanical Engineering

Behind the firms manufacturing the major products outlined in this section are nearly 4,000 enterprises, employing about 229,000, whose main functions are to supply parts and components, to conduct research and development work, and to undertake general sub-contracting and repair work. (Some enterprises are included because the mixed character of their work makes it impossible to classify them under any single industry.) They include several very large undertakings: 23 have over 1,000 employees each and 7 have over 5,000 employees. Ball and roller bearings, and chains, are particularly important products; exports of the former were valued at £10 million in 1964, and exports of chains at £6·7 million.

ELECTRICAL ENGINEERING

The electrical engineering industry is engaged in the manufacture and installation of a wide variety of electrical equipment, including all types of generating, transmission and distribution equipment; motors; telecommunications apparatus; domestic appliances; and specialised laboratory and electronic equipment. Exports (other than record players, etc.) in 1964 were valued at £315 million. Products are exported to all parts of the world; in 1964, Australia (£22·2 million), South Africa (£21·2 million), India (£17·9 million), the United States (£15·1 million) and New Zealand (£15·1 million) were the main markets.

Altogether the industry employs a labour force of about 887,000. The leading organisation of the industry is the British Electrical and Allied Manufacturers' Association.

Basic research on behalf of the industry is carried out by the Electrical Research Association.

Electrical Machinery

British scientists and engineers have been responsible for many of the basic advances in the generation and transmission of electric power. The experiments of Michael Faraday pointed the way to the production of electricity as a source of cheap and abundant power; Sir Charles Parsons produced and patented the first turbo-dynamo, the forerunner of the giant turbo-generating sets of today. The industry is providing the plant required for the large-scale expansion programme of the electricity authorities in Britain and has built all types of equipment for overseas countries.

In 1964 the output of electrical machinery was valued at £384 million, comprising £138·5 million worth of rotating electrical machinery (motors, generators and rotary converters), £64·5 million worth of transformers for lighting, heating and power, £154·3 million worth of switchgear and control gear and £26·7 million worth of other electrical machinery.

Exports of electrical machinery in 1964 had a value of £73·7 million; Australia (£8·3 million) South Africa (£6·6 million) and India (£6·2 million) were the main markets. Generators, motors, converters, transformers and rectifiers accounted for £42·2 million and switchgear, starting and control gear for £23·7 million.

About 670 firms manufacture electrical machinery, including 27 with over 1,000 employees and five with over 7,500. The total labour force numbers 224,000. Manufacture takes place in many areas; among the most important are Manchester, Rugby, Tyneside, Stafford and Larne (Northern Ireland).

Radio and Other Electronic Apparatus

Production of electronic equipment is one of the most rapidly expanding of British industries. United Kingdom scientists and inventors have made many basic contributions to electronics—the thermionic valve, the development of radar (a British firm has fitted over half the world's radar-equipped ocean-going ships), the first public transmission television service, and the 'printed circuit', which has led to far-reaching changes in methods of production in the radio industry.

There are about 450 manufacturers of electronic equipment of all types, including some 250 firms engaged in the production of valves, transistors and specialised components and accessories. The industry employs about 297,000 people and its output in 1964 was valued at £395 million, an increase of 14 per cent over the previous year. The value of recorded exports in 1964 was £89 million. Indirect exports of equipment incorporated in other products, such as ships, aircraft and machinery, are also considerable.

Consumer Goods

The consumer goods sector of the industry is concerned with the manufacture of radio, television sets and radiograms. More than nine-tenths of total output comes from the six largest firms. Output of television sets in 1964, stimulated by the opening in April 1964 of the second BBC transmitting channel, was the highest since 1959 at 2·18 million sets, while the total value of sales was £80 million, almost all of which was in the home market. Sales of radios, together with radiograms, totalled 2·51 million in 1964 and were worth £27 million (including £1 million for export).

Capital Equipment

About four-fifths of the output of electronic capital equipment comes from some 30 companies. The total value of deliveries in 1964 was £220 million. The largest sectors of the industry, by value of deliveries, in 1964 were radar and navigational aid equipment (of which nearly one-third of the 1964 deliveries of £65·4 million was for export) and electronic computers (£42·6 million). Other important sectors include radio communications equipment (£31 million in 1964), electronic measuring and testing equipment (£15 million), electronic control equipment (£14 million) and broadcasting equipment (£9 million).

Insulated Wires and Cables

There are about 70 firms whose main products are cables and wires for the distribution of electric power, for telegraph and telephone networks and for many other purposes; they include submarine cables and those insulated by a great variety of materials. The value of deliveries in 1964 was £183·8 million and exports of electric cables, wires, etc., were worth £32·3 million.

The industry has a labour force of about 65,000 persons. Three firms with over 5,000 employees account for about 60 per cent of net output of larger firms.

Telegraph and Telephone Apparatus

Britain is the largest exporter of telegraph and telephone equipment. Shipment overseas (including signalling apparatus and parts) had a value of £27·5 million in 1964. Research and development work is done by firms in the industry in co-operation with the Post Office (see p. 391). The industry, employing 76,000 persons, is organised for large-scale operations. Three enterprises have over 10,000 employees and ten firms, each with over 1,000 employees, produce over 75 per cent of the output of the larger firms.

Electrical Goods and Domestic Electrical Appliances

Deliveries of electrical goods in 1964 included: domestic electrical appliances, £164·6 million; electrical equipment for motor vehicles, cycles and aircraft, £85 million; batteries and accumulators, £53·5 million; electric lamps, £30·2 million; and other electrical goods, £111·2 million. By number,

deliveries included: 1·6 million electric blankets, 1·7 million vacuum cleaners, 1·2 million domestic washing machines and 2·5 million electric irons. In 1964 exports of domestic electrical equipment were valued at £34·9 million, including washing machines and parts (£12·1 million) and refrigerators (£4·5 million); the main markets were France (£3·2 million), the German Federal Republic (£2·7 million), Australia and the Irish Republic. The industry has a labour force of 223,500.

VEHICLES, AIRCRAFT AND SHIPS

The industries which manufacture vehicles and aircraft provide a significant contribution to exports; exports of transport equipment in 1964 had a value of £653 million, accounting for 15 per cent of total exports. The labour force numbers 1·11 million and includes: 483,000 in motor vehicle manufacture, 268,000 in aircraft construction and repairing, 227,000 in shipbuilding and marine engineering, 99,000 in the manufacture of locomotives and railway wagons and carriages, 26,000 in cycle and motor cycle manufacturing, and 6,500 in the making of perambulators and hand trucks.

Motor Vehicles

In both size and value the largest section of the vehicle industry comprises the manufacture of cars and commercial vehicles. In the last few years development schemes costing over £200 million have been completed and, whereas the industry had previously been located mainly in the Midlands and London areas, manufacturing and assembly plants are now in full operation on Merseyside, in Wales and in Scotland.

Car and commercial vehicle output is dominated by the five largest firms (British Motor Corporation, Ford, Rootes, Leyland Motor Corporation and Vauxhall) who account for about 90 per cent of complete vehicle production; the balance is in the hands of specialist producers of heavy commercial vehicles, omnibuses, coaches, limousines and sports cars. The principal trade association is the Society of Motor Manufacturers and Traders (SMMT), which holds a motor show annually in London and a Commercial Motor Exhibition every two years.

Cars

Car output in 1964 at 1·87 million units was a record, well above the previous peak of 1·6 million in 1963. Exports in 1964, also a record, amounted to 672,000 cars with a value of £255·6 million. The United States (£43 million) was again the largest single purchaser; South Africa (£21·8 million), New Zealand, Australia and Canada were the other largest markets.

Commercial Vehicles

Production of commercial vehicles, including chassis, increased from 146,000 in 1946 to the record total of 465,000 in 1964. Exports in 1964 of commercial vehicles and chassis—168,000 units valued at £126·5 million—were the highest ever recorded. Australia (£15·8 million), South Africa (£15·6 million), Denmark, Belgium and New Zealand were the main markets for goods vehicles. Since 1961 Britain has been the world's largest exporter of commercial vehicles.

Accessories, Parts, etc.

It has been estimated that in some cases up to 70 per cent of the final cost of a car is represented by bought-out components. Exports of parts and accessories for cars and commercial vehicles in 1964 had a value of £113·2 million; engines and parts were valued at a further £43·2 million. Caravan and trailer exports were valued at £7·3 million.

Cycles and Motor Cycles

Cycles

Deliveries of bicycles have declined steadily from the post-war peak of over 4 million in 1951, the total in 1964 amounting to only 1·7 million. Over 80 per cent of British manufacturing capacity is in the hands of a single group

of companies, and output is concentrated in the Nottingham area. Over 1 million cycles worth £9·5 million were sent overseas in 1964; the United States (£3·4 million) was much the largest single market. Parts and accessories exported amounted to a further £4 million.

Motor Cycles

Deliveries of all types of motor cycle were 112,000 in 1964, slightly higher than the 1963 total but well below the 1959 peak of 249,000. Output was increasingly diversified during the 1950s, and the 1964 total of deliveries included 36,600 mopeds, 7,800 motor scooters and 12,100 three-wheeled vehicles. Manufacture of motor cycles is dominated by two large groups. Exports were valued at £5·9 million in 1964; parts and accessories came to an additional £1·4 million.

Railway Vehicles

Britain was the first country to build railways and British engineers pioneered railway development in most parts of the world. The industry is equipped to meet the conditions resulting from the replacement of steam locomotives by other forms of traction on most of the world's railways.

Deliveries in 1964 included 71 electric locomotives, of which all but six were for export, 626 diesel and diesel-electric locomotives, 297 coaching vehicles and 4,067 wagons. Deliveries of locomotives by private firms in 1964 were valued at £13·1 million. The total value of exports of railway vehicles in 1964 was £18·4 million; South Africa (£3·1 million) and Kenya (£2·6 million) were the largest purchasers.

There are over 50 establishments making locomotives and railway track equipment in Britain. British Railways Board has its own workshops which supply British Railways and certain other users in Britain; private firms build locomotives, carriages and wagons for the British Railways Board, for industrial users and for export.

Aircraft and Aero-Engines

Almost all the aircraft produced by the British industry today are based on civil and military applications of the gas-turbine aero-engine, first developed by Sir Frank Whittle. This form of propulsion was first used in scheduled airline services by the turbo-jet *Comet* and the turbo-prop *Viscount*, the latter one of the most successful post-war civil aircraft. Turbo-prop aircraft in current production and operation include the *Argosy*, the *Herald*, and the Hawker Siddeley *748*. Two of a second generation of jet airliners, the medium-haul *Trident* and the longer-haul Vickers *VC 10*, entered airline service in 1964, followed in 1965 by a third, the BAC *One-Eleven*, the world's first jet transport designed to operate economically on short-haul routes. Other civil aircraft in production include the *Skyvan* light transport aircraft, the *HS 125* executive jet, and the *Beagle* range of light aircraft, using piston and turbo-prop engines. The *Concord*, the world's first supersonic airliner, designed to fly at speeds of up to 1,450 miles per hour, is being developed jointly by Britain and France.

The industry produces a wide range of military aircraft. It is also engaged on work on rockets, earth satellites and other aero-space requirements, including the *Blue Streak* satellite launcher. The industry employs about 268,000 people but this number is likely to decline as a result of reductions in orders for military aircraft.

Exports of aircraft and parts in 1964 had a value of £43·3 million. Leading buyers (who vary considerably from year to year) included India (£4·4 million), the United States (£3·9 million), the German Federal Republic (£3·3 million), Canada, Iraq and South Africa. In addition, exports of instruments were worth £2·2 million, and tyres £1·2 million. Aero exports are expected to rise sharply in 1965.

As a result of a series of mergers in 1959 and 1960, the construction of aircraft is dominated by two large airframe manufacturers and one helicopter concern, though there are a few important smaller companies outside these groups. Main centres of the industry are the Home Counties (i.e. counties around London), Coventry, Bristol and the west of England, Lancashire, Northern Ireland and Scotland.

Besides extensive research work by the industry, research on a substantial scale on problems of aircraft and their engines is carried out by the Ministry of Aviation, chiefly at the Royal Aircraft Establishment and the National Gas Turbine Establishment, both at Farnborough, and the Royal Aircraft Establishment at Bedford. This work is done in collaboration with the industry and results are made known to manufacturers. In addition, the National Physical Laboratory undertakes research on aerodynamics.

Aero-Engines

Aero-engines provided some £615 million in export earnings from 1946 to 1964; in 1961 exports reached the record total of £83 million, including parts worth £26 million. In 1964 the figures were £44 million and £22 million respectively. Ten different British engines power nineteen types of aircraft currently in production overseas. In 1965 nearly half of the world total of jet and turbo-prop airliners on order or in service had British power plants. Famous engines in production include the economical *Dart* and *Tyne* turbo-props, the *Avon*, *Conway*, *Viper* and *Spey* turbo-jets and the revolutionary *Pegasus* lift-thrust engine for vertical take off and landing (VTOL) aircraft. The power plant for the *Concord* will be a further development of the *Olympus*.

Two companies are responsible for almost all aero-engine production.

Shipbuilding and Marine Engineering

The shipbuilding industry is concentrated in four main areas: the river Clyde in Scotland, the north-east coast of England, the north-west coast of England, and Belfast in Northern Ireland. Ships are also built in the Southampton area, in the Isle of Wight, and along the estuaries of the rivers Forth and Tay, in Scotland, while numerous yards along the coast build fishing vessels, yachts, harbour craft and barges. Repair yards and dry docks are situated in all the large ports. The shipbuilding, ship repairing and marine engineering industries give direct employment to nearly 150,000 workers.

Co-operative research into shipbuilding and marine engineering is undertaken by the British Ship Research Association with its headquarters in London and a research station on the river Tyne. Pametrada, a commercial organisation grouping turbine manufacturers, carries out design, development and production liaison work.

Merchant Shipbuilding and Ship Repairing

Although tonnage launched has decreased from a peak of 1·5 million gross tons in 1955, the 1964 total of 1·04 million tons was nearly 115,000 tons above the 1963 level. In 1964 Britain launched (after Japan) the largest quantity of shipping, accounting for 10 per cent of the world total, compared with 11 per cent in 1963. At the end of 1964 orders on hand of merchant vessels of 100 gross tons and over were 306, totalling 2·5 million gross tons and valued at £316 million. Of these vessels, 60 were for export. Completions in 1964 numbered 193 (0·8 million tons), 39 of which were for export. The 1964 total of completions included oil tankers amounting to 403,000 gross tons. The oil tankers launched in 1964 included seven of over 30,000 gross tons, two of which (both over 87,000 deadweight tons) were then the largest vessels built in Britain, but the first 100,000 deadweight-ton tanker was launched in 1965 and even larger vessels are under construction.

Modernisation in British shipyards over the last few years has involved

the replanning of yards, the erection of large prefabrication shops for welding massive sections under cover, the installation of heavy-lift travelling cranes, and much other reconstruction.

Although there are many specialist ship-repairing establishments, most of the largest shipbuilding firms also carry on repair work; about one-quarter of ship-repairing activity is concentrated in the north-east coast of England area.

Marine Engineering

Most of the larger shipbuilding yards maintain their own engine building works; often they manufacture several types of diesel engine under licence. Steam turbines of the highest powers are available, many designed by Pametrada.

MISCELLANEOUS METAL PRODUCTS

The group of industries manufacturing metal products not described above consists of a large number of companies, with a total labour force of 575,000 in 1964; the main groups were tools and implements (23,000 persons), cutlery (15,000), bolts, nuts and screws (46,000), wire and wire manufactures (44,000), cans and metal boxes (38,000), jewellery, plate, and refining of precious metals (27,000), and other metal industries (382,000). The total value of exports in 1964 was about £144 million.

Cutlery and Flatware

The production of cutlery and flatware is centred mainly in the city of Sheffield and the industry's reputation has been built up on the skill of its craftsmen. Mass production methods are, however, now extensively used except in the case of some of the highest quality wares. Firms remain mainly small and of some 290 enterprises manufacturing cutlery over 225 still employ fewer than 25 persons.

The value of sales of cutlery and flatware in 1964 was £15·2 million, including export sales of £4 million.

Domestic Hollow-ware

This industry, located mainly in the Midlands, Lancashire, Yorkshire, South Wales and London, produces a wide range of domestic utensils, such as saucepans, buckets and dustbins, mainly from wrought steel and aluminium. Increasing quantities of plastic hollow-ware are being produced, though aluminium manufactures comprise the largest single group, both in the value of total production and in exports. The value of sales (including some industrial hollow-ware) in 1964 was £33·6 million, of which £4·1 million were sales for export.

Tools and Implements

The manufacture of hand tools is one of the oldest British industries. Some 680 firms manufacture tools such as files, saws, hammers, axes and spades; Sheffield, Birmingham and other Midland towns are the most important centres.

The value of sales of implements and tools, other than machine tools and portable power tools, was £37·9 million in 1964, of which £12·4 million worth were exported; the totals included sales of hand tools, at home and for export, valued at £21·3 million and £11·7 million respectively.

Jewellery, Gold and Silver Ware

The making of jewellery, gold and silver ware and the refining of precious metals is an industry in which British craftsmen are heirs to a long tradition. Some 625 of the 885 firms in the industry have fewer than 25 employees. The law requires that gold and silver plate shall not be sold until it has been hall-marked at one of the Assay Offices situated in London, Birmingham, Sheffield and Edinburgh. The Birmingham office, located in the main centre

of the jewellery industry, probably hall-marks as much gold and silver as the rest together.

The total value of sales of jewellery, goldsmiths' and silversmiths' wares and electro-plated nickel silver wares in 1964 was £23·5 million, of which £3·2 million was for export.

CHEMICALS

The chemicals industry, with a labour force of about 461,000, comprises the manufacture of: chemicals and dyes (225,000 employees), pharmaceutical and toilet preparations (74,000 employees), explosives and fireworks (26,000 employees), paint and printing ink (48,000 employees), oils, fats, soap and detergents (43,000 employees), synthetic resins and plastics (31,000 employees) and polishes and gelatine (14,000 employees). The industry is capital intensive: the fixed capital expenditure of the industry, excluding mineral oil refining, amounted to some £925 million during the six years 1958–63 and totalled £192 million in 1964. The value of exports in 1964 was £412 million, or 9·7 per cent of total British exports. Production in the chemicals and allied industries rose by 51 per cent between 1958 and 1964.

Organic and Inorganic Chemicals and Dyestuffs

The inorganic chemicals industry dates back to the middle of the nineteenth century, when sulphuric acid and alkali were in increasing demand for the growing heavy industries. Over half of the output of this sector consists of a limited number of relatively simple chemicals, such as sulphuric acid, caustic soda, chlorine and ammonia, produced in very large quantities and serving as basic materials for industry. Sulphuric acid has the largest production of any chemical and over 3·1 million tons were produced in 1964. The remaining output of this sector consists of a very wide range of chemicals of varying complexity. Almost all inorganic chemicals are consumed in other manufacturing processes. Substantial quantities of inorganic chemicals are used in the production of plastics materials, while other major outlets include man-made fibres, detergents, paint, glass and metals. Exports are important; about one-quarter of output is estimated to be exported directly.

Production of organic chemicals (which include coal-tar chemicals) rose by 120 per cent between 1958 and 1964. To an increasing extent petroleum is the raw material used in the manufacture of organic chemicals although the by-products of the carbonisation of coal, such as benzene, phenol and naphthalene, are still important. It is estimated that in 1965 petroleum-based chemicals accounted for 70 per cent of the total output of organic chemicals; deliveries of feedstock for the petroleum chemical plants totalled 3·1 million tons in 1964 compared with 1·1 million tons in 1959. The main outlets for organic chemicals are plastics materials, solvents, synthetic rubber, man-made fibres and detergents.

Consumption of dyestuffs is geared to demand by the textile industry; 38,700 tons of dyestuffs were produced in 1964.

Exports of chemical elements and compounds amounted to £103·5 million in 1964. Exports go to a large number of countries including, in 1964, the Netherlands (£10·3 million), Australia (£6·4 million), the United States (£6 million), France (£5·5 million) and Canada (£4·5 million).

Plastics

The first plastic, Parkesine (later called Celluloid), was produced and patented in Britain in 1865 by Alexander Parkes; other British discoveries include polyethylene. Manufacture of plastics is one of the most rapidly growing sections of the economy. Output of synthetic resins has doubled since 1958 and total production in 1964 was 870,000 tons (an increase of

17 per cent over 1963), of which 581,000 tons consisted of thermoplastic resins.

Expansion in recent years has mainly been in thermoplastic materials, of which the most important are polyethylene (used in coverings and packaging—notably for foodstuffs), polyvinyl chloride (known as PVC and used for a wide range of industrial purposes and consumer goods) and polystyrene (a cheap non-inflammable material used for toys, light mouldings and many consumer goods). One of the newer thermoplastic materials is polypropylene, a versatile material for use mainly in electrical components, mouldings, and domestic appliances. Rapid expansion of capacity for all the main types of plastics materials is planned. Exports of plastics materials amounted to 330,000 tons in 1964, valued at nearly £75 million.

Synthetic Rubber

The first general purpose synthetic rubber to be manufactured on a commercial scale in the United Kingdom was marketed in 1958. Since then capacity for production of this and other rubbers has increased rapidly. High styrene rubbers for shoe soles and flooring, and nitrile rubbers for use where oil resistance is required, are in large-scale production, and neoprene rubber is manufactured at Londonderry, in Northern Ireland. Production in 1964 amounted to 153,100 tons, by far the greater part of which came from the styrene-butadiene plant at Hythe, near Southampton. Exports of synthetic rubber were valued at £7·8 million in 1964, with France as the largest market.

Fertilisers

The development of artificial fertilisers owes much to the pioneer work of the British scientists, Sir John Lawes and Sir Joseph Gilbert. The research now carried on at Rothamsted, Hertfordshire, and at the Macaulay Institute, Aberdeen, is of world-wide importance. Two firms predominate in the production of fertilisers and there are about one hundred firms marketing compound fertilisers from the principal constituents—nitrogen, phosphorus and potassium. To encourage use, sales on the home market are assisted by government subsidies paid to the farmer (see p. 341). Output of nitrogenous fertilisers (in terms of nitrogen content) in 1963–64 totalled 553,000 tons, and 421,000 tons (in terms of phosphate content) of phosphatic fertilisers were produced; production of compound fertilisers is increasing and amounted to 2·9 million tons in 1964. The use of ammonium nitrate (35 per cent nitrogen), ammonium phosphate, and, to a limited extent, urea (mostly 45 per cent nitrogen) is resulting in more concentrated fertilisers.

The value of exports of manufactured fertilisers, almost all nitrogenous, totalled £5·9 million in 1964.

Paints

Sales of paint and varnish during 1964 by manufacturers employing 25 or more persons amounted to some 91 million gallons, 7 per cent more than in 1963. Exports of pigments, paints, varnishes and related materials in 1964 amounted to £31·4 million; about a quarter were in the form of ready-mixed paints. The industry's indirect contribution to exports in the form of surface coatings for finished goods is also considerable.

In recent years the application of improved techniques has resulted in rapid development, in particular the use of important new ranges of synthetic resins and pigments; thixatropic, or jelly-like, paints and emulsions are growing in popularity.

Pharmaceuticals

The value of the pharmaceutical industry's annual output is estimated to have risen by over a third since 1959 to nearly £247 million. The whole range of

drugs is produced in the United Kingdom, including sulphonamides, anti-malarial drugs, anti-histamine products, anaesthetics, vaccines, sera, and naturally occurring drugs. About £8·5 million per annum is currently being spent on research.

Notable British contributions to the development of new products include: the discovery of penicillin by Sir Alexander Fleming and its evaluation by Sir Howard Florey and E. B. Chain; the evaluation of sulphapyridine (M & B 693) by Sir Lionel Whitby; the introduction of the anti-malarial drug proguanil; the discovery of griseofulvin; and, more recently, the isolation of the penicillin nucleus. A promising development is the Medical Research Council's discovery of 'interferon' for the treatment of virus diseases. Several of the larger pharmaceutical companies in Britain are subsidiaries of overseas firms.

In 1964 exports of medicinal and pharmaceutical products were valued at £59·2 million, of which £10·7 million worth were antibiotics. The largest purchasers were Australia (£3·7 million), Nigeria (£3·7 million), New Zealand, the Irish Republic and France.

Crop Protection Products

Notable discoveries by the British crop protection industry include the insecticidal activity of BHC (benzene hexachloride), the first selective weed-killer, MCPA, and more recently *Gramoxone*, a non-residual general herbicide based on paraquat. Sales of pesticides and allied products by larger manufacturers were valued at £19·4 million in 1964, 11 per cent higher than in 1963; herbicides (£9·3 million) were the largest single category. Exports of insecticides, fungicides and weedkillers in 1964 totalled £10·6 million.

Toilet Preparations, Soap and Cleaning Preparations

Sales of toilet preparations were valued at £79·6 million in 1964, including export sales of £10·1 million. Petroleum is the source of the principal raw material used in the manufacture of organic surface-active agents in detergents; the other main constituent, polyphosphates, is derived from inorganic sources. Sales of synthetic detergents amounted to 349,000 tons in 1964. Production of soap was some 400,000 tons. Exports of essential oils, perfumery and toilet preparations, soap and cleansing and polishing preparations were valued at £36·6 million in 1964.

TEXTILES

The textile industries in 1964 had a labour force of about 841,000 persons, including employees engaged in the production of man-made fibres. Some 119,000 were in the spinning and doubling of cotton, flax and man-made fibres, 109,000 in the weaving of cotton, linen and man-made fibres, 189,000 in the woollen and worsted trades, about 129,000 in hosiery and knitted goods, 76,000 in textile finishing and 41,000 in carpets. Over half the employees are women. The total value of textile exports in 1964 was £275 million, 8 per cent higher than in 1963. Production of textiles rose by 16 per cent between 1958 and 1964. Considerable re-organisation is taking place within the textile industry, connected with the increasing use of man-made fibres. This has given rise to several mergers and the formation of some large vertically integrated groups.

Cotton

The invention of mechanical spinning and weaving in the second half of the eighteenth century led to cotton becoming Britain's chief consumer goods industry and cotton piece-goods its largest export during the nineteenth century. Increasing foreign competition and the tendency of many countries to set up their own textile industry have cut progressively into British markets,

especially since 1952. Agreements have been negotiated with certain countries to fix temporary ceilings on their exports to the United Kingdom.

Output in 1964 consisted of: 508 million lb. of single cotton yarn, 146 million lb. of spun man-made fibre and mixture single yarn, 256 million lb. of doubled yarn, 1,034 million linear yards of woven cotton cloth, and 610 million linear yards of man-made fibres and mixture cloth. In 1964 exports of cotton yarn and woven fabrics (excluding man-made fibres) amounted in value to £44·1 million, including woven fabrics worth £31 million. Australia, South Africa, the Irish Republic and New Zealand were the most important markets.

Most of the industry is located in Lancashire, the north-east of the county being mainly concerned with weaving and the south-east with spinning. Manchester is the commercial centre. Liverpool is the chief port of entry for raw cotton and the Liverpool Cotton Exchange is the main market for raw cotton dealings.

Legislation to assist the reorganisation of the industry was introduced in 1959. Exchequer funds have paid for two-thirds of the cost of removing surplus capacity, and also provided grants of about one-quarter towards the cost of approved re-equipment and modernisation. The reorganisation schemes are administered by the Cotton Board, a development council, i.e. a statutory body with constitution and powers laid down under the authority of an Act of Parliament.

Scientific and technical research for the industry is carried out by the Cotton, Silk and Man-made Fibres Research Association.

Wool

The wool textile industry, the largest in the world, is the most ancient of Britain's staple industries and has been important since medieval times. There are two main branches—woollen and worsted. While about 70 per cent of woollens and 95 per cent of worsteds are made in the West Riding of Yorkshire, Scotland and the West of England have retained their importance as specialised producers of high quality woollen cloth. In recent years an increasing amount of man-made fibres has been blended with wool.

In 1964 output included 265 million lb. of wool and hair tops and 326 million lb. of woollen yarn. Production of worsted yarn amounted to 233 million lb. and of woven fabrics to 325 million square yards. In addition, large quantities of raw wool are scoured and cleaned in Britain. Consumption of raw wool in 1964 was 418 million lb., compared with 518 million lb. in 1959. Exports of wool yarns and woven fabrics in 1964 were valued at £89 million. Raw wool (cleaned or scoured in Britain) and other animal hair and tops exported had a value of £71 million. The United States, Canada, Japan and the German Federal Republic were the chief buyers of fabrics. Research is carried on mainly by the Wool Industries Research Association. The National Wool Textile Export Corporation is responsible for assistance to exporters and the development of new markets.

There are about 2,000 firms in the industry. The small or medium-sized business predominates and there are only a few large firms. In recent years on the worsted side there has been a tendency towards the formation of holding companies controlling a number of subsidiaries which combine all the worsted processes within one organisation. Firms on the woollen side are normally organised to include the full process of manufacture from raw material to finished article.

Man-made Fibres

Man-made fibres produced from cellulose were first made commercially available in the United Kingdom in 1905, and much of the early development

of viscose rayon and acetate took place in Britain. Large quantities of chemicals are consumed in their production, which is spread throughout the country; Northern Ireland is of growing importance. Nine enterprises manufacture man-made fibres in Britain; three of these, each with over 3,000 employees, account for over 90 per cent of net output. There has been a rapid expansion of output in recent years, the 1964 record total of 825 million lb. being about 15 per cent higher than in 1963. The total was made up of 447 million lb. of staple fibre and 378 million lb. of filament yarn. Of the staple fibre, 113 million lb., and of the continuous filament, 166 million lb., were of fully synthetic materials.

The output of a variety of fully synthetic fibres, derived predominantly from mineral rather than vegetable sources, has been expanding over the last decade at a rate previously unattained in a major chemical product. Production of nylon, the first fully synthetic fibre, in the form of nylon 66, started in Britain in 1941. Another type of nylon (nylon 6) has been manufactured since 1963 at Antrim, Northern Ireland; other new plants and extensions of capacity for improved types of nylon are in hand and total productive capacity is planned to reach about 390 million lb. a year by the end of 1967 compared with about 160 million lb. in 1964. Nylon is used extensively in the manufacture of clothing, fabrics and stockings, and has many industrial uses.

Terylene, a polyester fibre, was invented in the United Kingdom during the second world war. It is resistant to fading and is particularly suited to blending with wool. Annual manufacturing capacity is planned to reach 100 million lb. by the end of 1965. Firms in several overseas countries undertake its manufacture under licence, marketing it under a number of trade names.

A group of fibres of growing importance are known as acrylic or polyacrylonitrile fibres: *Courtelle* (a British discovery) and *Acrilan* are examples. Polypropylene fibre was introduced in 1962. These fibres are soft and warm and have particular applications in the wool textile industry. Synthetic elastomerics or spandex fibres, which are man-made textile fibres having inherent properties of stretch and recovery, are now produced commercially by British manufacturers.

Polyethylene fibres, such as *Courlene*, have been developed for industrial uses and polymethane fibres have recently come into use: protein fibres, such as *Fibrolane*, are used for blending with other man-made fibres. British textile manufacturers have developed a number of methods of blending man-made with natural fibres and with each other in order to produce fabrics with new combinations of texture, colour and finish, and with moisture-absorbent, hard-wearing, drip-dry and crease-resisting properties.

Exports of man-made fibre yarns and woven fabrics had a value of £58·5 million in 1964. Sweden (£5·1 million), the Republic of South Africa (£4·8 million), Australia (£4·5 million), the Irish Republic and Switzerland were the most important purchasers.

Hosiery and Knitwear

The hosiery and knitwear industry is predominantly one of small scale enterprises. Over 60 per cent of the 1,100 firms in the industry employ fewer than 50 workers, and only 4 enterprises have more than 2,000 employees. The industry is widely distributed, with Scotland and the east Midlands as the two most important centres. Sales of knitted goods were valued at £297·7 million in 1964 including £118·9 million worth of outerwear and £73 million worth of socks and stockings. Exports of knitted clothing and accessories were valued at £15·7 million in 1964; the largest buyers were the United

States, Switzerland, Canada and Sweden. Exports of knitted fabrics amounted to £4·6 million.

The Hosiery and Allied Trades Research Association, with laboratories at Nottingham, undertakes collective research.

Other Textiles

Linen

Linen has been made in Britain for more than a thousand years and it is believed that the art of linen weaving was being practised during the seventh century. Today the industry is concentrated in Northern Ireland (the greatest linen manufacturing region in the world), with most of the remainder in Scotland. Broadly speaking, the Northern Ireland industry concentrates on yarns and the lighter types of fabrics, while in Scotland production is largely, but not exclusively, of coarse linens and canvas. Northern Ireland manufacturers produced 51·1 million linear yards of cloth in 1964. Deliveries of cloth by weavers in Great Britain totalled 23·3 million square yards, including 14·6 million square yards of sailcloth and canvas. Exports in 1964 included £8·8 million worth of linen fabrics and £3·9 million worth of flax yarns and linen thread. Technical problems are investigated by the Research Institute of the Linen Industry Research Association, formed in 1919.

Jute

Jute is manufactured on a large scale in Dundee—the centre of the world's oldest jute industry. About 40 per cent of jute yarn production is utilised in the manufacture of carpets, cordage, ropes and other products. The balance is woven into fabrics for a wide range of uses in the carpet, upholstery, building and motor car industries, as well as its traditional use as a packaging material. Production of jute cloth in 1964 came to about 77,000 tons. The value of exports of jute fabrics in that year was £2·7 million. Research facilities are concentrated at the laboratories of the British Jute Trade Research Association. Over £14 million has been spent on a modernisation programme.

Lace

Sales of finished lace goods amounted to £19·3 million in 1964. The most important lace product is from the warp knitting machines, with sales valued at £10·1 million. Deliveries of lace products for export were worth £5 million in 1964.

Miscellaneous Textile Manufactures

In addition to the products mentioned specifically in this section, British textile firms manufacture a wide range of other goods, including many special yarns and fabrics, net, household textiles such as blankets, tablecloths and curtains, and floor coverings other than carpets. Sales of such floor coverings were valued at £39·1 million in 1964; just over one-fifth were for export.

Carpets

In 1964 manufacturers' total sales of all types of carpet and rugs amounted to 105·1 million square yards, valued at £146·6 million. Exports in 1964 had a value of £10·6 million; Australia (£2·7 million) was the largest single market.

There are about 130 enterprises engaged in the manufacture of carpets, though only 71 have over 25 employees and 9 firms each employing over 1,000 persons account for 58 per cent of net output of larger firms. In addition to the manufacture of woven carpets such as Axminster and Wilton, nearly one-third of total sales by quantity in 1964 were of tufted carpets, a form of carpeting in which the pile, usually containing a high proportion of artificial fibres, is inserted into a pre-woven backing. Axminster-type carpets account for nearly one-half of exports. There are about 41,000 employees, and the principal manufacturing centres include Kidderminster (in Worcestershire), Halifax and Dewsbury (in the West Riding of Yorkshire), Durham (in north-east England), Glasgow and Kilmarnock (in Scotland) and several towns

in Northern Ireland. Under half the carpets produced by quantity are made predominantly of wool and a growing proportion of traditional-type carpets contain some man-made fibre.

CLOTHING, LEATHER AND FOOTWEAR

There are about 632,000 employees in the clothing, leather and footwear industries. Some 453,000 are in the clothing industry, 116,000 in the footwear trade and 64,000 in leather, leather goods and fur manufacture. The aggregate value of their exports in 1964 was £87·5 million.

Clothing

The British clothing industry is the largest in Europe and total production of made-up clothing has increased by 28 per cent since 1958. Exports in 1964, including knitted goods, were valued at £43·8 million and, in addition, substantial quantities are sent by parcel post.

Although there are some large firms employing mass production methods on an increasing scale, the typical firm is small. Unofficial estimates suggest that five-sixths of the concerns in the industry employ fewer than 100 workers. The principal manufacturing centres are London, Leeds and Manchester, but several firms are also situated on industrial trading estates.

Fashion is important in the production of *haute couture* models and throughout the ready-to-wear industry.

Leather

Leather tanning is one of Britain's oldest industries. In 1964, 17,000 tons of sole and other heavy leather and 466 million square feet of upper, lining and other light leathers were produced. Britain is the world's leading exporter in terms of quantity, with exports in 1964 valued at £21·2 million. The United States is the largest single market (£4·1 million in 1964), followed by Canada (£2 million), Italy and Sweden.

Tanneries are situated in most parts of Britain, but there are important concentrations in Lancashire, Cheshire, Yorkshire, the north Midlands and the London area. Many different types of leather are produced, ranging from the heavy types for industrial uses, such as machinery belting and car upholstery, to high quality leather for footwear and for leather goods, and to gloving and clothing leather.

Research into tanning processes and the improvement of the quality of finished leather is undertaken by the British Leather Manufacturers' Research Association, the foremost association of this type in the world.

Footwear

The British footwear industry is the third largest in the world. In 1964 manufacturers' sales of footwear totalled 202 million pairs, the highest volume recorded in any year. Exports of all types had a value of £14·2 million; the United States (£3·4 million) and Canada were the largest markets.

Factories are located throughout Britain. Some areas concentrate on production of particular types; for example, the Rossendale Valley region of Lancashire on slippers, and Leicester and Norwich on women's and girls' shoes. There are about 800 firms in the industry, producing footwear of all types. The Shoe and Allied Trades Research Association enjoys a world-wide reputation in all matters connected with shoemaking.

FOOD, DRINK AND TOBACCO

The food, drink and tobacco industries employ about 842,000 persons in the production of a great variety of goods. The value of their combined exports in 1964 was £274·2 million; a record. Exports of alcoholic and other beverages accounted for £106·9 million; sugar, sugar preparations and honey for £43·5 million; cereal and cereal preparations for £19 million; and coffee (including

soluble), cocoa (including paste, powder and butter), tea and spices for £15·8 million.

Bread and Flour Confectionery and Biscuits

The average weekly household consumption of bread per head of population in Great Britain, which has been falling, was about 2 lb. 10 oz. in 1964. In England and Wales particularly, the small 'family' type of baker, producing bread with some mechanical aids, is still found, but the trend towards concentrating production in large mechanical bakeries has become more pronounced; at least two-thirds of the bread is made in these bakeries, which specialise in sliced and wrapped loaves; 4 groups have a dominant position. In the smaller bakeries production of cake and other flour confectionery is usually allied to bread production. There are about 2,000 firms and 158,000 employees in the bread and flour confectionery industry; a further 540 firms and about 44,000 employees are employed in grain-milling.

There are over 100 manufacturers, with some 52,000 employees, producing biscuits, and annual output has been well over half a million tons in recent years. Weekly consumption of cakes and biscuits per head in Britain was nearly 12¼ oz. in 1964. British biscuits have gained a world-wide reputation, and despite the problem of import restrictions in several overseas markets, exports in 1964 were valued at £7 million.

Cocoa, Chocolate and Sugar Confectionery

The chocolate and sugar confectionery industry, which has some 96,000 employees, is composed of a small number of very large manufacturers and many hundreds of medium-sized and small manufacturers. Though there are some 660 firms in the industry, about half the output is produced by 8 firms with over 2,000 employees.

The main ingredients used by the industry are sugar, cocoa beans, glucose, milk, nuts and fats. Production of chocolate and sugar confectionery was 633,000 tons in 1964. Consumption of chocolate and sugar confectionery in the United Kingdom is far higher than in any other country, being equivalent to about 7·4 oz. per head per week.

The value of exports in 1964 of cocoa preparations (including chocolate) was £10·1 million and of sugar confectionery, £11·3 million. Canada and the United States were the main markets for cocoa preparations.

Fruit and Vegetable Products

Fruit and vegetable products are manufactured in Britain by about 375 enterprises, including 11 with over 1,000 employees who account for 65 per cent of net output. Among the products manufactured are jam, marmalade, sauces and vinegar. The labour force numbers about 77,000.

The three largest manufacturers account for nearly half the total output of jams and marmalade, which fell from 329,000 tons in 1949 to about 215,000 tons in 1956 and then remained static until it fell to 198,000 tons in 1964. Strawberry, raspberry and blackcurrant jams are the most popular. Exports of jams and marmalade in 1964 were valued at £1·8 million.

In 1964, 686,000 tons of canned vegetables were produced. The British Navy was using canned foods in 1813, but rapid development in the industry did not take place until after 1935. Processed peas (177,000 tons) and beans in tomato sauce (259,000 tons) are the vegetables most in demand as canned products. In addition, output in 1964 included 98,000 tons of canned and bottled fruit, and 262,000 tons of canned soup. Rhubarb is the most important single fruit used for canning, followed by strawberries and apples.

The quick freezing of foods has been expanding rapidly in Britain since 1954. Some 85,800 tons of vegetables and 1,000 tons of fruit were preserved

by this method in 1964; peas accounted for over three-fifths of all quick-frozen vegetables.

Sales of dehydrated products, including accelerated freeze dried foods, which retain their appearance, taste and smell indefinitely, are increasing steadily.

Bacon Curing, Meat and Fish Products

There are some 980 enterprises, whose principal activities are: the curing of bacon and ham, the canning and preserving of meat and fish, the manufacture of sausages and pies or the preparation of extracts and pastes. The labour force numbers 83,000. Output in 1964 included 80,000 tons of canned meat and meat products and 219,000 tons of bacon and ham. There has been a rapid expansion of frozen fish output, and some 63,000 tons were produced in 1964; small quantities (6,700 tons in 1964) are also canned. Exports of fish and fish preparations had a value of £8·2 million in 1964 and those of meat and meat products were worth £10·9 million.

Beverages

The industries which manufacture beer, spirits, wines, cider and soft drinks have a labour force of about 164,000. Exports were valued at £106·9 million in 1964.

Whisky

Exports of whisky (almost all of it Scotch whisky) reached the record level of 32 million proof gallons with a value of £92·3 million in 1964; almost exactly half went to the United States (£46·4 million or 18·1 million proof gallons). Scotch whisky was first distilled in the fifteenth century. It is blended from 20 or more different types, some from malted barley and some from other grains. Whisky requires several years to mature, and the 108 million proof gallons (a record) of Scotch whisky produced in the 1964 distilling year will not be on sale for some years. Stocks of whisky amount to over 400 million proof gallons, of which one-third has been in stock for more than three years. About three-quarters of annual sales are to overseas buyers.

Gin

Production of gin in Britain has risen steadily since the early 1950s. The main distillers are in London and one company accounts for about half the total output. Although the larger manufacturers also own distilleries abroad, exports (4 million proof gallons) had a value of £7·1 million in 1964.

Brewing and Malting

There are 300 enterprises in the brewing and malting industry, with a labour force of about 99,000. In recent years there has been a strong tendency towards the creation of larger brewery units, partly to secure wide distributive outlets for the products of the large brewing groups, many of which market beer throughout the country. Bottled beer consumption, after increasing to nearly two-fifths of total consumption, has since dropped to about one-third; draught beer, in which is included keg beer (about 7 or 8 per cent of total output), accounts for the remainder, apart from a small output in canned form. In 1964, 29·6 million bulk barrels of beer were produced, the highest total since 1947, and consumers' expenditure on beer amounted to £760 million. Exports in 1964 of all types of beer were 381,000 bulk barrels, worth £3·3 million. Firms are experimenting with new methods, including continuous brewing processes.

The main raw materials used in brewing are malt, hops and some sugar. Malt is made almost entirely from home-grown barley. Some brewers make all or part of their own malt, others purchase it from independent maltsters who also supply distillers, vinegar brewers, and malt extract manufacturers. British malt is used by brewers throughout the world, and exports in 1964 amounted to 47,000 tons, worth £2·2 million.

Soft Drinks

The soft drinks industry has expanded markedly since 1954, although weather conditions can cause a marked drop in demand in some years. Output in 1964 included 50 million gallons of concentrated liquid, 8 million gallons more than in 1963, and 238 million gallons of unconcentrated drinks.

Though there has been some amalgamation in recent years, there are still several hundred firms supplying regional markets. There are three very large firms among the twenty producing widely advertised brands which are marketed on a national scale. There is also some degree of specialisation by firms in the production of various types, such as carbonated drinks, cola-based drinks, squashes and cordials, tonic waters and 'mixers', and comminuted drinks (in which the whole fruit is used).

Tobacco

The tobacco industry manufactures almost all the cigarettes and other tobacco goods sold in Britain. In 1964 consumers' expenditure on these goods amounted to £1,344 million (of which about 70 per cent was tax revenue) and, in addition, exports worth £16·9 million (87 per cent of which were cigarettes) were shipped to a large number of overseas markets, of which Malaysia and Aden were the most important. The main centres of production are in and around Bristol, Liverpool, London, Manchester, Newcastle, Nottingham, Glasgow and Belfast. The two biggest manufacturing groups account for a large proportion of total output. The industry has about 48,000 employees.

The tobacco industry used 308 million lb. of unmanufactured tobacco in 1964 (1·7 per cent less than in 1963), all of which was imported. The main sources are the United States, Rhodesia, Canada and India. Total consumption of tobacco in Britain in 1964 amounted to 267·8 million lb., including 230·8 million lb. consumed in cigarettes, 32·5 million lb. in pipe tobacco and 2·7 million lb. in cigars. In 1964, 114,400 million cigarettes were consumed, 800 million fewer than in the previous year; 42 per cent of the total were tipped compared with 16 per cent in 1960.

BRICKS, POTTERY, GLASS AND CEMENT

This group comprises the manufacture of bricks, fireclay, refractory goods, pottery, glass, cement, abrasives, asbestos and other building materials. The industries have a combined labour force of 359,000, which includes 76,000 in the bricks, fireclay and refractory goods trades, 79,000 in the glass industry and 67,000 in the pottery industry.

Brickmaking and Refractory Goods

About 700 firms manufacture items such as bricks, roofing tiles, chimney pots, fireclay ware and heat-resisting products including furnace and kiln linings. Brickmaking, one of Britain's oldest industries, was introduced by the Romans, and manufacturing methods vary from traditional hand fabrication to highly mechanised systems. In 1964 about 7,960 million building bricks were produced in Great Britain (the highest number ever) 40 per cent of which were of the Fletton type, made mainly in the Bedford and Peterborough areas. Capacity is being expanded and it is hoped to produce 8,400 million bricks in 1965. Refractory goods (firebricks, silica bricks, magnesite bricks and chrome-magnesite bricks) are manufactured mainly for home use. Exports of refractory construction materials in 1964 were worth £4·9 million.

Pottery

The pottery industry is a long-established and complex industry, largely located in the Stoke-on-Trent area of Staffordshire. Much of its raw material is indigenous, such as china clay, ball clay and china stone from Devon

and Cornwall. It supplies nearly all home needs for domestic and industrial pottery and its exports have recently been at an annual rate of about £20 million. Canada and the United States are important markets.

The largest section of the industry, about half, makes domestic pottery, sub-divided into china, earthenware, stoneware, jet and Rockingham; the other main divisions are glazed tiles, sanitary ware and electrical ware, but other specialised industrial products such as acid-proof stoneware, porous ceramics and laboratory porcelain are also manufactured. Among famous makes of British pottery are *Wedgwood*, *Spode*, *Royal Worcester*, *Royal Doulton*, *Minton*, *Coalport* and *Royal Crown Derby*. Total sales of domestic pottery were valued at £38·6 million in 1964, including export sales of £15·2 million.

The 350 firms in the industry employ about 67,000 people, of whom some 40,000 are women. There has been considerable re-equipment; gas or electrically fired kilns have replaced almost all the coal-fired kilns and new decorating techniques and automatic and semi-automatic machinery have been introduced.

Glass

Britain's glass industry is the third largest in the world. The section of the industry devoted to the manufacture of plate and sheet glass in their various forms is organised for quantity production, much of it in the form of the 'float' glass process, which was developed in Britain. Its use for internal decoration and as a finish for internal and external walls has greatly increased in recent years. Large quantities of safety glass are produced for the motor industry. Other products include glass bricks, tubular glass (produced on a large scale), mirrors, lamp and bulb glass, scientific and medical glassware, glass fibres, and all types of glass container (often made by fully automatic machinery). A traditional product is hand-made lead crystal glassware of very high quality, much of which is exported.

Direct exports of glass and glassware reached the record value of £25·2 million in 1964. Those of glass were worth £16 million, the most important markets being Australia, South Africa, the United States and Canada. The figures included £4·2 million of float glass.

Collective research is undertaken by the British Glass Industry Research Association, and much research work is also carried on by the Department of Glass Technology at Sheffield University.

Cement

The cement industry of the United Kingdom is chiefly concerned with the manufacture of Portland cement. Invented by Joseph Aspdin and patented in 1824, this material and the methods of its production have been the subject of continuous technical improvement and intensive research. The capacity of the industry, which has some 18,000 employees, has increased substantially since the war to meet the growing demands of the building industry and further expansion is planned. About one-third of production comes from plants situated in the Dartford-Gravesend district of Kent. Annual output, which reached 7·7 million tons in 1938, had risen to the record level of 16·7 million tons in 1964. One group of companies is responsible for about two-thirds of total output. In 1964 direct exports of cement, which have been tending to fall, were worth £2·7 million.

PAPER, PRINTING AND PUBLISHING

The paper, printing and publishing industries have a labour force of over 632,000 including 97,000 in the manufacture of paper and board, 70,000 in the production of cardboard boxes and packing cases, 141,000 in the publishing

of newspapers and periodicals and 253,000 in other types of printing and publishing.

Paper and Board

The manufacture of paper in Great Britain was not firmly established until 1678, but records show that some paper was produced as far back as the year 1492. The British paper and board industry is the largest of its kind in Europe. Total production in 1964 of all types of paper and board amounted to 4·4 million tons, the highest ever. Of this, newsprint accounted for 750,000 tons, board for 1·3 million tons and other paper for the remainder. Exports of paper, board and manufactured paper items were valued at £48·3 million in 1964. A substantial proportion of the export trade is to sterling area countries, mainly Australia, the Irish Republic and South Africa.

Wood pulp, almost all of which is imported, is the main raw material, but large and increasing quantities of waste paper are also used.

The industry comprises over 200 enterprises engaged in the manufacture of paper and board. There are a few very large groups and a large number of medium-sized and small firms. The large groups hold considerable interests abroad, including pulp and paper producing mills in the United States, Canada and other parts of the Commonwealth and Europe. In addition, there are nearly 500 enterprises which make cardboard boxes, cartons and packing cases and some 600 firms which manufacture miscellaneous items such as wallpaper and paper bags.

Printing and Publishing

The printing industry produces an immense range of goods from national newspapers and periodicals to books, catalogues and greetings cards. The industry includes many very small enterprises. Mergers in recent years have led to the formation of large groups in the newspaper, magazine and book publishing sections. Of the 630 enterprises in the printing and publishing of newspapers and periodicals, about half have over 25 employees and 22 of these over 1,000 employees; 4 large firms employ more than 7,500 persons. General printing, publishing, engraving and bookbinding remains essentially an industry of small firms with over 75 per cent of the 6,500 firms having fewer than 25 employees.

Publishers' turnover in 1964 amounted to £98·5 million, of which export sales accounted for £43·2 million. Consumers' expenditure on books, newspapers and magazines totalled £281 million in 1963. Popularity of paper-backed books has increased rapidly in recent years and they account for about a third of total sales in Britain. According to the overseas trade returns, exports of printed matter, manuscripts and typescripts were valued at £46·5 million in 1964, including books (£22·8 million), and newspapers and periodicals (£8·4 million), but these figures do not include parcel post shipments which are considerable, possibly as large again as the recorded totals. The Book Development Council was formed in 1965 to promote the supply and use of British books overseas. The United States and Australia are the most important overseas markets. A shortage of skilled workers has led firms to introduce the latest developments in high-speed printing equipment, including electronic engraving machines and advanced processes of photographic reproduction, and to experiments with typesetting by computer.

OTHER MANUFACTURING INDUSTRIES

Other manufacturing industries include the timber and furniture group, with about 296,000 employees, rubber manufacture, with 131,000 employees, and a group of miscellaneous manufactures which together embrace some 195,000 employees.

Rubber

Britain's rubber manufacturing industry is the oldest in the world, dating from 1819. Hancock, who developed the vulcanisation process in Britain, afterwards collaborated with Macintosh, the inventor of waterproof garments, and Dunlop in 1888 devised the pneumatic tyre. Tyres and tubes represent more than half the total output of the industry. British firms also make a great variety of other rubber manufactures, the most important being rubber footwear, conveyor belting, cables, hose, and latex foam products.

The British industry is one of the largest in the world. There are 470 firms located throughout the country, and the industry has a labour force of 131,000. In 1964 its consumption of rubber totalled 377,000 tons, including 180,000 tons of natural rubber, 161,000 tons of synthetic rubber and 37,000 tons of reclaimed rubber; the proportion of synthetic rubber used is increasing. There are 14 tyre manufacturers, including several subsidiaries of United States and other overseas companies. In 1964, 195,000 tons of rubber were used in the production of tyres and tyre products. Tyres and tubes exported were valued at £25·8 million; this figure excludes large indirect exports on vehicles. Direct exports of all rubber manufactures in 1964 were worth £48·5 million, with Australia, Sweden and Denmark as the main markets.

Furniture

London is the largest centre for furniture manufacturing, but High Wycombe, in Buckinghamshire, is an important centre for domestic furniture.

Deliveries of domestic furniture had a value of £145 million in 1964 and exports of furniture £12·6 million. There are some 2,400 enterprises engaged in the manufacture of furniture in Britain (including domestic, upholstered, office, school and other furniture) with a total labour force of about 103,000. Many firms are small and of the 600 larger enterprises, 8 with over 1,000 employees account for 25 per cent of net output. In recent years there has been a tendency towards increased concentration.

A Furniture Development Council was established in 1949; it undertakes research, training and study in technical and artistic subjects and design, provides a technical information service and publishes statistics.

Toys, Games and Sports Equipment

There are over 500 enterprises manufacturing toys and sports equipment in Britain, though three large firms with over 1,500 employees account for nearly a third of net output. The total number of persons employed is about 35,000. Deliveries of toys in 1964 were worth £42·8 million and exports had a value of £11·8 million. Australia, the United States, the German Federal Republic and Canada were the main overseas markets. The industry estimates that current annual expenditure in Britain on toys amounts to about £7 or £8 per child; current trends are towards increased production of small-scale precision models of vehicles and equipment and greater use of plastics materials; interest in construction kits is also growing.

The value of manufacturers' sales of games was £3·8 million and that of sports equipment £14·4 million, of which £4·5 million was for export.

12
AGRICULTURE, FISHERIES, AND FORESTRY

AGRICULTURE

Although Britain is a densely populated, industrialised country relying on imports for half its food supply, agriculture remains one of its largest and most important industries. It occupies about 825,000 people in Great Britain or just under 3½ per cent of those in civil employment, provides about 3½ per cent of the gross national product, and uses 49 million of the 60 million acres of land.

In Northern Ireland 2·8 million of the 3·4 million acres of land are in agricultural use, and the corresponding proportion for employment and gross output are 14 per cent and 17 per cent.

THE LAND AND ITS USES

Land used for farming is conventionally divided into improved land suitable for cultivation (crops and grass) and rough grazing, nearly all of which is hill or mountain land with a native herbage of coarse grasses, rushes, bracken, heather or scrub trees. Rough grazing has a low potential output—usually assessed at about one-sixth of that of agricultural land—but is valuable for sheep. In England and Wales only about one-sixth of the 29·2 million acres of farming land is classified as rough grazing. In Northern Ireland the proportion is about one-quarter of a total of 2·8 million acres but in Scotland it is about three-quarters (12·4 million out of 16·7 million acres). In the United Kingdom as a whole there are 30·7 million acres under crops and grass. Improved land and rough grazing together represent 82 per cent of the land area. The rest is mountain and forest, or put to urban and kindred uses. The area available for farming is gradually decreasing to meet the needs of housing and industry; however, the loss is more than outweighed by the increase in output from what remains.

The soils of the country are extremely varied. Many of those in the west and north, overlying hard rocks, are poor and thin. The lowlands and river valleys are usually fertile, varying in texture from clay to sandy loam, silt and peat. Clay soils everywhere necessitate under-drainage, and as all are constantly leached by rainwater, lime has to be applied at regular intervals. In hill country the area of improved land is often small, but is usually supplemented by grazing on a comparatively large area of hill land.

Size and Ownership of Farms

For many centuries the bulk of land in Britain lay in estates ranging in size from a few hundred acres upwards, comprising farms of varying sizes let to tenants. At all times the tenanted holdings were interspersed with some owned by the farmers who occupied them, and with some peasant or cottage holdings. Social changes of the past half-century have completely changed the pattern of rural life in England and Scotland. Estate duties have been a principal factor in the breaking up of estates. Most surviving estates are still owned by private individuals or family trusts, but the Crown, the Church Commissioners, local authorities, the National Coal Board, and other corporate bodies hold considerable areas. Of the farms sold, many have been bought by the tenants

already in occupation. About half the farms in Great Britain today are owner-occupied.

Although the average size of all agricultural holdings is about 70 acres of crops and grass, many of them are smallholdings which do not provide a full livelihood for their occupiers. It is estimated that the bulk of Britain's home-produced food supply comes from about one-quarter of the holdings. In England and Wales, for instance, about half the 330,000 holdings are part-time holdings, the occupiers generally having another source of livelihood in addition to farming. Taking full-time holdings only, the average size of holding in England and Wales is about 130 acres of crops and grass. In Scotland the crops and grass area of the 31,000 farms worked on a part or spare-time basis averages only 11 acres, but for the 27,000 full-time farms the average is 144 acres.

Scotland has two distinct farming zones: most of the good land lies in the east and south of the country, while in the Highlands and Western Islands agriculture is quite distinct from that of the rest of Britain, there being an exceptionally high proportion of rough grazing to improved land. Numerous small occupiers are grouped in scattered villages, each with a tiny area of enclosed land and rights of grazing on an adjoining hill. The Highlands are thus divided between a few large holdings and a great many very small crofts.

In Northern Ireland there are only a few large estates. Almost all the land is divided into about 68,000 holdings varying from a few acres to 300–400 acres. Most of these holdings are occupied by the owner. Some 20,000 are either re-let in conacre (seasonal lettings for crops or grazing) or owned by people who do practically no farming. Of the remaining 48,000 farms, with an average size of 40 acres of crops and grass, about half can be said to provide a full-time occupation for the owner.

Types of Farming

Most British farms produce a variety of products; the pattern varies from farm to farm. In many districts the mosaic of farms is dominated by one type and the bias towards one product or group of products is so marked that the whole area takes on a distinctive character. In England the farms devoted primarily to arable crops for sale are in the eastern part of the country, in East Anglia, Kent, Lincolnshire, and the East Riding of Yorkshire. Potato and vegetable growing on a substantial scale marks the farming of the Fens (south Lincolnshire and Cambridgeshire), the alluvial areas around the rivers Thames and Humber and the peaty lands in south Lancashire. Elsewhere, horticultural crops are widely dispersed amongst agricultural crops. In Scotland the rich lowlands of the east coast, the Lothians and a fringe of land around the Moray Firth are also primarily arable.

Interspersed between these arable areas, and also in the Midlands and the south-east of England, there are large tracts where, although much of the land is kept under the plough, the rearing and fattening of cattle is an important enterprise. In the south-west of Scotland dairying is extensively practised, but most of the north-west is devoted to rearing sheep on rough hill land. The parts of England bordering the Pennine hills and most of Wales are also sheep-rearing areas, though a good deal of dairying, based on purchased feedingstuffs, is also done there. Dairy farming is widely practised throughout much of the rest of Britain. In Northern Ireland mixed farming is practised, the most important products being milk, fat and store cattle, pigs and eggs, with sheep and stock raising in the hill areas. Oats and barley are widely grown, mainly for livestock feeding, and the only important cash crop is potatoes, both ware and seed.

Tillage and Grassland

Traditionally, in England and Wales old grass is regarded as the property of the landlord; many leases still specify the fields which may not be ploughed, except under penalty. But the tenant is free to sow other fields to grass if he wishes and to plough them out whenever he wishes; so two types of grass came into existence—old or permanent grass, the property of the owner, and temporary grass or ley, a rotational crop of the tenant, its lease of life depending on the system of farming. The ley farming system had its origin in the use of grass in the cereal rotation to restore soil fertility and structure.

In Scotland, which has never had the same tradition, the tenant is free to plough as he chooses, although in practice very high-lying fields are ploughed with the main object of renewal of the grass. The area under temporary grass has always been high.

The situation during the 1939–45 war called for a widespread ploughing out of grass. Since the end of the war, in all parts of the United Kingdom there has been a slow return to permanent grass; but not all of the gain in tillage has been lost and there has been an increase of nearly 3 million acres in the area of temporary grass, so that the total arable area remains about 5 million acres more than it was pre-war. On the table land of England and Wales the old-style rotations have been abandoned, and a cropping system has been adopted which allows a high proportion of cereals, sugar beet and potatoes, with short or medium term leys. The western counties show a heavy bias towards cereal crops with longer leys, and over the country as a whole there has been a tendency for leys to lengthen with improved management of grass. In Northern Ireland, while the greater proportion of the grassland is under permanent grass, medium length leys are a common feature. Scotland, with its choice of crops restricted by soil and climate, has returned to its pre-war pattern of rotational cropping, in which leys occupy more than half the arable ground. Thus, in England and Wales nearly one-half of the 24 million acres of arable and grassland is under permanent grass, about one-quarter under cereals and one-sixth under temporary grass; of the 4·3 million acres in Scotland, only one-fifth is in grass seven years old or over, against more than two-fifths in grass under seven years old; while in Northern Ireland over a half is permanent grass and about one-quarter temporary grass.

AGRICULTURAL PRODUCTION: CROPS AND LIVESTOCK

Farmers everywhere are exposed to the vagaries of the weather, of pests and diseases, and of the market; but over the past 30 years much has been done in Britain to mitigate these risks. In part this has been effected through the advance of science, in part through self-help by farmers' organisations, but probably in greatest measure by government action. The role of the Government, successively as financial supporter, as wartime controller, and as guarantor and provider of technical and advisory services, is described on p. 337.

Between the two world wars British agriculture suffered a long depression which reached its lowest point about 1930. Yet already the industry was becoming organised: separate National Farmers' Unions had been set up in England and Wales, Scotland and Northern Ireland to give farmers a collective voice; breed societies had been established to watch over the interests of stock breeders; young farmers' clubs were becoming numerous; a chain of research stations had been constituted; and a comprehensive system of university, college and farm institute education was in being.

During the second world war 7 million acres of the permanent grass were ploughed; the area under potatoes and barley was doubled, and that under wheat increased by about 30 per cent. The total number of cattle increased

slightly, chiefly owing to larger dairy herds; sheep and poultry stocks declined; and the number of pigs fell by more than half.

Agricultural Production

The steady expansion in productivity which has taken place over the last 25 years is summarised in Table 19. Cattle and sheep stocks increased between 1953 and 1961, but numbers are now tending to remain stable. The number of pigs and poultry has shown a sharp increase. Output of wheat has shown only small variations, although the trend has been upward; but that of barley doubled between 1947 and 1960 and has since almost doubled again to 7·4 million tons. There has been a marked fall in the acreage under oats while a smaller but significant drop in that under potatoes appears to have become stabilised. Between 1954 and 1964, output of pigmeat and eggs increased by 49 and 51 per cent respectively; this, together with the increase in the sales of milk off farms, is in part attributable to the increased import of feedingstuffs in recent years. It is estimated that about 5½ million tons of concentrates were imported in 1964–65, about double the imports of twelve years earlier, and a further 1·8 million tons were available as by-products of imported grain and oil-seeds.

The index of agricultural output at constant prices has risen steadily. By 1953–54 it was about 56 per cent above the immediate pre-war average. Using the average of 1954–55 to 1956–57 = 100 as basis, it reached 112 in 1959–60, 125 in 1962–63 and 127 in 1963–64; 137 is forecast for 1964–65.

Food Supplies

Since 1939 the population of the United Kingdom has increased by 6 million, or about one-eighth. In spite of this growth Britain now produces about half of its total food requirements or two-thirds of all that can be grown in temperate climates; this latter figure comparing with about one-half before the second world war. The percentages by weight of total supplies of the principal foods provided by home production in relation to the pre-war average are shown in Table 18.

TABLE 18
PERCENTAGE OF TOTAL FOOD SUPPLIES IN THE UNITED KINGDOM PROVIDED BY HOME AGRICULTURE

Food Product	Pre-war average	1951	1963	1964 (prov.)
Wheat and flour (as wheat equivalent) ..	23	33	41	47
Oils and fats (crude oil equivalent)	16	10	13	10
Sugar (refined value)	17	23	23	27
Carcase meat and offal	51	65	69	69
Bacon and ham (excluding canned)	32	49	38	38
Butter	9	4	10	6
Cheese	24	18	43	42
Condensed milk	70	63	95	95
Dried milk (whole and skimmed)	59	43	56	40
Shell eggs	71	86	97	98
Milk for human consumption (as liquid) ..	100	100	100	100
Potatoes for human consumption	96	98	93	95

Source : *Ministry of Agriculture, Fisheries and Food.*

Table 20 shows how, for selected items, total food supplies have changed since before the second world war and in the past 13 years. The main trends reflected in the table are that consumption of bulky foods (carbohydrates), such as flour and potatoes, has been declining almost uninterruptedly, while

TABLE 19
AGRICULTURAL LAND USE, CROPS, LIVESTOCK AND YIELDS IN THE UNITED KINGDOM

Periods commencing 1st June

Product and Unit	average 1936–38	10-year average 1944–53	5-year average 1954–58	5-year average 1959–63	Forecast for year 1964–65
Land Use Summary ('000 acres)					
Arable (other than feedingstuffs)	7,748	13,021	10,153	10,016	10,605
Temporary grass and fodder crops	5,340	5,536	7,498	7,999	7,777
Permanent grassland ..	18,798	12,501	13,441	12,719	12,305
Rough grazings	16,589	17,118	16,825	18,186	17,927
Total under agriculture	48,475	48,176	47,917	48,920	48,614
Main Crops					
Wheat: area ('000 acres) ..	1,856	2,282	2,205	2,008	2,206
harvest ('000 tons)	1,651	2,341	2,724	3,067	3,639
yield (cwt. per acre)	*17·79*	*20·52*	*24·59*	*30·59*	*33·00*
Barley: area ('000 acres) ..	929	2,079	2,419	3,791	5,032
harvest ('000 tons)	765	2,010	2,821	5,121	7,398
yield (cwt. per acre)	*16·47*	*19·34*	*23·32*	*27·02*	*29·40*
Oats: area ('000 acres) ..	2,403	3,254	2,459	1,711	1,125
harvest ('000 tons)	1,940	2,847	2,384	1,840	1,326
yield (cwt. per acre)	*16·15*	*17·51*	*19·39*	*21·45*	*23·57*
Mixed area ('000 acres) ..	113	706	453	173	101
corn and harvest ('000 tons)	86	635	445	201	125
rye: *yield (cwt. per acre)*	*15·22*	*17·93*	*19·42*	*23·23*	*24·75*
Potatoes: area ('000 acres) ..	723	1,286	874	771	778
harvest ('000 tons)	4,873	9,155	6,477	6,713	6,951
yield (tons per acre)	*6·74*	*7·22*	*7·41*	*8·69*	*8·99*
Sugar area ('000 acres) ..	335	419	431	429	443
beet harvest ('000 tons)[a]	415	558	753	811	980
yield (tons per acre)[a]	*24·77*	*26·63*	*34·94*	*37·81*	*44·24*
Vege- area ('000 acres) ..	289	504	436	391	378
tables: harvest ('000 tons)	2,090	2,832	2,439	2,608	2,628
yield (cwt. per acre)	*145*	*112*	*111*	*132*	*140*
Livestock ('000 head)					
Total cattle and calves	8,578	10,014	10,826	11,715	11,627
of which—dairy cows	3,824	3,639	3,801	3,237[b]	3,144
beef cows				937[b]	982
heifers in calf	563	853	818	798	798
Sheep and lambs	26,401	19,951	24,063	28,659	29,657
Pigs	4,410	2,961	6,005	6,266	7,379
Poultry	78,163	81,280	91,511	109,021	118,377
Livestock Products					
Milk (million gallons) ..	1,556	1,865	2,083	2,459	2,513
Eggs (million dozen) ..	545	582	900	1,090	1,246
Beef and veal ('000 tons) ..	578	570	774	819	860
Mutton and lamb ('000 tons)	195	142	192	245	257
Pigmeat ('000 tons) ..	368	258	603	625	809
Poultry meat ('000 tons) ..	89	86	165	320	363

[a] Raw equivalent basis.
[b] 4-year average 1960–63.

Source : *Agricultural Departments. Annual Abstract of Statistics.*

TABLE 20
FOOD CONSUMPTION IN THE UNITED KINGDOM
(selected items)

lb. per head per annum

	1934–38 average	1946	1954	1962	1963	1964 (prov.)
Flour	194·5	221·2	187·2	161·4	162·7	157·1
Sugar[a]	100·6	79·5	106·1	112·6	112·6	109·2
Fresh and frozen meat ..	92·4	70·8	83·8	97·4	98·5	94·0
Bacon and ham	26·4	15·1	25·0	26·0	25·2	25·3
Poultry	5·1	4·0	5·6	14·6	14·6	15·2
Fresh, frozen and cured fish	21·8	26·3	18·3	17·7	16·7	17·6
Liquid milk	217·1	309·4	328·2	324·7	325·9	237·4
Cheese	8·8	10·0	9·4	10·3	10·3	10·5
Eggs in shell	25·9	18·0	28·4	31·2	31·0	32·1
Butter	24·7	11·0	14·1	20·3	19·3	19·5
Margarine	8·7	15·1	18·3	13·2	13·5	13·4
Dried and fresh fruit ..	86·5	60·0	74·4	79·0	77·8	78·5
Canned and bottled fruit	10·3	2·4	10·5	18·8	18·8	19·7
Potatoes	190·0	281·2	242·3	213·6	227·0	226·4
Fresh vegetables (including tomatoes) ..	115·3	130·7	107·0	106·5	103·7	110·1

Source : *Ministry of Agriculture, Fisheries and Food.*

[a] Including sugar in all home-produced and imported manufactured foods and in brewing.

that of high-protein foods, such as meat and eggs, has increased with greater availability and rising living standards.

Crops

Cereals

The possibilities of wheat growing, which is mainly confined to England, have been changed out of all recognition by the advent of new strong strawed and heavy yielding varieties, mainly from the continent of Europe but some home-bred. These permit the liberal use of fertilisers, and spring dressings of nitrogen have become accepted practice. Crop yields of 2 tons per acre are no longer unusual. Over 3·6 million tons were harvested in 1964, with yields averaging 33 cwt. per acre.

There are two distinct markets for barley—for malting and for feeding to stock. Malting barley has in the past commanded a much higher price than feeding grain, but the disparity has now decreased. New varieties have greatly enlarged yields. Since 1960 the acreage under barley increased by nearly 50 per cent and production has almost doubled.

The total area under oats has halved since 1958; even in Scotland oats are now less widely grown than barley.

The widespread use of combine harvesters has necessitated the installation of drying and storage facilities on many farms. Such equipment is also widely used on a co-operative basis.

Fodder Roots

In England the turnip crop is giving way to kale and cabbage. The total acreage of fodder crops (except kale) has, however, been declining steadily because in many cases farmers can provide winter feed more economically by increased grass production and improved methods of conservation. In Scotland the decline in turnips and swedes has been less rapid and the acreage under these crops is now greater than in England. The area under mangolds (grown almost entirely in England) has been falling sharply—by

nearly 50 per cent since 1958—while fodder beet is grown on only a small scale. Rape retains a modest place as sheep fodder.

Sugar Beet

Beet is grown mainly in East Anglia and Lincolnshire where most of the beet sugar factories are situated. The crop is grown under contract to the British Sugar Corporation, which takes the entire output at guaranteed prices and also provides technical advice and assistance. Precision drilling is the usual method of sowing and more than three-quarters of the crop is mechanically harvested.

Potatoes

Early potatoes are grown in England and Wales in numerous, widely scattered districts with favourable soils and climate. The crop is marketed during the summer months and reaches the consumer within a few days of lifting. Main crop varieties, which are normally stored before sale, are grown chiefly in the Fen counties, Essex, Lincolnshire and Yorkshire. In Scotland early potatoes are grown in coastal areas of Ayrshire and Wigtownshire, main crop potatoes being grown mostly on the eastern side of the country; a substantial part of the industry is concerned with supplying seed potatoes to English and foreign growers. In Northern Ireland both main crop and seed potatoes are produced, and a large part of the crop is shipped to Great Britain and abroad. In recent years the area planted with potatoes in the United Kingdom has been about 775,000 acres, and the average yield has varied between 8½ and 9 tons per acre. Although cultivation and harvesting is largely done mechanically, a good deal of hand labour is still necessary for planting and grading.

Dairy Farming

Milk is much more valuable when sold on the liquid milk market than when converted into cheese, butter or other milk products. In Great Britain milk is produced primarily for liquid consumption, but in Northern Ireland the greater part of the milk is used for manufactured products. Production and liquid sales are now much greater than before the war. Sales promotion by the industry is helping to maintain these higher liquid sales. The average consumption per head is now about 5 pints per week.

Average yields per dairy cow are still rising steadily; in England and Wales they have increased during the last decade by about 15 per cent and now average almost 800 gallons a year. Freedom from tuberculosis has reduced herd wastage, and through the artificial insemination (AI) centres, operated by the Milk Marketing Boards and other organisations, the influence of a small number of high-potential bulls is widely disseminated. It is estimated that about two-thirds of Britain's total cattle are bred by AI. The Friesian breed now dominates both AI centres and farms on which bulls are maintained in England and Wales; the Ayrshire breed is by far the most in demand in Scotland; and in Northern Ireland the Dairy Shorthorn still predominates although Friesians are on the increase. Milk production has also been stimulated by advances in grassland management, intensive grazing techniques and new methods of making high quality hay; new methods of conversion into silage are being exploited. Most dairy farmers practise some degree of intensive grass management, but hay of the traditional type remains the basic winter feedingstuff; it is supplemented with purchased concentrates.

Clean dairy farming methods and hygienic standards for equipment and buildings used in milk production are enforced by regulations. The Ministry of Agriculture, Fisheries and Food's Milk Service has a general responsibility for enforcing the regulations and for advising farmers in England and Wales

on clean milk production. In Scotland these functions are performed by local authorities but central supervision is exercised by the Scottish Home and Health Department. In Northern Ireland all farmers producing milk for sale must hold a Ministry of Agriculture licence.

Livestock

A great number of specialised breeds of livestock have been developed over the centuries in Britain. It has been found that they meet the needs of breeders in most countries and substantial export sales are made to buyers seeking to replenish and improve their herds with British animals.

Beef Cattle

Although home production of beef is considerably greater than it was before the war, imports are lower and consumption per head has not yet overtaken the pre-war level. Taste is changing and the majority of buyers no longer want joints from fully fattened beasts. The average age of slaughter is below two years and systems of semi-intensive or intensive beef production, such as that involving large daily quantities of cereals and correspondingly little roughage, are being increasingly adopted. In the hill regions hardy herds of beef cattle are kept, especially of the Galloway breed and its crosses; in marginal land and lower areas the sires used are predominantly of the Aberdeen Angus, Beef Shorthorn and Hereford breeds. Such beef stock are kept on 'natural' lines, the cows calving in early spring and grazing with their calves through the summer. Usually the calves are sold at weaning to farmers with arable fodder and good grazing for fattening. Nowadays much beef derives from the dairy herds, some females being mated to beef sires, the majority by AI. The cross-bred calves make useful beef animals; so too do the pure-bred male calves from Friesian, Shorthorn and some other types of herds. There is a large and complex trade in store cattle (increased by animals imported from the Irish Republic) whose general movement is from the upland west to grazing areas in the Midlands and arable areas in the east.

Sheep

Britain has outstandingly good pastures for sheep. Moreover, veterinary researches have provided vaccine and sera protection against nearly all the epidemic diseases to which sheep are subject. More than thirty breeds and innumerable crosses are to be found in Britain, each breed having originated within a circumscribed area. The basic stocks are everywhere maintained by local selection.

In the hills, and especially in the Highlands, winter conditions are usually severe. Draft ewes and lambs are brought from the hill areas every autumn to swell the lowland flocks, usually in two stages: firstly, to farms at intermediate altitudes, where they are mated with rams of a larger and more rapidly maturing breed; then, the cross-bred progeny pass on in due course to the more genial lowland conditions and especially to the Midlands and the south and east of England, where they become crossed again with Down rams for fat lamb production. The hill breeds bring in hardiness and the lowland sires fecundity and early maturity.

Wool is now of increasing importance to the sheep farmer and research into breeding for wool is being undertaken. But the prime purpose of British sheep farming today is the production of fat lambs, in response to the change in the preference of consumers away from mature sheep. Leys are largely relied on for fodder, although in Scotland the turnip crop is still of considerable importance.

Pigs

Pig production is a complex enterprise, owing to the varying uses to which the carcase is put. In Britain the carcase has always been used in three different

ways: for curing as bacon, for sale in fresh condition as pork, and for sausages or other processed forms. Consumption per head, as pork and in processed form, is now more than double the pre-war level. For the several trades, pigs of three different weight ranges seem to be called for but leanness is desirable in all three.

Breeders, in the main, aim at the long type required by bacon curers, for which there is a grading system based on weight, carcase measurements of length and back-fat. The Large White and Landrace breeds yield carcases which meet the requirements of both the bacon and the pork trades.

Apart from type, breeders' attention is now focused on utility qualities, such as size and weight of litters, and on food consumed per pound of liveweight gain. Litter recording and the performance and progeny testing schemes for boars operated by the Pig Industry Development Authority are providing basic data. This authority, set up under the Agriculture Act 1957, promotes improvements in the production of pigs and in the processing and distribution of pigmeat.

Poultry

The organisation of the poultry industry has changed very considerably since the pre-war period. Specialist techniques and intensive husbandry have been introduced over a large part of the industry and considerable concentration has occurred. There are now several flocks of over 100,000 birds and only a comparatively small proportion of total production is in the hands of the smallest producers. By 1964 about half the laying birds on farms were in flocks of 1,000 or more. With the rise in the poultry population and in the yield of eggs per bird (now averaging over 200 eggs a year), the estimated production of eggs has more than doubled the 1938 level and for several years nearly all eggs consumed in Britain have been home-produced.

Within the industry the trend is towards specialisation in the breeding and supply of stock and in the production of eggs and table poultry. The mass production of special table chickens, or 'broilers', has become a major industry; it is estimated that about 150 million birds were produced in 1964.

Horticultural Crops

Horticultural crops occupy only a tiny fraction of the cultivated land of the country—less than 2½ per cent of the area under crops and grass—but their value in terms of output per acre is very high. The total value of horticultural crops sold in 1964–65 is estimated at about £175 million, compared with some £334 million for farm crops. About 400,000 acres are under vegetables and about 250,000 acres under fruit.

Market gardening has grown up around all the large centres of population, and in the Lea Valley, near London, for example, some very large capital investments have been made. It has also flourished in more rural areas with favourable soil or climatic conditions—in Bedfordshire, Cambridgeshire, Hampshire and Kent, and in a concentration of smallholdings around Evesham, in the Avon valley. Districts with mild climates, such as the Penzance region of Cornwall, have been favoured for the production of selected early crops. More recently, selected vegetable crops have been grown in increasing quantities by farmers as an alternative to potatoes: this applies particularly to cabbages and brussels sprouts and to peas for canning, drying and quick-freezing.

Specialised horticultural holdings range from a few acres up to about 300 acres, and many have glasshouses, frames or forcing houses. Use of fertilisers, particularly of an organic nature, is very heavy, and much of the field work is mechanised. The larger holdings normally have specialised packing sheds, with washing and grading machinery, and irrigation plants.

More and more growers, however, are coming together in co-operatives for marketing their produce and many of these co-operatives provide grading and packing facilities for members.

Britain has about 4,500 acres of glasshouses, about half of the area being used primarily for the cultivation of tomatoes, the main centres of which are the Lea Valley in Essex and Hertfordshire, and the Worthing district in Sussex. In the Lea Valley, on a narrow belt of gravel and brick earth, about 700 acres are covered with glass. Total production of tomatoes in the country is estimated at about 75,000–80,000 tons annually and the value of all glasshouse crops at about £30 million per year.

Hard fruits grow well in many parts of England and Wales, the chief risk associated with their culture being late frosts. The main centres are in the south, south-west and east of England, and Kent in particular. Production of apples has been about equally divided between cooking and dessert varieties, with Cox's orange pippin heading the latter group, but production of cooking apples is now declining. About 25,000 acres of varieties of cider apple are grown mainly in Devon, Herefordshire and Somerset for the cider-making industry. In Northern Ireland there are 8,000 acres of cooking apples—Bramley Seedlings—mostly concentrated in County Armagh. Plums and soft fruits are grown in many counties; concentrations of plums are found in Kent and Worcestershire, of blackcurrants in Norfolk, Kent and Hereford, of cherries in Kent and of strawberries in Norfolk, Kent and Hampshire. Raspberries are exceptional in that of some 9,000 acres grown in Britain nearly three-quarters are in Scotland, mainly in the Blairgowrie district of Perthshire and in Angus.

Hop-growing for the brewing industry is confined to two main areas, in Kent and Sussex and in Herefordshire and Worcestershire. Capital outlay and cultivation costs are very high, but crops per acre average about 12 cwt., worth some £380. The total annual value of the crop is about £8 million.

FARM EXPENDITURE AND EARNINGS

Estimates of farm expenses and sales and the aggregate net income of agricultural producers are prepared annually by the agricultural departments.

The estimates show that Britain's farming is based on livestock; fully two-thirds of farmers' income in Britain is derived from the sale of animals or their products. The aggregate net income of farmers, after fluctuating around £350 million for some years, now exceeds £450 million. The annual cost of government support to the industry has averaged about £300 million in recent years.

Growing items of farm outlay are machinery and equipment, amounting currently to about one-sixth of total expenses. Feedingstuffs amount to more than one-quarter but show signs of decreasing slightly. Since 1955 wages have risen by 60 per cent, offsetting the lower costs arising from the reduction in manpower made possible by mechanisation.

Until 1958 rents tended to lag behind other costs. This was due partly to the reluctance of landlords to put up the rents of satisfactory tenants, and partly to the terms of reference given to arbitrators. These terms were modified in the 1958 Agriculture Act and since 1959–60 rents in England and Wales have gone up by about half. Average rents now being negotiated are £3 17s. an acre for all types of tenancy.

Capital Requirements

The capital required for land and buildings may be provided by the farmer, if he is an owner-occupier, or by the landlord, if the farm is let to a tenant. Each year 'fixed capital' totalling some £60 million is added to the value of

land and buildings. (Annual gross investment in fixed assets exceeds £160 million.) The bulk of the capital required to stock and run the farms is provided by the occupiers. Bank advances are an increasingly important source of outside capital, both fixed and working; about half the total bank advances to agriculture are believed to be for short-term purposes. Agricultural merchants are also an important source of short-term credit.

Accounts of some 2,200 farms in England and Wales, analysed by university agricultural economists, show average valuations of occupiers' capital ranging from £20 to £50 per acre. In Scotland a similar sample of 850 accounts shows a wide range in tenants' capital per acre, from about £4 on hill sheep farms with extensive rough grazings to around £60 per acre on lower ground farms. In Northern Ireland, on the small intensive farms, occupiers' capital ranges from £50 to £70 an acre. Dairy farms are usually more heavily capitalised than other types of stock farms. On all types of farms machinery is a heavy item; on dairy farms it is often £15 per acre and on arable farms up to £20 per acre; even on stock rearing farms it may amount to £6 per acre.

Mechanisation

Britain has one of the heaviest tractor densities in the world, with half a million tractors in 1965, or one to every 36 acres of arable land. Power-take-off implements now characterise arable farming; and some 60,000 combine harvesters were in use in 1965. A wide variety of machines for harvesting and preservation of grass are employed. Milking machines are installed on all except the smallest farms, many with mechanical means of handling milk. About 90 per cent of the farms in Great Britain have an electricity supply and accompanying equipment. There are about 700 farmers' machinery syndicates through which farmers have the use of expensive equipment without tying up their own capital.

Research, development and testing of farm machinery are carried out at the National Institute of Agricultural Engineering in Bedfordshire. This Institute developed the first farm tractor in the world employing hydrostatic transmission and also one of the most effective complete potato-harvesters now in production.

Net Income

The range of profits between individual farms is very wide, varying with the type and size of farm, quality of land, and managerial ability of the occupier. The average profit for farms of different types varies from about £5 to £10 per acre and there is a marked tendency for small farms to show higher profits per acre than large ones, owing principally to the higher proportion of profit represented by personal work on the small farm.

Profits per acre on arable farms have, with occasional seasonal exceptions, been maintained at a higher level than on other types; dairy farming has shown consistent but moderate profits, while those on stock-raising farms have usually been low.

THE ROLE OF THE GOVERNMENT

During the last hundred years the Government has played an ever-increasing part in British agriculture. Since the opening up of the great primary-producing countries of the New World and the Antipodes in the latter part of the nineteenth century, producers of food had been at a disadvantage because supplies tended to exceed effective demand. By the beginning of the 1930s the need for some form of state assistance to agriculture had become pressing; during the following decade and subsequently, the main object of the Government's agricultural policy was to find methods of supporting domestic agriculture without prejudice to Britain's position as a world trading

nation; thus during the 1930s the Government initiated various forms of protection and financial assistance for agriculture.

During the second world war and the immediate post-war years, agricultural production was closely controlled by the State, with County War Agricultural Executive Committees, composed of landowners, farmers and farm workers, acting as the Government's local agents. To ensure a reasonable standard of living for farmers and farm workers, while at the same time keeping the cost of living steady, most of the basic farm products were purchased at fixed prices on government account and sold at controlled prices, often below the cost of procurement; the difference in price was borne by public funds. This practice continued as long as rationing lasted.

Government Policy

Government policy today is founded on the Agriculture Act of 1947. The main objective, as set out in Section 1 of the Act, continues to be 'a stable and efficient agricultural industry capable of producing such part of the nation's food and other agricultural produce as in the national interest it is desirable to produce in the United Kingdom, and of producing it at minimum prices consistent with proper remuneration and living conditions for farmers and workers in agriculture and an adequate return on capital invested in the industry'. To this end, the Government is empowered to provide, for the main agricultural products, guaranteed prices determined in the light of annual reviews (see p. 339).

Post-war policy falls broadly into two periods, with the dividing line about 1954. During the first, the chief aim was to encourage expansion and a return to something like the traditional pattern of British farming. 'Production objectives' were set for each of the main commodities, as they had been during the war, though the Government gradually ceased to direct farmers what to grow.

As world supplies of food and Britain's own agricultural production and trading position improved, the Government gradually restored to private business both the importing of food and domestic trading in food. Since the ending of the period of scarcity, policy objectives have changed: stress has been laid on more economic production of food of the kinds and qualities demanded by the market, rather than on indiscriminate expansion of production. The Agriculture Act of 1957 assured farmers that the prices guaranteed under the Act of 1947 would not be steeply reduced, and at the same time provided grants towards the cost of bringing fixed equipment up to date.

In recent years increasing pressure and poor phasing of supplies (at home and from abroad) brought depressed prices and unstable conditions in the British market for meat and cereals. The Government accordingly decided to introduce new arrangements to secure a greater degree of stability in the market and to ensure that the support system would not be undermined by excessively low market prices, which in turn would increase the cost to the Exchequer of agricultural support.

The Agriculture and Horticulture Act 1964 gave the Government power to introduce minimum import prices for agricultural and horticultural products. In the same year an understanding with overseas suppliers on the sharing of the bacon market became effective and agreed minimum import prices for cereals were introduced. Home production of pigs was already regulated by arrangements which reduce the guaranteed price if the quantity produced is likely to exceed a certain figure and in 1964 the 'standard quantity' concept (see p. 340) was extended to guarantee arrangements for wheat and barley.

Machinery of Government

The functions of government in relation to agriculture are mostly exercised by the agricultural ministers, that is to say, for England and Wales the Minister of Agriculture, Fisheries and Food, for Scotland the Secretary of State for Scotland, and for Northern Ireland the Home Secretary, who is the minister responsible for United Kingdom aspects of Northern Ireland agriculture, local aspects being the responsibility of the Northern Ireland Minister of Agriculture. The agricultural ministers are assisted by a number of advisory committees composed of general agriculturists and specialists.

The headquarters of the Ministry of Agriculture, Fisheries and Food is divided functionally, each division being responsible for a particular subject or service. Its relations with individual farmers are conducted mainly through its local offices, grouped in England in regions, each administered by a regional controller working in close collaboration with the regional heads of the technical services. Local offices in Wales are grouped under a Welsh Secretary with similar functions and with special responsibility for Welsh affairs. County Agricultural Executive Committees have a number of duties, including those of promoting technical development and advising the minister on local aspects of policy.

In Scotland most of the agricultural functions of the Secretary of State are discharged through the Department of Agriculture and Fisheries, which has its headquarters in Edinburgh, with the help and advice of 11 Agricultural Executive Committees.

The Secretary of State also appoints the members of the Crofters Commission, which has powers to deal with the unique and difficult circumstances of crofting in the Highlands and Islands, and the Red Deer Commission, which deals with the conservation and control of red deer.

In England and Wales the Minister is advised by a panel of independent scientists on the scientific aspect of any questions affecting the activities of his department. In addition, two councils, the Agricultural Advisory Council and the Horticultural Advisory Council, advise the Minister on the problems of the industry that require research and on the dissemination of research results to working farmers. In Scotland this function is exercised by the Agricultural Improvement Council.

The Northern Ireland Ministry of Agriculture is responsible for implementing agricultural policy inaugurated by the Northern Ireland Government. It is organised on similar lines to the Ministry of Agriculture, Fisheries and Food, for which it acts as agent in the administration in Northern Ireland of United Kingdom agricultural schemes. Its administrative headquarters are in Belfast and each of the six counties has an Agricultural Executive Officer.

CURRENT SUPPORT POLICY

Annual Review

In February each year, in accordance with the Act of 1947, the agricultural ministers review the economic condition and prospects of the industry. Between annual reviews, a special review may be held if the ministers consider it warranted, but this has seldom been necessary. In holding reviews, the ministers are required to consult with representatives of agricultural producers—in practice, the three farmers' unions in the United Kingdom. The ministers consider such factors as production trends and market requirements, world market prospects, the cost of subsidies, the trend of profits in the industry as a whole, the increasing efficiency of the industry and changes in production costs, trading relations (especially with the Commonwealth) and the national economic situation. In the light of their conclusions, they determine guaranteed prices for fat cattle, fat sheep, fat pigs, eggs, wool,

milk, cereals, potatoes and sugar beet. These guarantees apply to livestock and livestock products for the ensuing twelve months, and to crops to be harvested in the current year. Various grants in aid of particular kinds of production or farming practice (known as 'production grants') are also considered. Any changes in 'relevant' production grants (broadly, those payable to occupiers rather than landowners) are taken into account. The Government's conclusions and its decisions on changes in guaranteed prices and relevant production grants are published as a White Paper.

The long-term assurances provided for in the 1957 Act require the total value of the guaranteed prices and relevant production grants in any year to be maintained at not less than 97½ per cent of their value in the preceding year, after allowing for changes in costs. In addition, the guaranteed price (adjusted for any change in the basis of the guarantee) for each commodity must be not less than 96 per cent of that of the previous year. For livestock and livestock products—where farmers' decisions need time to take effect—there is a further provision that reductions in the guaranteed price for any product must not total more than 9 per cent in a period of three years. The cost of government support to the industry in 1964–65 was about £265 million; the estimate for 1965–66, adjusted for the effect of the 1965 review decisions, forecast an increase to about £293 million.

Price Guarantees

The general policy of the Government is to use methods of agricultural support that allow the ordinary channels of trade to flow freely. The form of guarantee most generally used is the deficiency payment, which means that the Government makes payments to producers, related to the differences between the average market price realised and the guaranteed price, for output eligible for the guarantee.

The deficiency payments schemes for cereals and fatstock are administered directly by the agricultural departments. Payments for wheat and rye are made on the quantity of millable grain and, in the case of wheat, potentially millable grain sold and delivered by the grower. For barley and oats, much of which is consumed on farms, payments are made on the acreage grown. New arrangements, first introduced for the 1961–62 season, provided growers with an incentive to hold barley until later in the season. 'Standard quantity'[1] arrangements for wheat and barley were introduced for the 1964 crop. Deficiency payments for fatstock are made weekly to individual producers on certified sales on a liveweight or deadweight basis but under new arrangements introduced for 1964–65 there may also be a second payment at the end of the year for cattle and sheep. The weekly standard prices for fat cattle and fat sheep vary on a seasonal scale; for pigs there is no seasonal scale but the weekly prices are adjusted for changes in feed costs and, under a flexible guarantee arrangement designed to stabilise pigmeat production, adjustments may also be made quarterly by reference to a forecast of the number of pigs likely to receive the guarantee payment during a period of 12 months. In Northern Ireland guarantee payments are administered through the prices paid to producers by the Pig Marketing Board.

[1] The Agriculture Act 1947 postulates that the guarantees should be related to the volume of agricultural produce which, in the national interest, it is desirable to produce domestically (see p. 338). This is effected by including 'standard quantities' in the guarantee arrangements for milk, pigs, barley, wheat, potatoes and sugar beet. 'Standard quantity' agreements vary in form but, in general, the basic guaranteed price determined in the Annual Review is related to a specific quantity of produce marketed annually on a national basis; if this quantity is exceeded the producers' average unit return falls.

For most of the remaining commodities the Government operates the guarantee through the appropriate marketing board, which takes account of any payments from or to the Government in deciding what to pay producers for their produce. In the case of milk there are five such boards, and the full guaranteed price is paid only on a 'standard quantity' which relates to the volume of liquid milk sales plus a substantial reserve. Milk produced in excess of the standard quantity is sold for manufacturing considerably below the full guaranteed price. The retail price of liquid milk is determined by the Government so as to cover the full cost of the guarantee and, taking one year with another, there is no Exchequer subsidy. For eggs, a subsidy is paid to the British Egg Marketing Board on all first quality eggs sold to the Board through packing stations. A deficiency payment is made for potatoes in years in which the British growers' average price for potatoes for human consumption (excluding new potatoes) is less than the guaranteed price; payment is made to the Potato Marketing Board for the benefit of growers in Great Britain and to the Ministry of Agriculture, Northern Ireland, for the benefit of growers there.

For wool a fixed price is guaranteed to the British Wool Marketing Board for every pound of fleece wool it buys from producers. This enables it to fix in advance a schedule of producers' prices, based on types and quality, after making allowance for its marketing costs.

Under the Sugar Act 1956 and the Agriculture Act 1957 the British Sugar Corporation contracts to buy the whole of the sugar beet crop produced from a specified acreage (at present 443,000 acres) at a scale of fixed prices, determined as a result of the annual review and related to sugar content. Refined sugar produced by the corporation is sold, under market-sharing agreements with the refiners, at a price based on the world price.

The Sugar Board buys Commonwealth sugar under the Commonwealth Sugar Agreement and sells it commercially. The deficits or surpluses which result from the transactions of both the Corporation and the Board are ultimately reflected in the Board's accounts. When these accounts show a deficit a levy is charged on all sugar, imported or home-produced, entering the United Kingdom market, including the sugar content of composite sugar imports, and when there is a surplus a distribution payment is made correspondingly, so that taking one year with another the board balances its account.

Production Grants

The price supports outlined above relate only to current production. To increase productivity, however, the Government offers to farmers a wide range of inducements, known as production grants, for improvements to land, crops, livestock and equipment. In 1964–65 the Exchequer's contribution in the form of production grants was £108 million. The form taken by these schemes varies considerably but they fall into three main categories. Firstly, improvement to land fertility, which is covered by a subsidy on fertilisers and lime, by grants for drainage and water supply, and by grants for ploughing and grassland renovation to improve pasturage; the Exchequer cost of these currently runs at nearly £55 million a year. The second type of inducement is aimed at maintaining and improving breeding herds of cattle and sheep (particularly in upland areas) and includes a calf subsidy on animals destined for the beef herds; the total cost is about £32 million a year. The third type consists of a contribution towards farm improvements generally but with particular reference to farm buildings, silage, roads, drainage, fences and other equipment. A special scheme exists within this category to assist farmers on small and uneconomic holdings; payments are based on the implementation

of schemes submitted by the farmers and approved by the Agricultural Departments and are limited per farm to £1,000 spread out over three years. This scheme at present affects some 80,000 holdings. In August 1965 the Government announced special measures to facilitate and speed up the voluntary amalgamation of small farms which, because of their scale and situation, could not expect to become financially viable.

Farmers' Machinery Syndicates

One-third capital grants are made under the Agriculture (Miscellaneous Provisions) Act 1963, towards expenditure incurred by landowners or syndicates of farmers in erecting buildings to house machinery or grain drying and storage facilities for use by farmers' machinery syndicates (see p. 337).

Horticulture

Horticultural produce, because it is perishable and liable to seasonal variation in quantity and quality, does not lend itself to a system of guaranteed prices. Hitherto the principal means of support has been tariffs on imports, but greater emphasis is now being placed on the need to strengthen the competitive efficiency of the industry so as to reduce its dependence upon the tariffs.

OTHER GOVERNMENT ASSISTANCE AND ACTION

Land Use

It is an integral part of the Government's planning policy (which is administered in England and Wales by the Ministry of Housing and Local Government, and in Scotland by the Scottish Development Department) that the better agricultural land should not be taken for other use if there is less valuable land that would serve the purpose. The Ministry of Agriculture, Fisheries and Food assists in carrying out this policy in England and Wales by providing expert advice to planning authorities and other departments on the implications, from the standpoint of the public agricultural interest, of all substantial proposals to take agricultural land for other purposes. Appropriate arrangements exist for the Ministry to be consulted about such proposals. In Scotland similar arrangements exist for the Department of Agriculture and Fisheries to give advice.

Agricultural Credit

The Government has never pursued a general policy of making credit available to agriculture on easy terms. Nevertheless, a number of facilities for specific purposes enjoy government encouragement and support.

In England and Wales finance for the purchase or improvement of agricultural property is available from the Agricultural Mortgage Corporation Ltd. (see p. 415) and takes the form of a loan on the security of a first mortgage on freehold agricultural land and buildings or of an improvement loan against the security of a terminable rent charge created on the land improved. The corporation's funds are derived mainly from public issues of stock, but it receives a measure of government support. In Scotland, loans for agricultural purposes secured on agricultural land in Scotland are granted by the Scottish Agricultural Securities Corporation Ltd.; this corporation also receives support from the Government.

Improvement loans for carrying out improvements to agricultural land and buildings are also available to landowners from the Lands Improvement Company, whose funds are provided privately. The amount of such loans is charged on the land and buildings in the form of a terminable rent charge. Improvement loans require the sanction of the agricultural ministers.

In Northern Ireland loans are available to farmers from the Agricultural Loans Fund, administered by the Ministry of Agriculture and financed out

of public funds. The bulk of the loans issued are short-term for agricultural machinery, but loans for other purposes are for medium terms, usually up to ten years and occasionally for longer periods.

A recently introduced scheme enables the Government to assist farmers to raise capital by guaranteeing loans made by banks. These guarantees may extend to a maximum of 12 years and will be available (within prescribed annual limits) for the provision of fixed and semi-permanent machinery and equipment, and also for the supply of working capital.

Smallholdings

Since 1892 county councils and county borough councils in England and Wales have had powers to provide land for smallholdings. The aim was, at first, to foster a peasant economy and later some preference was given to the provision of holdings for ex-Servicemen of the 1914–18 war. Under the Agriculture Act 1947, the policy was changed so as to relate the provision of smallholdings to agricultural rather than social considerations and the object is now to give opportunities to people with agricultural experience, particularly agricultural workers, to become farmers on their own account. Present legislation imposes on county councils an obligation to provide smallholdings and enables the Minister of Agriculture to contribute towards their losses. In England and Wales, about 15,000 smallholdings are provided by local authorities and about 1,300 by the Ministry. Of the smallholdings provided by the Ministry, approximately 1,000, situated on 18 different estates, are managed by the Land Settlement Association Limited, which was originally formed in 1934 for the purpose of developing smallholdings for unemployed men from industrial areas. The association provides centrally on each estate various services for the tenants' use, including the supply of agricultural stores and requisites, the operation of a machinery pool, and facilities for the packing and marketing of produce.

The Minister has power under the 1947 Act to make loans for working capital to tenants of statutory smallholdings. In this way they can be helped to obtain livestock, machinery, implements and other necessary items; tenants must, however, have available at least 25 per cent of the capital required.

Land settlement in Scotland has always been carried out by the central Government, which now owns and maintains about 430,000 acres of land settlement estates, with some 4,000 holdings, mainly in the Highlands.

Crofting

In the seven Scottish counties known as crofting counties—Argyll, Caithness, Inverness, Orkney, Ross and Cromarty, Sutherland, and Shetland—much of the land is farmed by crofters, tenant farmers whose holdings are generally either rented at a cost of not more than £50 a year or have an area not exceeding 75 acres.

In these counties there are about 20,000 crofts, which produce about one-quarter of the total agricultural output of the area. The special problems of the crofting counties, which had for some time been suffering from a declining population, led to the setting up, in 1955, of a Crofters Commission whose functions are to reorganise, develop and regulate crofting in the crofting counties, to promote the interests of crofters and to keep under review matters relating to crofting. The Commission's powers, embodied in the Crofters (Scotland) Acts of 1955 and 1961, include that of carrying out reorganisation schemes in 'townships' (crofting communities) if a majority of the crofters agree, by reallocating the land in a way which, in the Commission's opinion, would lead to the proper and efficient use of the land and the general benefit of the township. The Commission has also powers over the letting and

sub-letting of crofts and it is responsible for approving regulations governing the use of common grazings. It acts as agent for the Secretary of State for Scotland in the administration of schemes of loans and grants for the development of agricultural production on crofts, and collaborates with other bodies in carrying out measures for economic development and social improvement in crofting areas.

Arterial Drainage and Sea Defence

Land drainage in England and Wales is administered (since April 1965) by 27 river authorities (see p. 296), two catchment and 400 internal drainage boards. Each river authority area comprises one or more major river systems. They cover the whole of England and Wales, apart from the London area. There are no comparable authorities in Scotland, where drainage is the responsibility of owners and occupiers of land. River authorities have powers to maintain and improve watercourses scheduled as main rivers. Their work is concerned with the improvement of land drainage by increasing the capacity of rivers and erecting pumping stations, the prevention of inland flooding—both urban and agricultural—and the erection of defences to protect low-lying areas from coastal flooding. River authorities also have powers relating to water resources generally, freshwater fisheries and river pollution.

Internal drainage boards are concerned with very much smaller areas and their work is chiefly in low-lying agricultural districts. Their main function is to keep the land drained in their area by improving the main drains and, where necessary, by pumping from low-lying land.

The authorities derive their income directly or indirectly from rate-payers. The Government pays grants towards the cost of the improvement schemes carried out by both types of organisation. Grants to river authorities vary from 20 per cent to 80 per cent according to the financial position of the authority. Internal drainage boards receive grants at a flat rate of 50 per cent.

The gross capital expenditure of drainage authorities on new and improved works amounts to about £8 million a year. Government grants, including grants towards the repayment of loans raised in previous years, amount to nearly £5 million. Drainage authorities' expenditure on maintenance is estimated at over £4 million a year and is rising steadily.

In Northern Ireland the Minister of Agriculture is the drainage authority in respect of watercourses designated by the Drainage Council as main or minor watercourses. The cost of these works is met in the first place by the Exchequer and offset later by contributions from the county and county borough councils. Urban drainage schemes may be promoted by local sanitary authorities and are eligible in appropriate cases for Exchequer grants-in-aid.

Land Tenure

In Great Britain about half, and in Northern Ireland all, farms are owner-occupied. The traditional form of tenancy in England and Wales runs from year to year; in Scotland leases for terms of 10 to 14 years are more common. The tenancy agreement may be either written or verbal and may (but need not) include provisions about such matters as rights of cropping, liability for repair and maintenance, and compensation for tenant's improvements.

In order to protect the respective interests of landlords and tenants and to eliminate uncertainty as to their rights and liabilities, a code of landlord and tenant relationships has been written into legislation. The Agriculture Acts of 1947 and, for Scotland, 1948, lay down the basic rules of good estate management and good husbandry for owners and occupiers respectively. The Agricultural Holdings Acts of 1948 and 1949 contain more detailed

provisions, some of which apply to all tenancy agreements (i.e. the parties may not contract out of them) and some of which apply only in the absence of specific provision in the tenancy agreement.

Among the compulsory provisions are those relating to security of tenure. The Acts provide for any tenancy of agricultural land, with the exception of certain short-term lettings to which exemption can be given by the Minister or Secretary of State, to continue in force from year to year until determined by a valid notice to quit. With certain exceptions, such as where the notice to quit is given on account of a breach of contract by the tenant (for instance, failure to pay rent or carry out repairs), the tenant can contest it by serving a counter-notice; the notice to quit then becomes inoperative unless the landlord can satisfy an independent body (in England and Wales the Agricultural Land Tribunal and in Scotland the Scottish Land Court) that his claim for possession is in the interests of sound estate management or good husbandry or that the land is required for certain purposes specified in the Acts.

The Acts lay down a code of compensation to which the tenant is entitled on termination of the tenancy. Compensation is normally payable both for disturbance (between one and two years' rent) and for improvements which the tenant has carried out during the tenancy. The landlord is normally entitled to counter-claim for dilapidations, and machinery is provided for the settlement of claims by arbitration in default of agreement between the parties. Rent is a matter for negotiation between landlord and tenant and may be varied by agreement at any time or, failing agreement, by arbitration at intervals of not less than three years in England and Wales and five years in Scotland. A landlord is entitled to claim additional rent for improvements carried out at his expense. The Acts also forbid provisions in tenancy agreements which would unduly restrict the tenant's farming operations.

MARKETING

Agricultural products are now marketed mainly through private trade channels such as corn merchants, livestock auctions and markets, and bacon factories; or through producers' co-operative organisations. For certain commodities, however, marketing arrangements are influenced by boards operating under the Agricultural Marketing Act 1958 (which consolidated earlier legislation). These marketing boards are producers' organisations with statutory powers to regulate the marketing of particular products. The schemes under which they are constituted and operate must be approved by Parliament and confirmed by a poll of the producers. Most of the members of the boards are elected by the producers but a minority are appointed by the minister or ministers concerned. Further safeguards serve to protect consumers and other interests affected by schemes and the public interest generally.

Marketing boards fall into two broad categories: first, those which have powers to trade as the first selling agency for all producers not specially exempted or, alternatively, to exercise a comparable influence by controlling all contracts between producers and first buyers; and secondly, boards which maintain only a broad control over marketing conditions leaving producers free otherwise to deal individually with buyers. The boards for eggs, hops, milk and wool fall into the first category and the potato board into the second.

A Home-Grown Cereals Authority was set up in June 1965 under the Cereals Marketing Act 1965. Its purpose is to improve the marketing of home-grown cereals and its activities will include the provision of financial inducements to growers to make forward contracts for the sale of their grain and the improvement of market information. The Authority also has certain

reserve trading powers. A Covent Garden Market Authority was established in 1961 to reorganise and modernise the largest of London's wholesale agricultural markets. Plans are in hand to move this market to a new site, south of the Thames, by the early 1970s.

Market Development Scheme

To assist the financing of research and development in the marketing of agricultural and horticultural produce, £1½ million was earmarked in 1962 by the Government, a similar sum being set aside by the industry. By spring 1965, grants totalling about £70,000 had been approved, and Parliament extended the life of the scheme by a further three years to 1968. The majority of applications have come from producer groups and more than half of the projects relate to livestock or meat.

CONTROL OF DISEASES AND PESTS

Animals

The day-to-day work of treating animal disease is the responsibility of the veterinary profession in private practice. The State veterinary service, inaugurated in 1865 and covering Great Britain, deals with situations beyond the control of the individual veterinary surgeon. Centred on London and Edinburgh, it is able, at any hour, to deal promptly with outbreaks of infectious diseases. Northern Ireland has its own veterinary service.

For many years Britain has been free from eight serious animal diseases, including rinderpest, sheep scab, glanders and rabies.

On 1st October, 1960, the whole of Great Britain became a bovine tuberculosis attested area and Northern Ireland followed a month later. Bovine tuberculosis is now a disease of extreme rarity: all cattle are tuberculin tested at regular intervals and reactors to the test are slaughtered, compensation being paid to the owners.

The work of the service is backed by the extensive facilities of the Central Veterinary Laboratory at Weybridge, Surrey, and those of its subsidiary laboratory at Lasswade, near Edinburgh. In addition, there are 19 investigation centres with well-equipped laboratories in England and Wales. These centres perform work requiring specialist knowledge and give advice on disease problems to private practitioners. In Scotland a similar service is provided by investigation centres attached to agricultural colleges. The veterinary laboratory for Northern Ireland is situated at Stormont, Belfast.

Plants

Advice to growers on the general control of plant pests and diseases is given by the advisory services. In addition, the State plant health service is responsible for statutory controls designed to limit the spread of plant pests and diseases present in Britain and prevent the introduction of new ones from abroad. It also issues the health certificates required by other countries to accompany plant material imported from Britain.

Voluntary certification schemes are operated to encourage the development of healthy, vigorous and true-to-type planting stocks, particularly of crops subject to degenerative diseases.

Agricultural Chemicals

Although the increasing use of pesticides has contributed appreciably to the expansion of agricultural output in Britain, it has been recognised that effective safeguards are needed against the dangers arising from their uncontrolled use. The Regulations made under the Agriculture (Poisonous Substances) Act 1952 provides protection for workers using the more toxic chemicals. The voluntary Pesticides Society Precautions Scheme, operated by the Government with the full backing of the industy, ensures that new pesticides for use in agriculture and food storage, or new methods of using

existing pesticides, are not introduced until enough experimental work has been done on their attendant hazards (including contamination of food and harm to wild life) to allow the Government to make recommendations for their safe use. There is also a voluntary Veterinary Products Safety Precautions Scheme on similar lines, designed initially to cover veterinary products on sale to farmers.

A key role in the administration of both these schemes is played by the Government's Advisory Committee on Pesticides and Other Toxic Chemicals. Reports of this Committee, published in March and October 1964, concluded that there was no evidence that the use of the persistent organochlorine pesticides presented any immediate hazard to human beings and animals, apart from certain species of predatory birds; but the Committee also recommended that the cumulative contamination of the environment should be curtailed by restricting certain uses of aldrin and dieldrin and making some minor restrictions on the use of endosulfan and endrin. Effect is being given to these recommendations.

AGRICULTURAL ADVISORY SERVICES

The National Agricultural Advisory Service

In England and Wales free technical advice on all agricultural and horticultural matters is available to every farmer and grower through the Ministry of Agriculture, Fisheries and Food's National Agricultural Advisory Service (NAAS) which is organised on a regional and county basis. Every county has a county advisory officer in charge of advisory work and is divided into districts, in each of which there is a district advisory officer who can call on an extensive system of specialist advisers. In Northern Ireland advisory work is organised by the Ministry of Agriculture, with a county organisation similar to the NAAS. In Scotland the advisory services, likewise similar in scope to the NAAS, are based on the three agricultural colleges.

Facilities are provided at the NAAS experimental farms and horticultural stations in England and Wales and at agricultural college centres in Scotland and Northern Ireland for field-scale extensions of research work and investigations of local problems.

The Agricultural Land Service

The main functions of the Agricultural Land Service, which operates in England and Wales, are:

(1) to advise owners and occupiers of agricultural land on estate management matters including farm buildings;

(2) to provide professional advice and services to the Minister of Agriculture, Fisheries and Food and his agents on all matters relating to farm land and buildings;

(3) to provide expert professional advice to the Minister and department on the agricultural land use implications of planning proposals, including the possibilities of reclaiming to agriculture, land worked for minerals by open-cast methods; and

(4) liaison with other departments and planning authorities about such proposals.

In Scotland similar duties are carried out by officers of the Department of Agriculture and Fisheries but advisory work regarding farm buildings is undertaken by the agricultural colleges. In Northern Ireland advice on matters relating to farm land and buildings falls within the scope of the Ministry's advisory service.

The work of the advisory and veterinary services is supplemented by numerous technical publications.

RESEARCH AND EDUCATION

Economic and Market Research

Basic agricultural research in Britain is described on p. 214. In England and Wales, research and advice on farm economics are combined in the Provincial Agricultural Economics Service, which comprises ten university Departments of Agricultural Economics and which is co-ordinated by the Ministry of Agriculture, Fisheries and Food. In Scotland, agricultural economists are on the staff of the three agricultural colleges. The agricultural departments in both England and Wales and Scotland have economics and statistics units.

The Northern Ireland Ministry of Agriculture also has an Economics and Statistics Division and has, in addition, its own research divisions investigating problems of animal and crop production. The staff of these divisions are also responsible for lectures in the Faculty of Agriculture of Queen's University, Belfast, and for specialist advice to the county advisory staffs.

Industrial concerns manufacturing weed-killers, insecticides, fertilisers, feedingstuffs and agricultural tractors and implements undertake research on a considerable scale and in most cases maintain experimental farms and estates.

Agricultural Education

There are four types of institution which provide full-time education in agricultural subjects: universities and agricultural colleges; in England and Wales, county farm institutes, and in Scotland, farm schools. Twelve universities in the United Kingdom provide degree and postgraduate training in agriculture, and one other university offers postgraduate diploma courses. A National College of Agricultural Engineering was established in 1960 at Silsoe, Bedfordshire. This is one of the national colleges (see p. 162) established to train people for highly specialised industries, the needs of which cannot be met at local technical colleges.

Two-year diploma courses and some specialised courses are given at five agricultural colleges and at two of the county farm institutes in England and Wales; three agricultural colleges in Scotland give two-year to three-year diploma courses and also offer two- or three-term certificate courses. In Northern Ireland there are two agricultural colleges and two more are planned.

There are 31 county farm institutes in England and five in Wales run by local education authorities. They provide residential courses in general agriculture, dairying, horticulture, poultry husbandry and rural domestic economy. Local education authorities also provide a wide range of short courses and classes for farmers, farm workers, horticulturists and domestic producers.

There are eight farm schools in Scotland, run by local education authorities, providing courses—mainly residential—of from one to three years' duration for boys and girls of from 12 to 16 years. There is one residential agricultural school in Northern Ireland, which provides short courses for boys and girls over 15 years of age.

Courses in land management are available at the Universities of Cambridge and London and at the Royal Agricultural College, Cirencester.

In 1964 the Secretary of State for Education and Science's National Advisory Council on Education for Industry and Commerce was invited to consider the provision of further education for agriculture at institutions other than universities. Its first report is expected late in 1965.

FISHERIES

Although the sea fishing industry contributes only about ¼ per cent of the United Kingdom's gross national product, it is of greater importance to the economy of Scotland. It is also by far the most important single source of

employment in some of the major fishing ports. The industry falls into three main divisions, concerned respectively with white fish, herring and shellfish. The major element of the catch is white fish: the catches of herring and shellfish are relatively small. White fish are demersal fish (such as cod, haddock, plaice, turbot and sole) which live on or near the sea bed, and also pelagic fish (such as pilchard, mackerel and sprats) which live mainly in intermediate waters or near the surface. Herring is a pelagic species and constitutes a separate fishery. Shellfish include crustacea (such as lobsters, nephrops and crabs) and molluscs (such as escallops, mussels, cockles and oysters).

The white fish section of the industry is made up of three main groups: the distant water, the near and middle water, and the inshore fisheries. The distant waters are those round Iceland and in the west Atlantic, Greenland, Bear Island and the north coast of Norway, and the Barents Sea; the middle water grounds lie around the Faroe Islands; and the near water grounds are those in the North Sea, the Irish Sea and in the coastal areas around Britain. The herring fishing grounds are mainly within 60 miles of land. The inshore waters also yield considerable quantities of shellfish.

Fishing Ports

The principal fishing ports in England and Wales are Hull, Grimsby, Fleetwood, Milford Haven and Lowestoft for white fish, and Great Yarmouth and Lowestoft for herring. In Scotland the chief centres for white fish are Aberdeen, Granton, Fraserburgh, the Moray Firth, the West Coast and Shetland; herring landings are made mainly at the east coast ports of Aberdeen, Fraserburgh and Peterhead, the west coast ports of Ullapool, Mallaig, Oban and Portpatrick, and in Shetland. In Northern Ireland the herring fishing ports are Ardglass, Portavogie and Kilkeel.

Methods of Sea Fishing

The chief methods of catching fish are by trawling, seining, lining, and ring and drift netting. Trawling is carried out throughout the year in the distant and near waters for all species of demersal fish. Seining is also used for catching demersal fish all the year round, mainly in the North Sea, the Minches, the Firth of Clyde, and the Irish Sea. There are about 600 Scottish and Northern Ireland seiners, and about 200 operating from English ports.

The pelagic fisheries are seasonal. There is summer fishing for herring based on the Shetlands, the east coast ports of Scotland, and the north-east coast ports of England, and autumn fishing off East Anglia based on Lowestoft and Yarmouth. Other seasonal fisheries take place off the west coast of Scotland, in the Isle of Man area and off Southern Ireland.

The inshore fisheries comprise a great diversity of types of vessels and methods of capture; in addition, there are extensive fisheries for crabs, lobsters, shrimps, mussels, escallops, cockles and oysters, and, off Scotland, north-east England and in the Irish Sea there are substantial catches of 'Norway lobsters' (nephrops).

The Fishing Fleet

Distant water vessels, which operate mainly from Hull, Grimsby and Fleetwood, numbered 203 at the end of 1964. They are over 140 feet in length and 194 of them make voyages of 17 to 23 days to fishing grounds in the Arctic Circle. Recently, partly due to the introduction of freezer trawlers and factory vessels, there has been an increasing tendency to fish the waters bordering Newfoundland, Labrador and Greenland. These vessels spend from one to three months at sea and fillet and freeze much or all of their catch immediately it is taken. At the same date, near and middle water vessels numbered 434; they are under 140 feet long and most of them work nearer

home, making voyages of from a few days up to more than two weeks, although some of the larger vessels fish regularly off the Faroes and seasonally as far afield as Iceland. Included in the near water group are vessels engaged in drift net fishing for herring; these vessels usually make daily voyages. The inshore group consists mainly of vessels of under 80 feet which are seldom at sea for longer than two or three days and more usually make daily landings, often fishing within sight of land.

In the British fishing industry in 1964 there were about 21,600 fishermen in regular employment and some 5,900 occasionally employed; 8,200 of the former and 2,100 of the latter were from Scottish ports. In Northern Ireland there were about 460 regular fishermen.

Supplies

In 1964 landings of fish, both demersal and pelagic, by British fishing vessels totalled 817,000 tons (677,000 tons of demersal fish and 140,000 tons of pelagic), valued at about £54 million. Landings at British ports by foreign vessels totalled about 131,000 tons of fresh and frozen fish (including 51,000 tons brought direct from the fishing grounds), valued at about £21 million. British landings of shellfish yielded £2·9 million. Cod accounted for 43 per cent of the total value of wet fish (i.e. fish other than shellfish) landed by British vessels; haddock (19 per cent) and plaice (10 per cent) were the other most important sources of earnings to the industry.

Net imports of all types of fish (fresh, frozen, salted or canned) in 1964 amounted to about 225,000 tons valued at £67 million, including 45,000 tons of canned salmon to the value of £29 million and other canned fish worth £11·2 million.

Weekly consumption of fresh, frozen and cured fish (excluding shellfish and imported canned fish) in Britain averaged 15,250 tons landed weight in 1964. Consumption has been declining slightly; on an edible (fillet) weight basis, it was estimated provisionally at 17·6 lb. per head in 1964, compared with 18·8 lb. in 1958, a peak total of 28·7 lb. in 1948 and an annual average of 21·8 lb. from 1934–38.

Sea Fish Processing

Processing and packaging of fish—curing, kippering, canning and quick-freezing for consumer packs—are the subject of continuing research and development. The production of quick-frozen fish has been increasing steadily since 1952. With the increase in quick-freezing (which now processes over 15 per cent of all white fish landings), new export outlets have opened up for white fish, which in 1964 accounted for nearly half the total British exports of fish and fish products, valued at £8·2 million. Markets abroad for quick-frozen fish, mainly in Europe, have been expanding; exports of herrings have continued to decline.

A valuable by-product of the industry is the manufacture of fish meal for animal food and to a much lesser extent for fertilisers. Home production of white fish meal and herring meal in 1964 was 78,000 tons.

Whaling

Whaling is regulated by the International Whaling Commission (of which Britain is a member) set up under the International Whaling Convention of 1946. Its headquarters are in London. The last remaining British whaling expedition has been disposed of to foreign interests.

Freshwater Fisheries

The main commercial freshwater catches are salmon, sea-trout and eels. In Scotland and Northern Ireland, fixed nets along the coast and sweep or draught nets in rivers and estuaries are used; in England, drift nets are used

for catching salmon in the sea, and draught nets and fixed traps in estuaries. In England and Wales the value of the salmon catch is approximately £200,000 a year, in Scotland it amounts to nearly £1·5 million, and in Northern Ireland to some £250,000. In Northern Ireland, eels worth about £200,000 a year are captured by long lines and by eel nets placed in river weirs.

Distribution System

The principal inland wholesale distributing centre for fish is Billingsgate Market in London, which handles about 300 tons a day, but other large cities also have central fish markets. The principal method of distribution is through wholesalers, located at the ports, who buy at the auctions and sell to inland wholesalers; the port wholesalers prepare the fish for onward shipment. Special express fish trains transport the catch daily from the ports to inland centres, and increasing use is being made of road transport. Retail sales are handled by some 25,000 to 30,000 fishmongers and fish friers; the latter use about a third of the landings of white fish.

Recent developments include the entry of trawler-owning companies into the system of distribution. This process is being speeded by the growing popularity of quick-frozen consumer packs, which are sold by other retail outlets as well as by fishmongers.

Promotion and Regulation of the Industry

The government departments mainly responsible for the administration of legislation concerning the fishing industry are the Ministry of Agriculture, Fisheries and Food, the Department of Agriculture and Fisheries for Scotland and the Ministry of Agriculture for Northern Ireland; the Ministry of Health and the Scottish Home and Health Department are concerned with questions of nutrition and hygiene affecting fish and fish products. The safety and welfare of crews of fishing vessels are provided for under the Merchant Shipping Acts, which are administered by the Board of Trade.

The Herring Industry Board

The Herring Industry Board was set up under the Herring Industry Act of 1935 to reorganise, develop and regulate the herring industry; subsequent amending Acts have also been passed. The Board consists of a chairman and three other members, all part-time and independent of the industry, who are appointed jointly by the Minister of Agriculture, Fisheries and Food, the Secretary of State for Scotland and the Home Secretary. The Board, whose activities are financed partly by levies and licence fees and partly by government grants and loans is advised by the Herring Industry Advisory Council, consisting of 33 members representing all sections of the industry and consumers.

The functions of the Board include the promotion of sales of herring, both at home and abroad, and the application of the benefits of technical progress to the industry, including the adoption of new methods of catching, processing and distributing herring. The Board administers the government grant and loan schemes which provide for assistance towards the purchase of new fishing vessels, and new engines for existing vessels. Fishermen may also obtain loans from the Board towards the purchase of second-hand vessels under 80 feet in length and towards the cost of new nets and gear. Up to 31st March, 1965, £1,502,600 in loans and £476,014 in grants had been advanced.

The White Fish Authority

The White Fish Authority and the Committee for Scotland and Northern Ireland of the Authority were set up under the Sea Fish Industry Act 1951. The function of the Authority is to reorganise, develop and regulate the white fish industry, and that of the Committee to advise the Authority about the exercise and performance of its functions in Scotland and Northern Ireland.

The Authority is composed of six independent members, and the Scottish Committee of five, under the chairmanship of a member of the Authority. They are appointed jointly by the Minister of Agriculture, Fisheries and Food, the Secretary of State for Scotland and the Home Secretary. The White Fish Industry Advisory Council was also set up under the Sea Fish Industry Act 1951 to advise the Authority about the exercise and performance of its functions. It consists of 48 members representing the various interests of the fishing industry.

The White Fish Authority administers government grant and loan schemes for the purchase of new fishing vessels and engines and the improvement of existing vessels. It also administers loans for the purchase of nets and gear and processing plants. Up to 31st March, 1965, £31·6 million in loans and £13·9 million in grants were approved for these purposes by the Authority. Its other activities are financed by a levy on first-hand sales of fish.

Subsidies and Grants

Since 1950 a government subsidy has been paid towards inshore, near and middle water vessels fishing for white fish. This subsidy, now paid under the White Fish and Herring Industries Act 1953, varies according to the class of vessel concerned and is paid at the rate of so much per day at sea for the larger vessels and at so much per stone of fish landed from the smaller boats. In 1964–65 the amount paid in this way was £400 million. The White Fish and Herring Industries Act 1957 extended the subsidy to vessels fishing for herring, the conditions being broadly the same as for white fish vessels. In 1964–65 the herring subsidy totalled £372,000. In addition to the rate per day at sea or stonage rate, subsidy is payable, subject to certain conditions, on herring sold for reduction to oil and meal. Grants and loans are also available under these Acts for vessels and engines for the fishing fleets. No subsidy is paid for shellfish but vessels fishing for them are eligible for grants and loans.

The Sea Fish Industry Act 1959, which came into operation in December 1959, provided for further funds for subsidies and grants, and the White Fish and Herring Industries Act 1961 extended the white fish subsidy to vessels over 140 feet in length and to other vessels fishing distant waters.

The Sea Fish Industry Act 1962, passed in consequence of the report of a Committee of Inquiry into the Fishing Industry, extended the scope of these forms of aid and made provision for their continuance until the end of 1972. The Act, however, has special provisions for annual reductions in the rates of white fish subsidy payable to vessels of 80 feet or over in length.

FORESTRY

The total area of productive woodland in Great Britain is 3¼ million acres, or less than 6 per cent of the total land area. If account is taken of areas of scrub and old felled areas, including those cut down in the 1939–45 war, the total rises to 4¼ million acres, or 7½ per cent of the land area. The high proportion of unproductive woodland is largely a legacy of two wars and, while rehabilitation of these areas continues to proceed, it is unlikely that all areas (because of remoteness and poor site conditions) will be replanted. A measure of the extent of rehabilitation, combined with a small amount of deforestation through conversion to agricultural land or other use, is provided by the fact that the area of unproductive woodland has been reduced by 300,000 acres since 1945.

On 30th September, 1964, the area of all woodland in blocks of one acre or more was estimated at 4·29 million acres, of which half were in England, two-fifths in Scotland and the rest in Wales. The classification of forest area, showing type and ownership in 1964, is given in Table 21.

TABLE 21
CLASSIFICATION OF FOREST AREA IN GREAT BRITAIN 1964

Thousands of acres

Forest Type	Forestry Commission woodlands	Private woodlands[a]	Total	Percentage of total forest area
Mainly coniferous high forest.. ..	1,361	720	2,081	48
Mainly broadleaved high forest ..	138	743	881	21
Coppice and coppice with standards ..	26	291	317	7
Total productive	*1,525*	*1,754*	*3,279*	*76*
Unproductive woodlands	66	954	1,011	24
TOTALS	1,591	2,699	4,290	100
Percentage of total forest area ..	37	63	100	

Source : *Forestry Commission.*

[a] Includes forest area owned by certain bodies such as local authorities and water supply undertakings.

The area of productive forest managed by the Forestry Commission, at 1,525,000 acres, represents 47 per cent of the total. Currently the rate of forest extension is 45,000 acres by the Commission and nearly 20,000 acres per year by private woodland owners. The Commission's programme is concentrated in upland areas, especially of Scotland, and consists mainly of conifers because of the difficult site conditions encountered. The major species used are Sitka spruce, Lodgepole pine, Scots pine and Norway spruce. In private planting the dependence on conifers is high, though larches are more widely used and only a very small number of Lodgepole pine. In older woodlands and taking the country as a whole the commonest coniferous trees are Scots pine, Sitka spruce, Norway spruce and the larches, while the commonest broadleaved trees are oak and beech.

Except for the period of the two world wars, when much over-felling took place, home woodlands have made only a limited contribution to the nation's total requirements of wood and wood products. At present the country imports 90 per cent of its needs by volume, and a higher proportion still by value, the total import bill for wood and wood products averaging £455 million over the years 1960 to 1964. The proportion of conifers in total home production is rising, largely owing to the increasing contribution of Forestry Commission woodlands planted between the wars.

The Forestry Commission and Forestry Policy

In 1919 the Forestry Act was passed establishing the Forestry Commission as the national forest authority, with the general duty of promoting the interests of forestry, the development of afforestation and the production and supply of timber in Great Britain. The Commission was formerly required to comply with directions given by the Minister of Agriculture, Fisheries and Food and the Secretary of State for Scotland, but in 1964 the Minister of Land and Natural Resources assumed responsibility for forestry, sharing this function with the Secretaries of State for Scotland and Wales. Because of the

broadening of the Commission's functions, particularly where production and marketing of timber is concerned, it was decided in 1965 to reconstitute the Commission to comprise a part-time chairman, four full-time executive commissioners and five part-time commissioners. The Commission's planting programmes are to be reviewed.

The Commission manages some 500 forests, which together embrace more than 1,800,000 acres of forest land, of which nearly 1,600,000 are under trees. They are distributed over England, Scotland and Wales. All these forests are covered by management plans, which provide for such work as planting, road construction, thinning, fire protection, and timber production.

As already stated, a substantial amount of the Forestry Commission's new planting is carried out in Scotland, much of it in the Highland counties. The poorer types of land are being used, such as sour, peaty soil which is unsuitable for other agricultural purposes, and has become suitable for forestry as a result of advances in the technique of deep ploughing. Sand dunes are used to a limited extent: on the southern shore of the Moray Firth, Culbin Forest now includes nearly 7,500 acres of plantations formed on dunes which had been unstable for centuries. Similarly, in Wales, about 3,000 acres of sand dunes at Môn, Anglesey, and more than 2,000 acres at Pembrey, Carmarthenshire, have been successfully planted.

Production of coniferous timber from Commission woodlands, mainly in the way of thinnings, is expected to rise from some 900,000 tons in 1965 to about 2,400,000 tons by 1980. Much of this kind of produce is meeting traditional requirements of the coal mines but a great deal is also taken up by the paper pulp industry and by the new factories established to make chipboard.

Finance

The Forestry Fund was established by the Forestry Act 1919; from it is paid all the expenditure of the Forestry Commissioners and into it are paid their receipts from sales of produce, rentals and other sources, together with the amounts voted annually by Parliament. The net cost of managing the Commission's forestry enterprise in the year ended 30th September, 1964, was £19·3 million. Expenditure on grants and services to private forestry was £1·5 million.

Private Forestry

Privately owned woods comprise about two-thirds of the total forest area in Great Britain (as shown in Table 21), and contain most of the mature and semi-mature timber. The size of woodlands in individual ownership ranges from a few acres to several thousand acres, and a high proportion of private woodland area is in small ownership (i.e. owners of up to about 250 acres).

Impetus has been given to the effective management of private woodlands by the introduction of the Dedication of Woodlands Scheme under the Forestry Act 1947. Under this scheme, owners are invited to put their land permanently to timber production and to manage their woods in accordance with a plan agreed with the Forestry Commission, in return for the provision of planting and management grants and technical advice. By September 1964 the total area dedicated was nearly 800,000 acres. In addition, there are the woodlands covered by the Approved Woodlands Scheme in which a planting grant, but no management grant, is made; and these bring the total area managed under agreed plans to over 960,000 acres. Woodland owners are represented, in their relations with the Forestry Commission, by the Forestry Committee of Great Britain, which co-ordinates the work of two associations of woodland owners, the Timber Growers' Organisation (for owners in England and Wales) and the Scottish Woodland Owners' Association.

The Forestry Commissioners have encouraged the development of co-operative forestry schemes. The co-operative societies provide for landowners and farmers the services of skilled staff, centralised purchasing facilities, and a central agency for the disposal of forest produce. The Commission also co-operates with the principal forestry societies, such as the Royal Forestry Society of England and Wales and the Royal Scottish Forestry Society, in disseminating technical knowledge.

In 1959 the Home Grown Timber Marketing Corporation was established by timber merchants to promote the use of home grown timber.

Consultative Machinery

The Forestry Act 1945 established national committees for England, Scotland and Wales, composed partly of Forestry Commissioners and partly of persons outside the Commission. These committees keep under review certain aspects of the Commission's work and matters concerning the development of private forestry.

Other bodies have been set up to provide for consultation on the marketing and utilisation of home grown timber. The Home Grown Timber Advisory Committee, established by the Forestry Commissioners in 1939, includes representatives of associations of landowners and timber merchants, under an independent chairman. In 1949 the Forestry Commissioners set up the Advisory Committee on Utilisation of Home Grown Timber to advise on measures designed to promote the sale and utilisation of produce from British woodlands. A voluntary scheme was agreed upon in 1961 for consultation on proposals for afforestation of land within National Parks (see p. 183) that has not previously been planted with trees. The Forestry Commission agreed, and the Timber Growers' Organisation and the Country Landowners' Association undertook to advise their members, to submit such proposals to the park planning authorities.

Forestry Education and Research

The Forestry Commission maintains three forester training schools: in England, at Parkend in the Forest of Dean, Gloucestershire; in Wales, near Betws-y-Coed in Caernarvonshire; and in Scotland at Faskally, near Pitlochry in Perthshire. Northerwood House in the New Forest, Hampshire, is the Commission's educational centre, and is used for practical courses for university students, landowners and agents, planning officers, school teachers and others connected with, or interested in, forestry.

Higher education in forestry is provided at several universities; a proportion of suitable graduates is recruited by the Commission as forest officers.

The Commission's Forest Research Station at Alice Holt Lodge, near Farnham, Surrey, was opened in 1946. Expenditure on research work at this station and in experimental areas in many forests in Great Britain amounted to £486,000 in 1964. This sum included grants for special forestry research work to various institutions and to university departments including the Commonwealth Forestry Institute at Oxford, which is also financed by the University, the Colonial Office and overseas Governments. Research into the qualities of home grown timber is carried out by the Forest Products Research Laboratory at Princes Risborough, Bucks, and also by grant-aided research associations.

Forestry in Northern Ireland

When the Government of Northern Ireland was formed in 1922, the new Ministry of Agriculture became the forest authority working with similar powers and duties to those conferred on the Forestry Commission by the

Forestry Act 1919. At that time the Ministry took over some 4,000 acres for afforestation, of which 700 acres had been planted.

Forest policy in Northern Ireland is implemented by the Forestry Act (Northern Ireland) 1953, which replaced earlier legislation. This Act provides the Ministry with powers to acquire and manage land, and to give financial and technical assistance for private planting. It introduced measures for the protection of all woodlands, whether owned by the State or privately owned, against destruction by over-cutting, fire or depredation by animals.

The State forest area has grown steadily and at a greatly accelerated pace since the end of the second world war. By 1964 nearly 130,000 acres had been acquired, of which about 75,000 acres had been planted. The present afforestation programme provides for the creation, as soon as possible, of an area of 150,000 acres of productive State forest. To reach this objective, a minimum annual planting rate of 5,000 acres has been set.

Financial provision is made by sums voted annually by Parliament and from receipts from forest produce and other sources. About 1,200 people are employed in field labour and ancillary work. The area of exploitable private woodlands is at present about 33,000 acres, and private planting, which is gaining impetus, is assisted by schemes for the supply at a low cost of young trees from the Ministry's nurseries, by grants towards the cost of the establishment of new plantations, and by free technical advice.

Pomeroy Forestry School at Pomeroy House, Co. Tyrone, provides training and refresher courses for forestry workers, school teachers and others interested in trees and forestry.

13
TRANSPORT AND COMMUNICATIONS

Inland and overseas transport and communications employed 7·3 per cent of the total labour force in the United Kingdom in June 1964. Of the 1·7 million persons so occupied, 28 per cent were engaged in road passenger transport and road haulage contracting, 23·1 per cent in railways and 24·3 per cent in postal services and telecommunications; sea and air transport absorbed respectively 8·2 per cent and 2·9 per cent; port and inland water transport and miscellaneous transport services and storage absorbed 3·5 per cent. Transport and communications contribute about 8 per cent to the gross national product and are responsible for 9 per cent of the nation's gross fixed capital formation.

SHIPPING

Of the world's active sea-going tonnage of 100 gross tons[1] and over, 14 per cent is registered in the United Kingdom. Although the British merchant fleet is still the largest in active employment, British shipowners have been subject to increasing competition from the growing fleets of other nations. Between 1954 and 1964 the British merchant fleet increased by 13 per cent from 19 million to 21·5 million gross tons, while the total tonnage of all other countries increased by 68 per cent, from 78·4 million to 131·5 million gross tons. The balance of payments for shipping services was positive until about 1959 (it was minus £27 million in 1964). Shipping, however, still makes one of the largest contributions to Britain's total earnings of foreign exchange and in 1964 freights, charter receipts and passage money amounted to £678 million, or about one-quarter of the total value of invisible exports. In recent years freight earnings in cross-trade have amounted to about 60 per cent of total shipping earnings. The proportion of the United Kingdom's own sea-borne trade carried in British ships is not known exactly, but is believed to amount to about half.

THE MERCHANT FLEET

Of the 21·5 million gross tons of merchant shipping of 100 gross tons and over registered (though not all owned) in the United Kingdom on 30th June, 1964, tankers constituted 8 million gross tons; this was 16 per cent of the world's sea-going tanker tonnage.

Recent trends in the composition of the merchant fleet have been the reduction of tramp tonnage other than specially built bulk carrier tonnage, the growth of tanker tonnage, the increasing size of tankers, and the commissioning of vessels specially built to carry ore, sugar, and other commodities in bulk.

[1] One gross ton (g.t.) = 100 cubic feet. One deadweight ton (d.w.t.) = 1 long ton (2,240 lb.). Gross tonnage indicates the total capacity of the enclosed spaces on a ship. Deadweight tonnage denotes the maximum load which a vessel can carry before sinking to the load line.

Modernisation, Age and Size

As a result of replacements built in recent years, 60 per cent of the total gross tonnage in 1964 was less than ten years old. The corresponding figure for tankers was 75 per cent. There has been a tendency for replacements to be larger because big ships are more economical to run.

In 1965 there were four liners from British shipyards of 30,000 gross tons and over operating on transatlantic passenger services: namely, the *Queen Elizabeth* (83,673 g.t.), the *Queen Mary* (81,237 g.t.), the *Mauretania* (35,673 g.t.), and the *Caronia* (34,173 g.t.). The two largest liners to be built in Britain in recent years, the *Oriana* (42,000 g.t.) and the *Canberra* (45,000 g.t.), came into service in 1960 and 1961 respectively on the services from Britain to Australia and across the Pacific to North America. A new liner, of about 58,000 g.t., is to be built for the Cunard Company with financial aid from the Government. In June 1964, 22 tankers of 50,000 d.w.t. and over were owned and registered in Britain and of these, 4 were of 80,000 to 90,000 d.w.t.; there were a further 29 tankers under construction, totalling 702,630 gross tons, for registration in Britain.

The first British-built tanker of 100,000 d.w.t., the *British Admiral*, was launched in March 1965.

Propulsion

Steam has continued to give place to the diesel engine, 51 per cent of all tonnage being diesel-driven in 1964. The virtual disappearance of coal-fired tonnage from the foreign-going fleet has been accompanied by a continued fall in the amount of coal-fired tonnage in the coasting and home trade tramp fleet.

Employment of Shipping

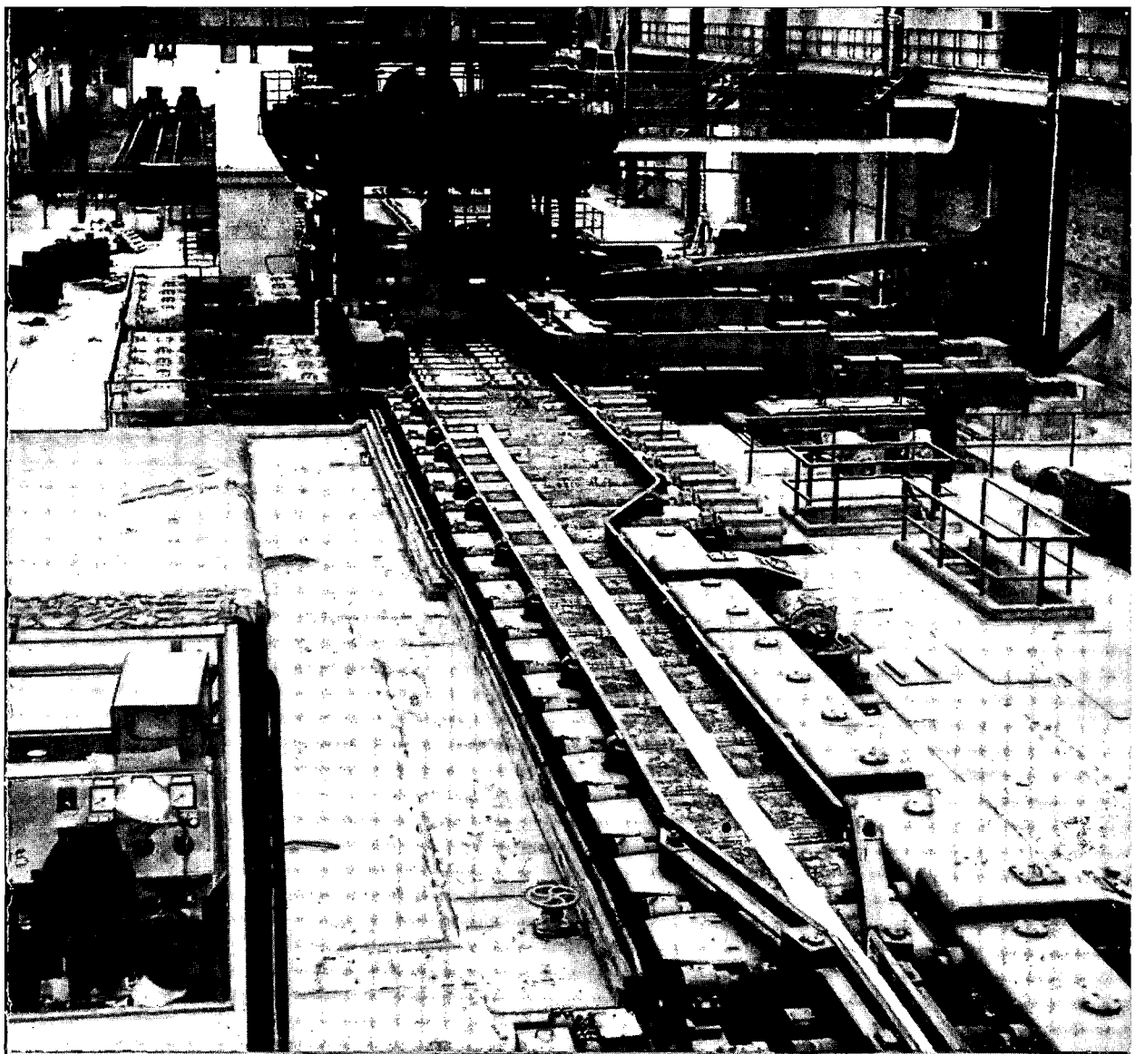
In June 1964, 16·9 million gross tons of trading vessels of 100 gross tons and over were both owned and registered in Britain.[1] The usual employment of this fleet has been analysed by the United Kingdom Chamber of Shipping as follows: 7·4 million gross tons were employed as ocean-going passenger and cargo liners; 2·9 million gross tons as ocean-going tramps; 5·7 million gross tons as ocean-going tankers; and 0·9 million gross tons in coasting and trade with ports between the Elbe and Brest (home trades).

SHIPOWNERS

About half of British-owned shipping registered in the United Kingdom consists of ocean-going passenger-cargo and cargo liners, mostly the latter. Practically all these ships are owned by large liner companies or groups of liner companies. Many of them operate wide networks of scheduled freight and passenger services which, between them, cover every ocean. The 3 million gross tons of ocean-going tramp ships are operated by a large number of private owners, some of them having only a small number of ships and some only one ship.

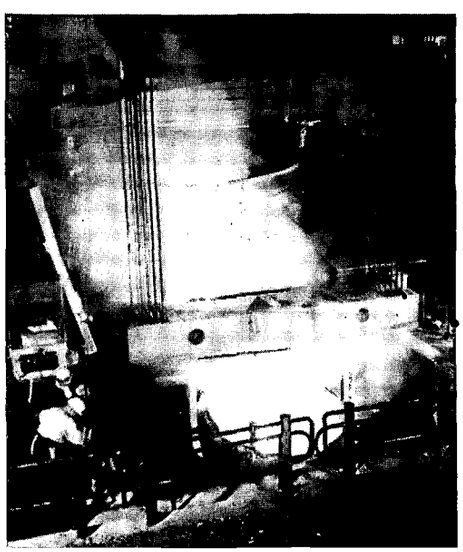
According to a survey published in 1959, the British shipping industry was composed of some 270 companies, over half the tonnage being owned by nine or ten main groups controlling about 50 companies. The many world-famous British shipping lines operating services on international routes include: the Cunard, to North America; the Royal Mail, to South America; the Blue Funnel, to Australia and the Far East; the Peninsular and Oriental (P. and O.)-Orient and the British India lines, to India, Australia and the Far East; the Union Castle, to South and East Africa; Elder Dempster, to

[1] The remaining tonnage included fishing vessels, tugs, river and estuary craft, Admiralty vessels (mostly tankers) not usually engaged in the commercial carriage of cargo, and shipping registered in Britain but owned in other Commonwealth countries (including over 1 million gross tons of tankers).



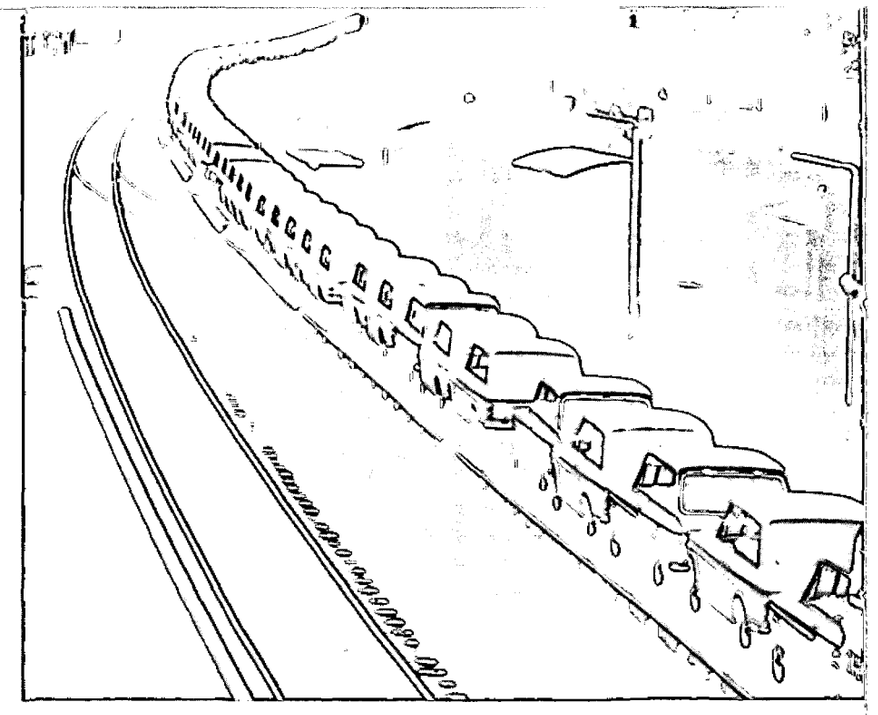
Production of special engineering steels: the £25 million blooming and billet mills at Sheffield.

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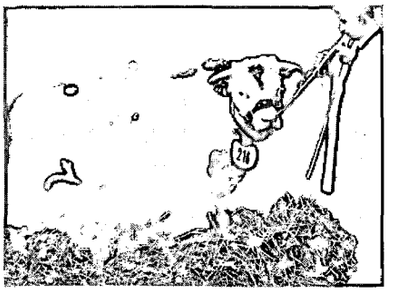


Tapping one of the six 180-ton electric arc furnaces at the giant steel plant at Rotherham, Yorkshire.

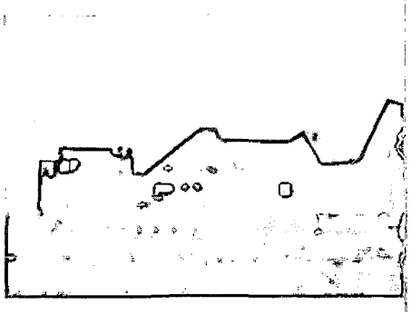
EXPORT PRODUCTS



100 Hillman Imps on a ¼-mile long Company Express Train carrying them from Scotland to the south.

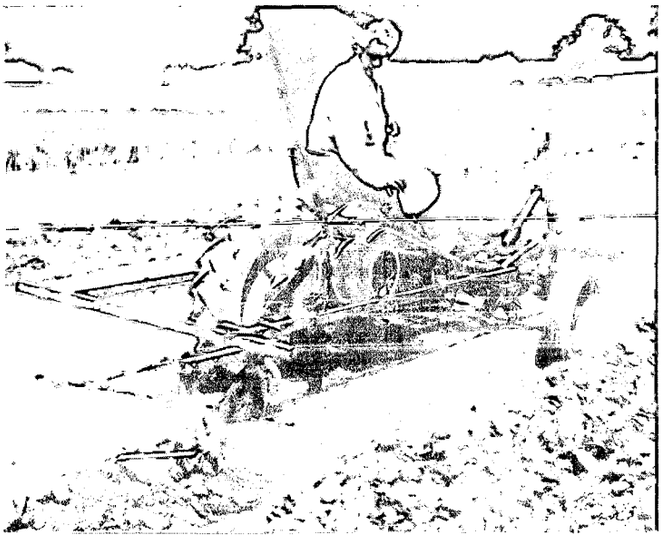


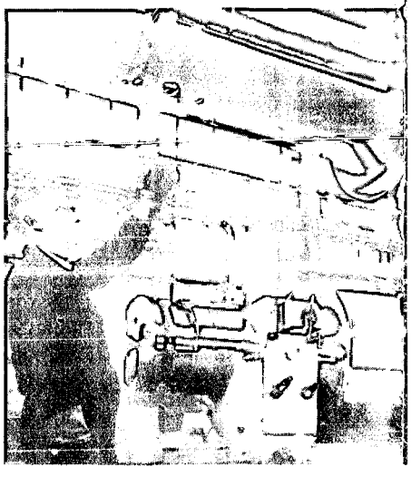
Hereford bull for Brazil.

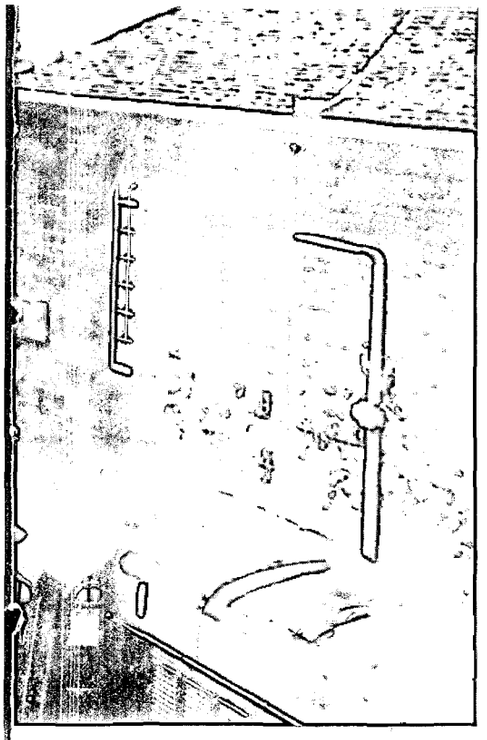


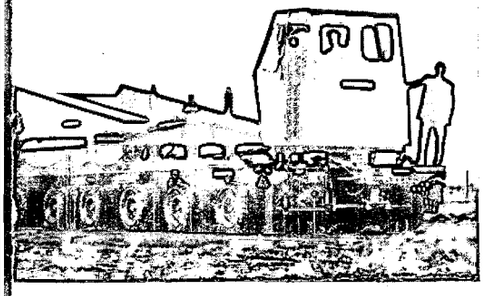
Giant 250-ton trailer for Rumania.

Robust one-wheel-drive tractor to meet the needs of developing countries.

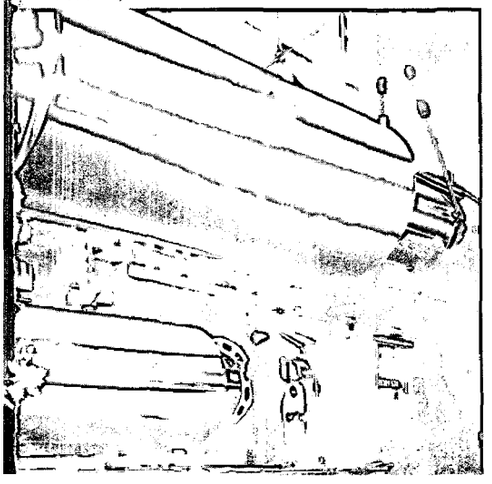


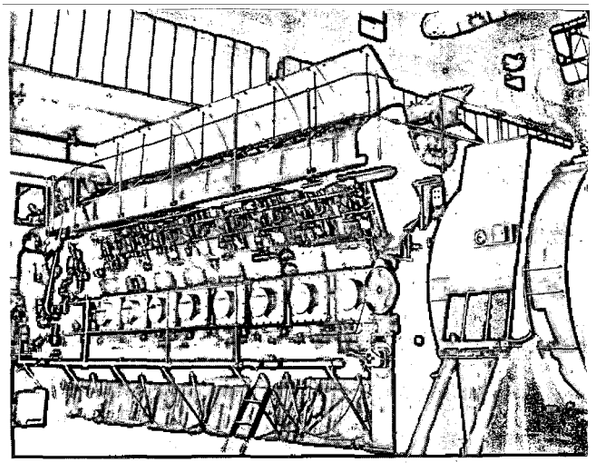




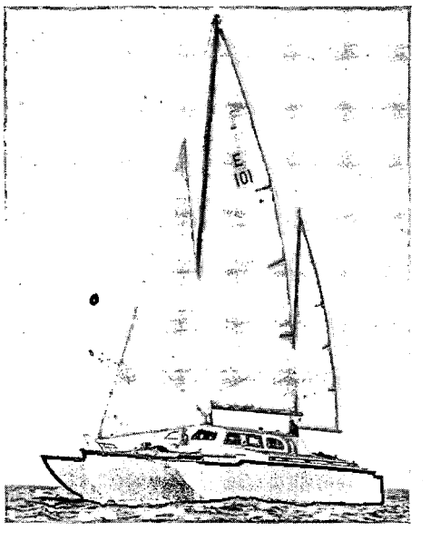


Steel rollers for production of alloys at Issoire, France.



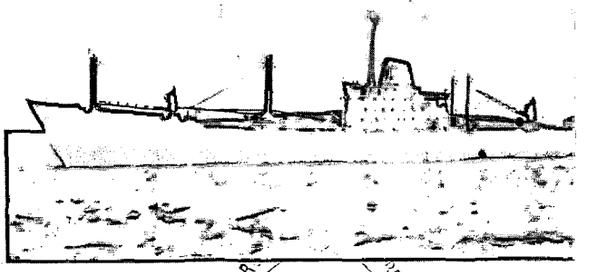


Diesel engine for the Sudan.



The *Triptique*, world's largest trimaran, for Antigua.

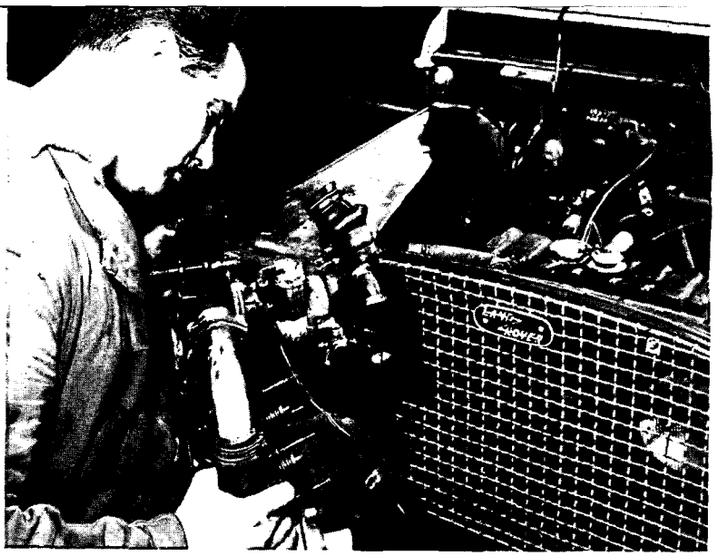
Refrigerated cargo vessel, the *Zealandic*, sailing for Australia.



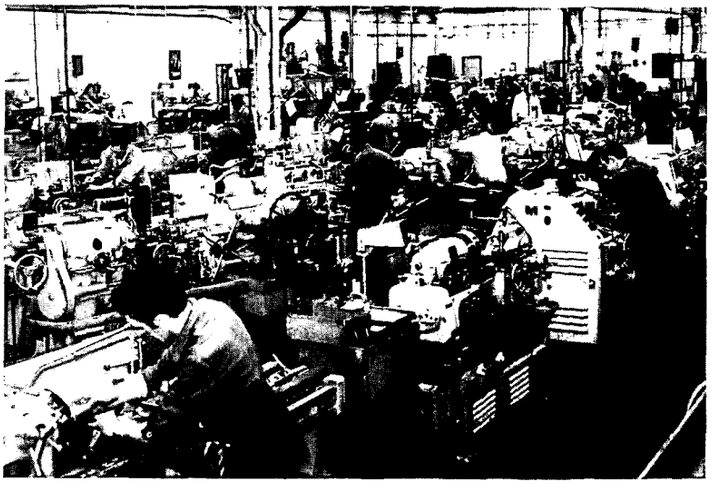
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INDUSTRIAL RETRAINING

Ministry of Labour Training Centres



Motor vehicle repairing, Enfield.



Engineering workshop, Enfield.

Joinery section, Motherwell.



West Africa; Furness Withy, to North America and the West Indies; the New Zealand line, to North America, Australia and New Zealand; and Shaw Savill and Albion, to Australia and New Zealand.

Over two-thirds of the total tanker fleet belong to the oil companies, although there are a few important independent United Kingdom tanker-owning companies. A new type of specialised bulk carrier—the ore-carrier—is in use on a substantial scale; some of the ore-carriers are partly owned by companies in the steel industry, but are managed and operated by shipping companies.

Since the end of the second world war shipowners have received no direct financial assistance from the Government. For some years, however, the Government has recognised that the shipping industry is faced with severe competition from foreign shipping, some of which is operated with considerable tax advantages. The investment allowance for capital expenditure on the construction of new ships was raised to 40 per cent in 1957. (In other industries there has been since 1962 an investment allowance of 30 per cent plus an initial allowance of 10 per cent on plant and machinery.) To assist the shipbuilding industry the Government introduced in 1963 a Shipbuilding Credit Scheme, whereby £75 million has been made available to British shipowners, at government lending rates, for financing the building of ships in British yards. Of this sum, a maximum of £17·6 million was allocated for the new Cunard liner due to come into service on the transatlantic route in 1967. The total of £75 million had been fully allocated by the end of 1963.

SHIPPING ORGANISATIONS

The main organisations concerned with the activities, interests and common problems of the industry are as follows:

Lloyd's Register of Shipping

Lloyd's Register is an organisation (distinct from the Society of Lloyd's, see p. 417) which surveys and classifies ships with particular regard to their safety and operational efficiency. It will accept responsibility for surveying and giving technical advice on vessels of all flags from the initial stages of building, at regular intervals during their service, and after casualties. A satisfactory Lloyd's classification is a guarantee to an underwriter that he may accept the risk of a vessel, and this forms a strong link between the Register and the Society of Lloyd's.

Shipowners' and Shippers' Organisations

The representative body speaking for shipowners generally (excluding, for the most part, owners of fishing vessels) is the *Chamber of Shipping*.

There are a number of local associations of shipowners centred around the main port areas: for example, the *Liverpool Steamship Owners' Association*, the *Bristol Steamship Owners' Association*, the *London General Shipowners' Society*, and the *North of England Shipowners' Association*. Others represent companies specialising in a particular trade or type of cargo.

The *British Shippers' Council* was formed in 1955 to represent the shipping interests of exporters and importers in matters of both national and international concern.

Employers' Organisations

The *Shipping Federation* and the *Employers' Association of the Port of Liverpool* are the employers' organisations concerned with labour relations and the regulation of employment throughout the Merchant Navy. They are responsible for the administration of the Merchant Navy Established Service Scheme, under which shipowners engaging crews for ships of 200 gross tons and above engage them through the Merchant Navy Establishment Administration unless they are prepared to offer two-year Company Service contracts. The Shipping Federation is also responsible for the day-to-day operation of

the National Sea Training Schools, administered under the National Sea Training Trust, which train ratings for the deck and catering departments and as firemen.

Seafarers' Organisations

Shipmasters are represented by the *Mercantile Marine Service Association;* navigating officers, engineer officers, apprentices, cadets, pursers and ships' surgeons by the *Merchant Navy and Airline Officers' Association;* and radio officers by the *Radio Officers' Union.* Some uncertificated engineer officers are represented by the *Amalgamated Engineering Union.* The interests of the deck, engine-room and catering ratings are represented by the *National Union of Seamen.*

The National Maritime Board

The National Maritime Board is composed of equal numbers of representatives of the shipowners and seafarers and is responsible for all negotiations of wages and conditions of service in the Merchant Navy, although, except by special arrangement, National Maritime Board agreements do not apply to vessels of under 200 gross tons, or to certain other ships, including tugs and salvage vessels. Detailed working of the board is carried on by a number of 'panels' representing the various interests of those forming the seafarers' part of the board.

Conferences

British shipping companies operating liners have associated with each other and with the companies of other countries operating on the same routes in a series of 'conferences' designed to secure standardisation and stability of rates, and to maintain frequency and regularity of services. The essential principle of a conference is the establishment of a common tariff of freight rates or passenger fares from each port of departure. Each conference meets from time to time to review and revise existing rates, or to compile new ones. Some of the conferences are connected by rate agreements, or have joined together to form wider groupings. There are over 60 conferences dealing with trade to and from the United Kingdom.

The Baltic Exchange

The Baltic Mercantile and Shipping Exchange, which originated in one of London's seventeenth-century coffee houses, is the world's largest market for the chartering of ships of all nationalities. Shipbrokers and merchants' representatives meet here to arrange the chartering of dry-cargo tramp ships for the carriage of goods to and from all parts of the world.

RELATIONS WITH THE GOVERNMENT

The Board of Trade is now the government department responsible for most matters connected with merchant shipping; it took over this responsibility from the Ministry of Transport in February 1965. Under the Merchant Shipping Act of 1894 and subsequent legislation, it administers many regulations for marine safety and welfare, for instance: certifying the load-line (or Plimsoll line) that ensures that a ship is not overloaded; ensuring that standards of safety are observed in ship construction; ensuring the provision of adequate life-saving, fire-fighting and radio equipment; and dealing with the discipline, professional standards, health and accommodation of seamen. Most of the work which these responsibilities entail is carried out by the officers of the Marine Survey and Mercantile Marine at the ports. There is also a Registrar-General of Shipping and Seamen in whose office at Cardiff a complete record of all British ships and seamen is kept. The Board of Trade is represented on the Merchant Navy Welfare Board and on the Merchant Navy Training Board (see p. 362).

The Board of Trade fosters the development and use of modern navigational aids. It arranges for the provision of space in merchant ships to meet the sea transport needs of the armed forces and looks after ships that it owns

or has chartered. It is concerned with general shipping policy and the strategic implications of the Merchant Navy; and it is also the sponsoring department for the shipbuilding, ship repairing and marine engineering industries.

Abroad, certain parts of the Merchant Shipping Acts, in particular those provisions dealing with the engagement and discharge of crews outside the United Kingdom, are administered by H.M. Consuls and by officers of Commonwealth and Colonial Governments.

A Shipping Advisory Panel advises the President of the Board of Trade on commercial and economic matters affecting the prosperity of British shipping.

Britain is a party to the 1954 International Convention for the Prevention of the Pollution of the Sea by Oil which came into force in 1958. The nations which have ratified this convention agree to prohibit their national fleets from persistent discharging of oil within 50 miles of any coast and also in extensive areas of the Atlantic Ocean, the North Sea and around Australia. Amendments to the Convention were agreed at an international conference held in London in 1962. British ships registered in the United Kingdom were already prohibited from discharging oil within a wide zone of the sea around the United Kingdom under the Oil in Navigable Waters Act 1955 (the discharge of oil from any source into United Kingdom territorial waters and harbours was first prohibited in 1922); a further Act was passed in 1963 giving effect to the amendments agreed at the 1962 conference.

Lighthouses, Pilotage and Rescue

The Board of Trade administers the Coastguard Service. This is primarily a life-saving organisation which keeps watch at danger points around the coast for vessels in distress and renders assistance either by rocket life-saving apparatus or by informing other authorities who may be able to give help. There is close liaison between the Coastguard Service and the Royal National Life-boat Institution. The latter maintains lifeboats and fast inshore rescue boats around the coast of the United Kingdom; it is supported entirely by voluntary contributions, and depends largely for its operation on voluntary workers. From its foundation in 1824 to the end of 1964 the Royal National Life-boat Institution saved 85,502 lives. Lifeboats and inshore rescue boats were launched 1,167 times in 1964, and rescued 847 people.

The general lighthouse authority for England and Wales, the Channel Islands and Gibraltar is the *Corporation of Trinity House*, which received its first Royal Charter in the sixteenth century and is administered by a Board of ten Elder Brethren, elected from the Royal Navy and the Merchant Navy. Lighthouses in Scotland and Ireland are the responsibility respectively of the Commissioners of Northern Lighthouses and the Commissioners of Irish Lights.

Trinity House is also the chief pilotage authority, licensing some 750 pilots in 41 districts in England and Wales, including London. In some cases the harbour authority or local council is the pilotage authority. The Board of Trade also has certain responsibilities in connection with lighthouses and pilotage.

THE MERCHANT NAVY

The number of masters, officers and men serving in December 1964 in British ships on articles of agreement opened or closed in the United Kingdom was 123,000. Masters and deck and engineer officers numbered 39,000 and deck and engine-room ratings 37,000. There were 35,000 catering personnel, nearly 6,000 apprentices and cadets and 3,000 radio officers.

Qualifications

The *Merchant Navy Training Board* promotes the instruction and studies at sea of apprentices and cadets who are preparing for their examinations for certificates of competency as second mate.

The Board of Trade holds examinations for, and issues certificates of competency to, ships' officers as master, first mate and second mate of foreign-going ships, or master and mate of home trade ships and as first-class engineer and second-class engineer. Officers may not normally serve on board ships in these grades unless they hold the appropriate, or a higher, certificate.

Radio officers are required to hold certificates of competency in radio-telegraphy issued by the Postmaster General on the results of an open examination.

A seamen may not be rated as A.B. (Able Seaman) in United Kingdom registered ships unless he holds a certificate of competency as A.B., granted by the Board of Trade, or an equivalent certificate. To obtain this certificate a seaman must, among other qualifications, have served three years at sea on deck, have obtained a certificate of efficiency as lifeboatman and have passed a qualifying examination.

Seamen qualify by seniority for promotion to the rating of petty officer. Service as a deck rating qualifies for the purpose of admission to the examination for a second mate's certificate.

Conditions of Employment and Welfare

Wages and conditions of employment are negotiated by the National Maritime Board. Minimum wages and holidays with pay are guaranteed for both officers and ratings. Moreover, the Merchant Navy Established Service Scheme, introduced by the Board in 1947, has removed a great deal of the uncertainty formerly associated with a seafaring life. Officers and men can now take two-year contracts, not only with individual shipping companies but with the industry as a whole, and get special benefits, in addition to the normal unemployment insurance benefit, when they are ashore between voyages.

The *Merchant Navy Welfare Board*, on which are represented officers' and seamen's unions and associations, shipowners, voluntary societies, the Board of Trade, the Ministries of Labour, and Pensions and National Insurance, and the Colonial Office, has been responsible since 1948 for the control and co-ordination of the welfare services for merchant seamen in the United Kingdom and of British merchant seamen abroad.

PORTS

There are over 300 ports in Britain. It is estimated that 144 million tons of imports, including 76 million tons of petroleum and petroleum products, passed through the ports in 1964, and 37 million tons of exports and re-exports, including 7 million tons of coal.

Under the provisions of the Harbours Act 1964, the National Ports Council was set up as a statutory body (it had originally been established in the previous year as a non-statutory body). The functions of the Council are primarily advisory, and the executive powers needed to enforce its recommendations are vested in the Minister of Transport. The Council's main task is to formulate comprehensive plans for the modernisation of harbour facilities in Great Britain, but any harbour development schemes of a substantial nature have first to be authorised by the Minister. The intention is that ports should operate as commercial undertakings and be self-sufficient but the Act does provide, however, for government financial assistance, mainly in the form of loans at market rates, though grants may be given in exceptional circumstances.

The Minister of Transport may confirm schemes, whether suggested to him by the National Ports Council or by individual harbour authorities, for placing under one authority functions which are at present discharged by a number of authorities (and possibly other bodies and persons) in a group of harbours.

The Port of London, with 92 miles of waterway and over 4,000 acres of dock estate, including 42 miles of quayage, is the largest port in the Commonwealth and, with New York and Rotterdam, is one of the three largest ports in the world. Goods of every kind, from meat to marble, from plywood to perfume, pass through the docks; over 61 million tons of cargo were handled in the year ending in March 1964. Imports are distributed all over the United Kingdom, though the port supplies, primarily, Greater London and the home counties. The Thames Navigation Service, operating from Gravesend, provides navigational surveillance and information, by means of radar and radio telephone and other methods, for vessels between the estuary and London Bridge.

Liverpool is the second largest port and the major export cargo outlet of the United Kingdom. The port handles one-sixth of Britain's grain imports and has one of the largest grain-handling plants in Europe. There are tobacco warehouses with a capacity of 200,000 casks and, for wool imports, a warehouse with a capacity of 60,000 bales. In 1964, 9 million tons of imports (excluding petroleum and cattle) passed through the port. Full use of the new terminal at Tranmere raised imports of oil from under a million tons in 1960 to 7·8 million tons in 1964, and crude oil is now the major commodity entering the port of Liverpool. In 1948 the Harbour Board was the first in the world to install radar to cover its sea channels.

Manchester is an inland port, access to which is by the Manchester Ship Canal. Petroleum is both the main import and export. At Eastham is the largest oil dock in the United Kingdom, covering 19 acres.

Southampton is the chief port for ocean passenger traffic, and the principal port for imports of deciduous and citrus fruits. Southampton's value as a port is enhanced by its deep water, double tides and its easy access to London. A considerable volume of oil for the refinery at Fawley (see p. 284) is handled.

Newcastle upon Tyne and the other Tyne ports serve the industrial north-east of England and comprise the most important coal-shipping and largest ship repairing centre in the country.

Hull, on the Humber estuary, serves particularly the industrial centres of Yorkshire and the Midlands, and is one of the largest white fish ports in the world. Other imports are grain, timber and oil.

Tees ports are one of the largest centres for importing iron ore and for exporting steel and engineering products.

Swansea has the largest trade of the group of ports serving South Wales. As well as coal, Swansea exports the steel and tinplate manufactured in its immediate neighbourhood. It is also an important oil port.

Newport (Monmouthshire) is one of Britain's principal ore-importing centres.

Bristol and nearby *Avonmouth* serve the industrial Midlands as well as the city of Bristol itself, and also have a large coastal trade. About 7½ million tons of cargo are handled annually, including a quarter of Britain's banana imports and one-fifth of its tobacco imports. There are also extensive oil installations.

Glasgow, the principal Scottish port, serves as an entrepôt centre for the industrial area of central Scotland, and is the principal outlet for exports of Scotch whisky.

Grangemouth, Scotland's second port, is associated particularly with oil and timber.

Leith is the port of the city of Edinburgh. The chief import is grain and the main export coal from the Lothian coalfields.

Belfast is the principal port of Northern Ireland and handles the main traffic across the Irish Sea.

Other major ports are *Immingham*, with an important trade in chemicals, coal and petroleum, *Cardiff*, for iron ore, petroleum and general traffics, and *Milford Haven* for oil.

Developments

The National Ports Council's first studies have been concerned with harbour facilities in the Firth of Forth, South Wales and at Bristol. In July 1965 the Council recommended to the Minister of Transport an interim development plan costing about £150 million for the urgent development and improvement of 14 ports. It advised that 70 new berths should be built and about 46 existing berths be renovated. This would raise annual capital expenditure by 1968 to £40 million. (It has averaged about £23 million in recent years.) Among the most important projects in 1964 were a new dry dock, quay and tanker-cleaning installation at Greenock, Firth of Clyde (£4 million); improvements to the oil basin in Avonmouth Docks at Bristol (nearly £2 million); and reconstruction of the St. Katharine Dock House in London (£1 million). A new dry dock at Glasgow and improvements to the Tilbury Docks in London, including two new deep-water berths, were completed in 1965 at a cost of £1·3 million and £6 million respectively. A £5 million improvement scheme for Hull Docks and a £6 million scheme for Leith are in hand, as is a £1·5 million scheme for a new cargo and passenger terminal at Southampton Docks.

Ownership

Since 1948 about a third of the total port capacity has been in public ownership; the British Transport Docks Board (see p. 368) owns the majority, which includes Southampton, Hull, Immingham, Cardiff and Swansea.

Certain ports and docks used largely for the cross-channel services of the railways are administered by the British Railways Board: examples of these are Folkestone, Holyhead, Heysham, Stranraer and Parkeston Quay (at Harwich).

In 1964 shipping arrivals and departures at British Transport docks, at which 11,500 were employed at the end of that year, totalled 91 million net registered tons (including fishing vessels), and the total cargo handled was about 55 million tons.

Other ports are controlled by public trusts on which are represented users of the port (such as shippers, importers and shipping companies) and other bodies, such as local authorities. Examples are London (controlled by the Port of London Authority), Liverpool (Mersey Docks and Harbour Board), and Belfast (Belfast Harbour Commissioners).

The powers and responsibilities of the port authorities are, in the main, set down in private Acts of Parliament. A model set of clauses dealing with many of the details is set out in the Harbours, Docks and Piers Act 1847.

Most ports are represented on the *Dock and Harbour Authorities' Association*, formed in 1917 to represent the common interests of port authorities in their relations with government, shipowners and traders.

Labour

There are about 120,000 people employed in the operation of ports in the United Kingdom. Just under half of these are administrative, clerical and technical staff, and pilots, lightermen and customs officials. Over half are the dock workers (popularly called 'dockers') who do the physical handling of cargo.

Shipping arrivals and departures do not all conform to a regular schedule, with the result that there is sometimes too much work for the dock workers available, sometimes too little. Dock labour was therefore largely casual labour until 1941, when war-time schemes were introduced to control the port registers of employers and workers. The war-time arrangements were superseded in 1947 by a permanent scheme administered by the *National Dock Labour Board*, which consists of a chairman, vice-chairman, and eight members appointed by the Minister of Labour, four to represent employers and four to represent employees. Workers on the Board's registers now receive a guaranteed minimum wage for attendance, even when there is no work available. A committee of inquiry was set up by the Government in October 1964 to inquire into labour relations in the docks; its report (the Devlin report) recommended complete 'decasualisation' and a reduction in the number of port employers.

Tanker Terminals

Most of the oil tankers coming to the United Kingdom to discharge crude oil are berthed at special tanker terminals which are near the oil refineries and are owned and operated by the oil companies. The maximum deadweight tonnage of tankers that some of the most important terminals can accommodate at present is: Finnart (West of Scotland) 100,000; Isle of Grain (Thames estuary) 42,000; Coryton (London) 45,000; Tilbury Reach (London) 47,000; Thames Haven (London) 60,000; Tranmere (Liverpool) 65,000; Milford Haven (Pembroke) 100,000; and Fawley (Southampton) 90,000. Long pipelines connect Finnart with the refinery at Grangemouth on the Firth of Forth, and Angle Bay (Milford Haven) with the refinery at Llandarcy (near Swansea).

New terminals for crude oil are being built at Milford Haven, at the Isle of Grain and on the river Tees, whilst the capacity of existing terminals on the Tyne and the Thames is being increased by dredging.

INLAND TRANSPORT

The dense passenger and freight traffic of Great Britain[1] is carried mainly by road and rail, although coastal shipping and, to a lesser extent, inland waterways are important in carrying certain types of freight, particularly bulk cargoes.

Part of the inland transport system of Great Britain is nationalised; namely, the railways, passenger transport in the London area, certain road haulage and road passenger services, most of the inland waterways and some of the vessels on them. Many local authorities and private firms run road passenger services, while road haulage is largely, and coastal shipping entirely, in the hands of private enterprise.

Table 22 gives comparative figures relating to the carrying activities of the nationalised transport undertakings in Great Britain. At the end of 1964 the nationalised sector owned 14 per cent of the 97,000 public road passenger vehicles and over 2 per cent of the 1,635,000 road goods vehicles in use. British Railways and Road Services and London Transport were responsible for 43 per cent of the 13,737 million passenger journeys made in public passenger vehicles in 1964. In the same year there were 8·25 million motor cars and 1·8 million motor cycles, scooters and mopeds licensed for use on the roads.

[1] For an account of inland transport in Northern Ireland, see p. 381.

A sample survey of goods transport by road was made by the Ministry of Transport in 1962. It showed that 81 per cent of the total tonnage carried in that year (estimated at 1,540 million tons) went by road, while in terms of ton-mileage[1] the proportion was 55 per cent. The railways accounted for 15 per cent of all tonnage carried and 26½ per cent of the ton-mileage. The proportions for coastal shipping were 3¼ per cent and 18 per cent, and for inland waterways slightly less than 1 per cent of the total tonnage. A previous survey in 1958 had already shown that road transport had become the major means of inland carriage of goods whatever unit of measurement was used. In terms of ton-mileage, transport by road exceeded that by rail for the first time in 1955; three years later it was responsible for 47 per cent of the total ton-mileage (against 35 per cent for rail) and a further expansion resulted in it accounting for over half the total in 1959.

Long-term Trends in Transport and Traffic

The rapid growth of private and commercial motor traffic, causing congestion problems of increasing severity, especially in cities and towns, and the changing pattern of demand for transport services have led the Government to undertake a series of long-term studies of probable trends in transport and problems which may arise therefrom. A survey of needs for inland transport facilities over the next 20 years (the Hall report, published in March 1963) envisaged an annual rate of increase in total traffic of 4 to 5 per cent; a large rise in ownership of private cars by 1980; and a further switch of goods traffic from rail to road. A systematic assessment of the future of the railway system was also published in the same month (the Beeching report) and supplemented by a further report in February 1965. Early in 1965 an inquiry was instituted by the Minister of Transport into the best means of co-ordinating and developing, in the national interest, the public transport of goods and passengers in Britain.

The study group set up to make an independent report on the long-term problems of traffic in urban areas issued its report (the Buchanan report) in November 1963. It estimated that Britain would have 40 million vehicles on its roads by A.D. 2010 and proposed radical measures to rebuild and adapt cities and roads to handle the growth of traffic. The Minister of Transport appointed a small transport advisory council in 1965 to assist him on policy matters generally, including the implementation of the Buchanan report and the many problems connected with transport in the large conurbations. Comprehensive transport surveys of the large conurbations are being made or will be made by the Government.

NATIONALISED TRANSPORT

The present role and structure of the nationalised transport undertakings are the result of a series of legislative measures passed over the last 18 years.

Transport Legislation, 1947–56

On 1st January, 1948, in accordance with the provisions of the Transport Act of 1947, the British Transport Commission (BTC) came into being and assumed control of Britain's railways, all railway-owned steamships, docks, hotel and road transport interests, most of the country's canals (including all those owned by the railways), certain rivers (as navigation authority) and the whole of the London passenger transport system. In addition, the BTC was to arrange for the gradual acquisition of privately owned long-distance road haulage firms. Road passenger transport outside London was not taken

[1] Ton-mileage is calculated by multiplying the tonnage carried by the actual distance it was transported.

over, but the BTC was given powers to prepare area schemes for co-ordinating passenger services by road and rail, including power to acquire road passenger undertakings for this purpose. A considerable amount of road haulage, several waterways and many docks were left outside the Commission's scope.

The Conservative Government which took office in 1951 announced a new policy for the operation of public transport, including decentralisation of the railway administration, greater freedom to adopt normal commercial practice (particularly in charging), the partial return of long-distance road haulage to private enterprise, and the revocation of the Commission's power to make schemes for the co-ordination of road and rail passenger services. The policy was put into effect by the Transport Act of 1953, and the actual reorganisation of the BTC was completed by 1st January, 1955. A further Act, the Transport (Disposal of Road Haulage Property) Act 1956, provided for the completion of the denationalisation of road haulage.

TABLE 22
NATIONALISED INLAND TRANSPORT UNDERTAKINGS OPERATING AND REVENUE STATISTICS FOR MAIN SERVICES

	Year	Distance served *miles*	Passenger miles[a] *millions*	Receipts per passenger mile *pence* (estimated)	Freight ton-miles[b] *millions*	Staff at 1st January *thousands*	Gross receipts (carrying activities) *£ million*
British Railways	1955	19,061	20,308	1·40	21,353	577	453·9
	1960	18,369	21,547	1·68	18,650	519	478·6
	1964	15,991	19,874	2·00	16,003[c]	440	474·9
Road Haulage							
British Road Services	1955	—	—	—	23[d]	56	55·7
	1960	—	—	—	16[d]	36	55·5
	1964	—	—	—	n.a.	34	71·1
Road Passenger Services							
Provincial and Scottish	1955	—	1,172	1·17	—	59	54·3
	1960	—	10,126	1·47	—	57	62·2
	1964	—	n.a.	n.a.	—	58	75·4
London Transport							
Railways	1955	228	3,469	1·42	—	90[e]	21·0
	1960	228	3,204	1·97	—	77[e]	26·4
	1964	215	3,066	2·71	—	74[e]	34·5
Road Services	1955	3,021	7,656	1·67	—	—	53·2
	1960	3,119	5,942	2·30	—	—	56·9
	1964	3,202	5,094	2·98	—	—	63·2
Inland Waterways	1955	1,430	—	—	184	4	1·0
	1960	1,236	—	—	169	5	1·0
	1964	880	—	—	141	4	0·7

[a] Estimated sum of miles paid for by each passenger.
[b] Freight carried (in long tons of 2,240 lb.), multiplied by distance travelled in miles.
[c] Excludes free-hauled traffic.
[d] Freight carried (in long tons of 2,240 lb.).
[e] Figures refer to all London transport.

Source : *Report and Accounts of Nationalised Transport Undertakings.*

The British Transport Commission

The British Transport Commission (whose members were appointed by and responsible to the Minister of Transport) was a policy-making and not a managing body. Management functions were carried out by seven divisions, corresponding to various activities, namely: British Railways, British Road Services, the Tilling Bus Group, the Scottish Omnibus Group, British Transport Docks, British Waterways, and British Transport Hotels and Catering Services.

The London Transport Executive was established by the Transport Act, 1947, as an agent of the BTC to operate road passenger transport and the underground railways in the London area.

The BTC was required to submit an annual report and statement of accounts to the Minister, who laid it before Parliament. The Commission was under obligation to cover its outgoings, taking one year with another, but during the period of railway modernisation it was permitted to carry forward the deficits arising on British Railways. Meanwhile, in order to meet financial needs during the critical years of reconstruction, the Government, under the Transport (Railway Finances) Act 1957, and the Transport (Borrowing Powers) Act 1959, was empowered to make repayable advances to the Commission of up to £400 million to meet the annual revenue deficits until 1962. From the financial year 1960–61 these deficits were met by the Exchequer from revenue and are not repayable advances. The Commission's ordinary borrowing powers (i.e. excluding those to meet deficits) had been limited to £1,200 million.

Reorganisation Under the Transport Act of 1962

The Transport Act 1962 gave effect to the Government's policy, set out in the White Paper on the Reorganisation of the Nationalised Transport Undertakings. The Government concluded that the activities of the British Transport Commission were so large and diverse that they could not be run effectively as a single undertaking. The commercial capacity of the railways was circumscribed by outmoded statutory obligations and restrictions on their trading operations. Mounting deficits, the size of the capital debt in relation to the earning capacity of the assets and the increasing burden of interest as modernisation proceeded, were detrimental to the morale of railwaymen, to financial control, and to hopes of recovery. The Government therefore proposed that each of the main activities of the Commission should be managed by a separate board, holding its own assets and responsible for its own capital debt.

Statutory Boards

The Transport Act 1962 dissolved the BTC[1] and set up four boards for British Railways, London Transport, British Transport Docks and British Waterways, each of which is responsible directly to the Minister of Transport, who appoints the members. Road passenger and haulage undertakings, such as British Road Services, the Tilling Bus Group, the Scottish Omnibus Group, Road Freight Shipping Services, Thomas Cook and Son and other holdings, are operated as companies incorporated under the Companies Act, with their own boards; they are grouped under a Transport Holding Company, responsible to the Minister of Transport, who appoints its directors. The hotel property of the BTC was transferred to British Transport Hotels Ltd., a wholly owned subsidiary, first of the BTC and later of the British Railways Board.

The cross-channel shipping services operated by British Railways and certain ports and docks used for them passed to the British Railways Board.

[1] The BTC remained in existence until 1st January, 1964, to facilitate the transfer of its foreign assets to the new boards.

Duties and Rights of the Boards

Each board is required to conduct its business so as to pay its way, taking one year with another, and to set up general reserves. The Railways Board and the British Waterways Board may receive financial assistance from the Exchequer for five years from vesting date. All the boards may borrow up to specified limits from the Minister with the approval of the Treasury. The Act facilitates operations on a commercial basis by conferring on the boards powers to sell or develop their land and to construct and operate pipelines, and by freeing them from controlled charges schemes. Except for railway passenger fares in the London Passenger Transport area, certain harbour charges and road passenger fares in an area including London, the boards are free to fix the rates charged for their services. The boards are also released from common carrier obligations as regards carriage by rail or inland waterway.

Financial Changes

The Treasury assumed responsibility for outstanding British Transport stock (amounting to about £1,450 million), so that interest on this debt is now met out of taxation instead of the BTC's receipts. The Treasury also became responsible for Exchequer advances for capital purposes, which amounted to about £690 million by the end of 1962, and for about £300 million lent to the BTC since 1957 to meet revenue deficits. Altogether, the community as a whole took over liabilities for debt amounting to about £2,440 million.

Nationalised Transport Advisory Council

A Nationalised Transport Advisory Council of up to twelve members advises the Minister on questions relating to the co-ordination, or any other aspect, of the nationalised transport undertakings. At present the Minister presides over the council.

Transport Tribunal

The Transport Tribunal, set up under the 1947 Act, had jurisdiction over the charges schemes governing maximum charges which the British Transport Commission could make in respect of all its activities save road services. It could also hear appeals arising from applications for road haulage (goods vehicles) licences. Under the 1962 Act, the tribunal sits in two divisions, one having jurisdiction over London rail and road fares and the other continuing to hear appeals relating to road carriers' licences.

Transport Users' Consultative Committees

The 1947 Act set up a structure of Area Transport Users' Consultative Committees which could consider criticisms of nationalised transport services and suggestions made for improving them. The Area Committees sent their findings to the Central Transport Consultative Committee which could make formal recommendations. Where it did so, the Minister had power to give directions to the BTC. The committees continue under the 1962 Act, with some changes in functions and membership. In particular, they have been given a principal role in a new statutory procedure which the Railways Board and the London Transport Board have to follow when they want to close a railway passenger service. When a closure is proposed, the area committee concerned considers objections from users and reports to the Minister on any hardship which is likely to arise. The Minister considers the area committee's report and decides whether, bearing in mind all the issues involved, he should consent to the closure.

Coastal Shipping

The main features of the previous safeguards for coastal shipping were that a complaint might be made on behalf of coastal shipping to the Transport Tribunal if charges made or proposed by the railways in competition with coastal shipping placed coastal carriers at an unfair disadvantage, or were inadequate in relation to the cost of the service provided. The 1962 Act provides that complaints of this kind can be made to the Minister.

RAILWAYS

Britain was the pioneer of railways. The opening of the Stockton to Darlington Railway in 1825, and of the Liverpool and Manchester line in 1830, when George Stephenson's famous 'Rocket' locomotive was used, began a century of widespread railway development. The great period of railway building was from 1840 to 1875, with a short lull following the collapse of the speculative railway boom in 1846.

During the first world war, the railways came under centralised government direction through a Railway Executive Committee. This experience emphasised the need for concentration and a reorganisation of the whole rail system. The Railways Act of 1921 amalgamated some 130 private companies into four large regional groups: the London, Midland and Scottish; London and North Eastern; Great Western; and Southern. In the 1920s and 1930s the railways suffered from the prolonged industrial depression and the growing competition from road transport. The causes of road competition were twofold: first, motor transport often offered cheaper and better facilities; secondly, the statutory regulation of the railways' charging system resulted in the loss of some lucrative traffic and the forced retention of unprofitable traffic.

In 1938 the railways made proposals for relief from statutory regulation of charges, but the outbreak of war in 1939 postponed action and the railways again became controlled by the Government; at the end of the war the railways were returned to the control of the regional groups for a brief period.

Organisation under Public Ownership

The Transport Act of 1947 brought the railways under public ownership as a single enterprise, British Railways. It was grouped in six regional subdivisions and operated under the overall management of a Railway Executive established as the agent of the BTC.

The 1953 Transport Act abolished the Railway Executive and provided for decentralisation of the administration. The operation of British Railways was placed in the hands of six area boards (the areas corresponding with the former regions). The general manager of each board was responsible for day-to-day management but matters affecting general policy were reserved to the Transport Commission.

It became clear, however, that even under this arrangement the organisation of the Commission, with responsibility for diverse transport undertakings, was too unwieldy. The Transport Act 1962 therefore set up a new board—the British Railways Board—with sole responsibility for managing railway affairs. Under the Act the railways were also relieved of much of their burden of accumulated debt and were given freedom to alter their charges at will, except for passenger fares in the London area. The Board came into existence on 1st January, 1963. Its responsibilities for the operation of the various parts of the system are delegated to six regional boards.

Operations

Statistics relating to the operations and traffic revenue of British Railways are given in Table 22. The process of rationalisation arising from changing public transport requirements is reflected in the reduction of over 2,300 miles of standard-gauge route since 1961. A total of 928 million passenger journeys was made and 240 million tons of freight traffic conveyed on British Railways in 1964. Traffic revenue increased, partly owing to increases in fares and freight charges.

At the end of 1964 British Transport Hotels Ltd. (which provides all catering facilities on British Railways' trains) managed 35 hotels and refreshment rooms at 235 stations. In addition, two hotels and refreshment rooms

at 68 stations were operated by tenants. Gross receipts for 1964 were £25·5 million.

Development

Capital Expenditure

Because of the economic difficulties of the early 1930s, the strain of the war years, and the numerous post-war claims on national resources, for many years it had not been possible for the railways to carry out any large modernisation schemes or to maintain an adequate replacement programme. However, in 1955, the BTC produced a modernisation plan which was designed to transform virtually all the services offered by the railways. Since then the plan has been modified in the light of ensuing economic and technical developments. Some £1,100 million was invested in British Railways and their associated activities in the eight years 1955–63, and capital expenditure is still substantial, amounting to £108 million in 1964.

Progress in Modernisation

On main lines in 1955 there were about 18,000 steam, 7 main line diesel and 71 electric locomotives. At the end of 1964 the corresponding figures were 4,970 steam, 2,458 diesel and 198 electric locomotives. In addition, there were 4,107 diesel and 6,980 electric passenger-carrying multiple units. The phase of railway modernisation represented by the diesel multiple unit was completed by 1961; no more are expected to be needed.

Passenger services have continued to improve as steam is replaced by electric or diesel traction. The replacement of out-of-date passenger coaches by new stock, with improved amenities, continues and diesel electric *de luxe* trains are in operation on routes from London to Manchester and elsewhere.

The efficiency of freight services is being improved as new and modern type freight vehicles come into service and as facilities become available for concentrating freight traffic at fewer and better equipped and better sited marshalling yards and terminals. For example, a new £6 million marshalling yard has been opened at Sheffield. This yard is capable of sorting wagons quickly for the 130 different destinations for which traffic passing through the area requires to be marshalled. Many other new freight facilities, such as the marshalling yard at Lamesley and the new central goods depot on Tyneside, which together cost over £5 million, are in use.

The installation of modern colour-light signalling, coupled with the installation of either electro-mechanical or power-operated signal boxes and the rapid extension of the automatic warning system, is enabling faster and more frequent trains to be run with a greater degree of safety. Schemes are in hand, costing about £8 million, for the complete modernisation of signalling on the main line between London and Didcot (an important junction in Berkshire) and on the South Wales main line between Cardiff and Port Talbot.

Electric and Diesel Traction

One of the most important suburban electrification schemes carried out is that of the Glasgow central lines ('Blue Train service') at a cost of nearly £13 million. The extension of the Southern Region's electrification of the line to the Kent coast at a cost of over £20 million has been completed. Electrification of the London Midland Region's lines from London (Euston) via Crewe to Liverpool, costing about £175 million (including the cost of rolling-stock and works such as overhead equipment, signalling improvements and station modernisation), will be completed by the end of 1965.

Reorganisation

In spite of the considerable injection of new capital over the period 1955–62 British Railways incurred a steadily increasing overall deficit (including interest charges), which rose to a peak of more than £150 million in 1962. The new Railways Board was given the task of preparing a scheme for reorganising the railways in such a way that they could be run as a commercially

viable undertaking. In March 1963 a *Report on the Reshaping of British Railways* ('Beeching Report') was published and was accepted in principle by the Government. Its proposals include the withdrawal of passenger services from about a third of the country's railway system. (These little-used lines carry only 1 per cent of the total passenger traffic.) Before any passenger service is withdrawn there must be provision for any objectors to state their case against closure and a final decision must be given by the Minister of Transport. Other important proposals are for the improvement of inter-city passenger services, with the emphasis on speed, reliability and comfort; the introduction of express freight services ('liner trains') to link all the main industrial areas, increased mechanisation in the carrying of coal (the railways' most profitable traffic); and the continuing replacement of steam by diesel and electric traction. A further report, *The Development of the Major Railway Trunk Routes*, was published in February 1965.

Although many of the changes foreshadowed in the plan have not yet had time to have any significant effect on the railways' financial results, there was a reduction in 1964 by £15 million to £67 million in the railway operating deficit, the result mainly of economies and increases in efficiency.

Channel Tunnel

Early in 1964 the British and French Governments agreed in principle to the construction of a rail Channel Tunnel (either a bored tunnel or an immersed tube). The cost is estimated at £160 million (at 1962 prices) and the time for completion six years from the start of work. The preliminary geological survey to determine the line of the tunnel is expected to be completed at the end of 1965.

ROADS

The advent of the motor vehicle made it necessary for the Government to set up a central road authority; accordingly, the Road Board was established by the Development and Road Improvement Funds Act of 1909. In 1919 the Board's responsibilities were taken over by the newly established Ministry of Transport.

In April 1964 Great Britain had 199,740 miles of public highway. There were 285 miles of motorway, 8,342 miles of trunk roads, 19,822 miles of Class I roads, 17,626 miles of Class II roads, 48,982 miles of Class III roads and 104,678 miles of unclassified roads. Roads are classified according to their traffic value, those of purely local traffic importance remaining unclassified. On maps and signposts the trunk and Class I roads can usually be identified by the letter 'A' in front of a route number, and Class II roads by a letter 'B'. Trunk roads are the main arteries of national traffic and the whole cost of their upkeep is met from Exchequer funds. The Minister of Transport is the highway authority for trunk roads in England and Wales and on these roads he administers expenditure, which is provided wholly from central government sources, although for many purposes he employs local authorities as his agents. The highway authority for Class I, Class II and Class III roads is, in general, the council of the county or county borough in whose area the roads lie. The Minister makes grants towards approved expenditure on construction and major improvement of these roads at the rate of 75, 60 or 50 per cent according to the class of road. (Classified roads include nearly all the main streets of the large cities.) The Secretary of State for Scotland has corresponding responsibilities for roads in Scotland. Unclassified roads are entirely the responsibility of the local authority in whose area they lie.

Development

While it was impossible for several years immediately following the second world war to spend much more on the roads than was required for their

essential maintenance, a large and steadily expanding road-building programme has now been in progress since 1955. Annual outlay on motorways, trunk roads and classified roads is expected nearly to double during the period 1965–70. Public investment on new construction and major improvements is planned to amount to some £1,000 million during the next five years, including about £150 million from resources of the local authorities. A substantial part of central government expenditure will be in the form of grants to local authorities for work on classified roads, mainly in urban areas. The current programme includes Britain's first motorways, constructed for the use of limited classes of traffic under the powers granted to the ministers by the Special Roads Act 1949 (consolidated in the Highways Act 1959).

The motorways form part of a programme designed to provide a national network of modern through routes. At the same time, work done under this programme will eliminate the worst bottlenecks in urban areas and thus give free outlets from the big cities and from other main sources of traffic to the trunk routes.

Motorways

It is planned that 1,000 miles of motorways should be completed by the early 1970s. At the end of July 1965, 358½ miles had been opened for traffic and construction had started, or tenders had been invited, for a further 140 miles. The lines of a further 218 miles had been fixed and draft schemes been published for a further 138 miles. It is probable that 600 miles of motorway will be in use by 1968–69 and the map on p. 374 shows the planned motorway system. Among the motorways in Great Britain open to traffic or under construction in July 1965 were:

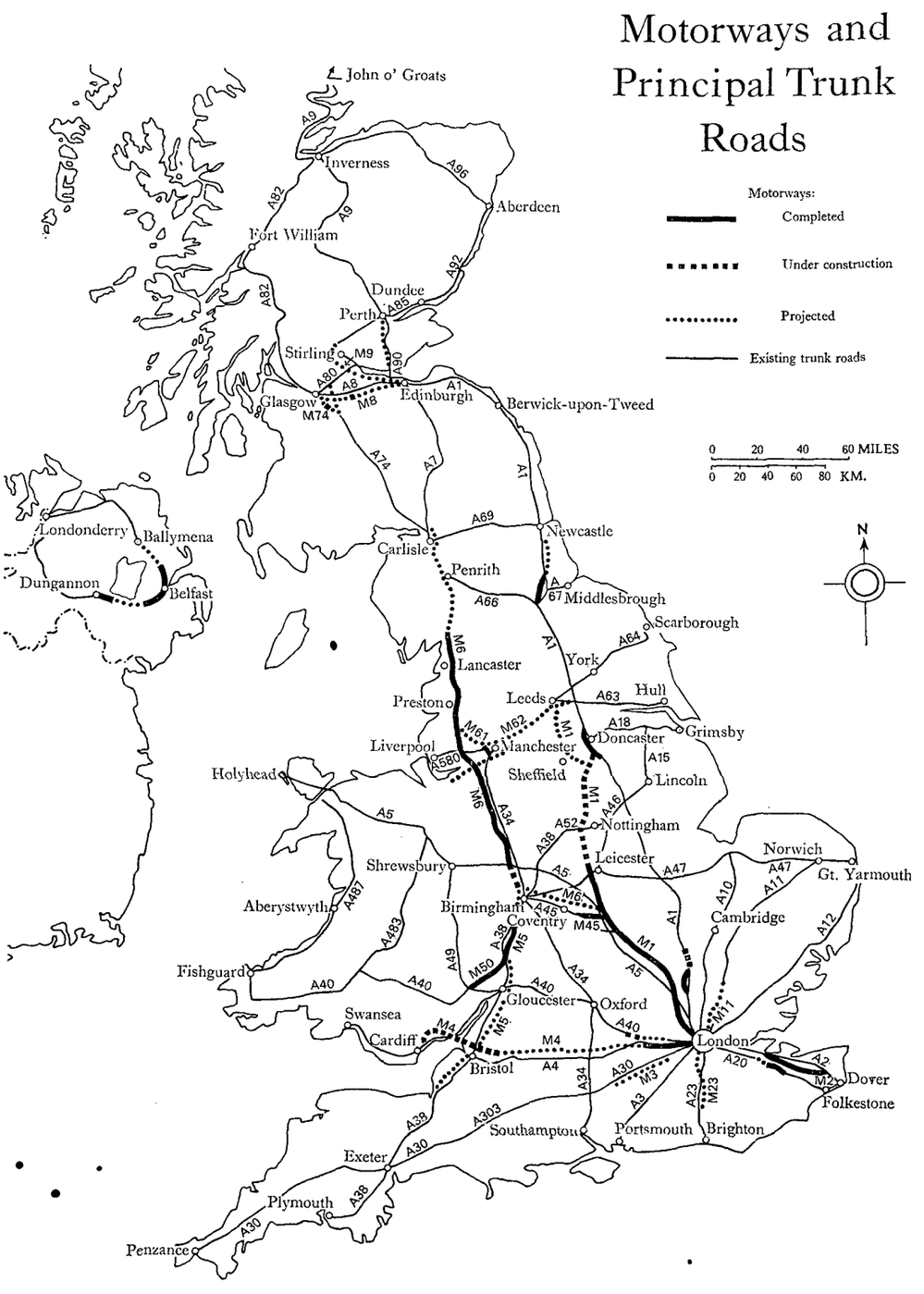
M1—London to Yorkshire (Leeds). The projected length of this motorway is about 190 miles, of which 100 miles, providing a link between London, Birmingham and Leicestershire, have been opened to traffic in the last six years. Construction of the 12-mile section from Markfield (Leicestershire) to the river Trent is due to be completed by the end of 1965. Work was under way in 1965 on a further 47½ miles north of the river Trent and on an 8½-mile extension southwards into London.

M2—Medway motorway, London to Dover. The 26 miles of this motorway came into use in 1963.

M4—London to South Wales. The projected length of this road, which will link London with Newport, is 140 miles. In the east, 24½ miles are in use from Chiswick to Maidenhead, including a one-mile spur to London Airport. Under construction in the west are 20 miles of road from Newport (Monmouthshire) to Tormarton (Gloucestershire) and a £9 million bridge over the Severn.

M5—Birmingham to Bristol. Of this 117-mile motorway reaching to East Brent (20 miles beyond Bristol), the first 26 miles running south from Birmingham were opened in July 1962. There will be a connection with the M4 north of Bristol. The 21½-mile Ross Spur (M50), opened in 1960, links the M5 with the existing road system leading from Ross-on-Wye (Herefordshire) to South Wales.

M6—Birmingham to Carlisle. The projected length of this road is 172 miles, of which 110 miles, linking Dunston (north of Birmingham) with Lancaster, are open to traffic. It includes the 8½-mile Preston bypass, the first section of motorway, opened in 1958. A system of motorway links will connect this road at its southern end with the M1 and M5; the first stage of work on the latter link should be ready by the end of 1965.


Motorways and Principal Trunk Roads
Motorways:
Completed
Under construction
Projected
Existing trunk roads
0 20 40 60 MILES
0 20 40 60 80 KM.
N
John o' Groats
Inverness
Aberdeen
Fort William
Dundee
Perth
Stirling
Glasgow
Edinburgh
Berwick-upon-Tweed
Londonderry
Ballymena
Dungannon
Belfast
Carlisle
Penrith
Newcastle
Middlesbrough
Scarborough
Lancaster
York
Preston
Leeds
Hull
Grimsby
Liverpool
Manchester
Doncaster
Holyhead
Sheffield
Lincoln
Nottingham
Leicester
Norwich
Gt. Yarmouth
Shrewsbury
Aberystwyth
Birmingham
Coventry
Cambridge
Fishguard
Gloucester
Oxford
Swansea
Cardiff
Bristol
London
Dover
Folkestone
Southampton
Portsmouth
Brighton
Exeter
Plymouth
Penzance
A9
A82
A96
A92
A85
A90
M9
A80
A8
M8
M74
A1
A74
A7
A69
A66
A67
A64
M6
A63
A18
A15
M62
M61
M1
A580
A5
A34
A52
A38
A46
A47
A11
A10
A12
A487
A483
A49
M50
A39
M5
A40
M4
M45
A20
A2
M2
A23
M23
A3
A303
A30
A38
A4

In Scotland about 73 miles of motorways are planned over five years. They include motorways between Glasgow and Edinburgh, Edinburgh and Stirling, and a 16-mile section southwards on the Glasgow-Carlisle route. The first section of the Glasgow to Edinburgh motorway was completed in 1965.

Other Roads

Notable schemes for improving existing trunk roads include those for the Great North Road (A1) between London and Newcastle, of which 175 miles of dual carriageway, several sections built to motorway standards, are already open, including a ten-mile bypass of Darlington opened in 1965. Improvements on the A40 route, linking London with Gloucester and South Wales via Oxford, include a 13½-mile bypass around High Wycombe, in Buckinghamshire, built to motorway standards.

In Scotland the trunk roads in the central belt and to Carlisle, where industrial traffic is greatest, are to be improved to provide dual carriageways. Over 50 miles of the Glasgow-Carlisle route have so far been reconstructed.

Bridges and Tunnels

The largest bridge building programme in Britain for over a century is in progress. The £2·3 million Medway Bridge, which is part of M2 and one of the largest prestressed concrete structures of its kind in the world, was completed in 1963 and the new suspension bridge across the Firth of Forth, the main span of which is the largest of its kind in Europe, was opened in 1964. The Severn Bridge, whose main span is nearly as long as that of the Forth Bridge, is due for completion in 1966 to be followed in 1967 by a 7,000 ft. bridge across the Firth of Tay.

The second Blackwall Tunnel (under the Thames), which is expected to cost £6·5 million, is nearing completion and the £12·6 million Tyne Tunnel between Wallsend (Northumberland) and Jarrow (Durham) is planned to be in use by early 1967. The first Whiteinch Tunnel (under the Clyde) was completed in 1963 and the second in 1964. The £11 million Dartford-Purfleet tunnel (under the Thames) has been open to traffic since the end of 1963.

Research

Research on roads is carried out at the Road Research Laboratory (see p. 205). Its aims are to find more economical ways of designing, constructing and maintaining roads and of facilitating the flow of traffic on them and to reduce road accidents. The layout of roads, their traffic, the safety features of road vehicles and the behaviour of road users are investigated, and new methods, materials and processes are developed for building roads and providing them with a smooth, safe and durable surface. The Laboratory has a Tropical Section, which undertakes research and advice on road problems overseas.

ROAD TRANSPORT

At the end of 1964 there were 12·25 million motor vehicles licensed to use Great Britain's roads. Of these, 1·5 million were goods vehicles and 1 million were public road passenger vehicles (i.e. buses and taxicabs).

The first world war greatly stimulated the development of motor vehicles and road transport began to make itself felt as a serious competitor of the railways. The first step towards government regulation of public road transport was the passing of the London Traffic Act of 1924, which gave the Minister of Transport power to control the number of buses and their journeys in London; this was followed, in 1933, by the setting up of the London Passenger Transport Board (see p. 381).

Licensing

The Road Traffic Act 1930 ended the licensing of public service vehicles (i.e. buses and coaches) by local authorities and set up instead traffic areas, of which there are now eleven, covering the whole country and each under

the control of three traffic commissioners (except for the London metropolitan area, which has one) appointed by the Minister. The commissioners regulate, by means of a licensing system, all public road passenger transport services, and they sanction routes and time-tables in order to secure proper co-ordination of services and eliminate unnecessary competition; they may also control fares. Competing operators and local authorities are entitled to raise objections concerning applications to the commissioners for new licences or the renewal of existing licences and to appeal to the Minister of Transport against the commissioners' decisions.

The Road and Rail Traffic Act 1933, based upon the recommendations of the Royal Commission and of an experts' report (the Salter report) of 1932, established a system of licensing for road haulage vehicles, which is still in operation, designed to restrict vehicle operations to proved needs and to eliminate wasteful competition. A licence has to be secured from the licensing authority (the chairman of the appropriate body of traffic commissioners) before a goods vehicle can be used on the road. There are three types of licence: the 'A' licence for general public haulage; the 'B' licence for public haulage limited to certain goods or certain areas and covering also the carriage of the licensee's own goods; and the 'C' licence for the carriage by traders solely of their own goods. Applications for 'A' and 'B' licences are examined by the licensing authorities to see if they are necessary in view of existing transport services, and competitors may raise objections. There is a right of appeal to the Transport Tribunal against the decision of the licensing authorities. The 'C' licence is granted on application, as of right. All goods vehicle operators are bound by regulations concerning the fitness and loading of vehicles, the movements of large vehicles likely to obstruct traffic, the keeping of records, and driving hours and rest periods of their employees.

The main licensing provisions contained in the Road Traffic Act 1930, and the Road and Rail Traffic Act 1933, as subsequently amended, were consolidated in the Road Traffic Act 1960.

Organisation of Road Haulage

State-owned Services

Under the Transport Act 1947, the BTC took over 'A' and 'B' hauliers predominantly engaged on long-distance haulage; vehicles operating under 'C' licences and those used for carrying certain specialised traffic were not affected. After the change of Government in 1951, the Transport Act of 1953 required the BTC to dispose of the bulk of its road haulage undertaking. In 1956 this process was halted by the Transport (Disposal of Road Haulage Property) Act, which enabled the Commission to retain under its control more vehicles than were permitted under the 1953 Act. Altogether, the Commission disposed of 20,000 vehicles.

From September 1956 British Road Services (BRS) were a division of the Commission and conducted their business through the medium of five companies, which together owned about 16,000 vehicles: British Road Services Ltd. (general haulage); BRS (Pickfords) Ltd. (special traffic and some contracts); BRS (Contracts) Ltd.; BRS (Parcels) Ltd.; and BRS (Meat Haulage) Ltd. All the companies' vehicles are subject to the licensing system. Under the Transport Act 1962, these organisations have been operating (since January 1963) as companies incorporated under the Companies Act, with their own boards. They are grouped together under the Transport Holding Company, responsible to the Minister of Transport.

Size of the Industry

The number of licensed vehicles in the road goods transport industry rose from 1 million in 1954 to 1·6 million in 1964. The percentages with 'C' licences were 84 in 1954 and 87 in 1964 (1,312,000 vehicles). Of the

other 208,000 vehicles, with 'A' and 'B' licences, about 16,000 are operated by British Road Services and the rest are operated by some 46,000 hauliers. There are only a few operators with large fleets of vehicles in any of the licence categories. 'C' licence vehicles include a large number of small vehicles used locally in the delivery of groceries and other goods. Other vehicles in this class are engaged in long-distance carriage of traders' own goods. A sample survey made by the Traders Road Transport Association in 1958 indicated that 'C' licence operators with fleets of over 100 vehicles were probably fewer than 3 per cent of the total number of operators, but accounted for over half the 'C' licence vehicles in use in the country.

In October 1963 the Minister of Transport appointed an independent committee of inquiry (the Geddes Committee) to examine the licensing system for road haulage and to make recommendations. It reported (*Report of the Committee on Carriers' Licensing*) in June 1965 and recommended the abolition of the present licensing system. The Committee proposed instead a system of permits to ply as a carrier of goods, whether for hire or for the carriage of a trader's own goods. These permits would be available on demand, without restriction, but subject to withdrawal if prescribed safety standards for goods vehicles were not observed.

Public Passenger Transport by Road

With the exception of the London transport system which is operated by the London Transport Board, road passenger transport in Great Britain is run by about 5,000 operators, 95 of them being local authorities owning and operating urban bus and trolleybus services. About 4,700 are independent operators of coaches and, of these, 3,600 have not more than 5 vehicles. Most of the remainder operate both bus and coach services and belong to three main groups—Tilling, Scottish Omnibuses and British Electric Traction. The British Electric Traction Group is a private concern but substantial shareholdings in many of its companies, without any controlling interest, are held by the Transport Holding Company, who own the Tilling and Scottish Omnibus groups outright. The Tilling bus companies are grouped into six regions covering England and Wales, with a total vehicle strength of about 9,600. The Scottish group, with a vehicle strength of 4,700, covers most of Scotland, with the exception of the major municipalities of Glasgow, Edinburgh, Dundee and Aberdeen and services in the Highlands and Islands.

At the beginning of 1965 there were 257 concerns operating fleets of over 24 vehicles, 88 of which were local authorities, the largest being the Birmingham Corporation.

Road Safety

Britain has the highest density of road traffic in the world. In 1964, 7,820 people were killed on the roads and over 377,000 injured. This compares with over 7,000 persons killed and 230,000 injured in 1934, when there was one-quarter of the present number of motor vehicles on the roads—an indication that the problems have, to some extent, been held in check by road safety measures introduced since 1930. Since 1946 the volume of traffic has at least trebled: but road accident casualties have only doubled. The fatal accident rate in Britain is better than that in most other European countries, but slightly worse than in the United States and Canada. Road accident statistics are compiled and published by the Ministry of Transport and Scottish Development Department from reports made by the police.

Modern roads, designed for present day traffic and segregating pedestrians from vehicles, are safer than the roads they replace and surveys have shown they result in a marked fall in casualties. The more important measures

directed primarily towards road safety include speed limits of 30 and 40 m.p.h. in and around built-up areas and 50 m.p.h. on certain trunk roads in rural areas; the provision of pedestrian crossings—some illuminated by flashing beacons and marked with conspicuous white stripes ('zebra' crossings); and the system of road markings and traffic signs (which are being replaced by greatly improved signs over the next few years).

The safety of vehicles, both in design and use, is controlled by regulations; a system of vehicle testing, which applies at present to vehicles five or more years old, is being gradually extended. Heavy goods vehicles are at present subject to a separate procedure of spot checks but the Government intends to introduce legislation to establish a system of annual tests.

All drivers of motor vehicles, including motor cycles, motor scooters and powered pedal cycles, unless they have either held a full British licence or passed the driving test in the last ten years are required to pass the test before being granted a full licence to drive[1]. Until they pass the test they must obtain a 'provisional' licence which necessitates their displaying 'L' (Learner) plates on their vehicle, and in all cases where vehicles are constructed to carry passengers, other than pillion passengers, learner drivers must be accompanied by a qualified driver (a person who holds a current driving licence for the same type of vehicle as that driven by the learner). A learner driver of a motorcycle is restricted, until he passes the driving test, to a machine not exceeding 250 c.c.

The Road Traffic Acts, which embody the law relating to road users, are enforced by the police and the courts. A person convicted of any of the 26 most serious offences is liable to be disqualified from driving for a period. The standard of conduct for all road users—pedestrians and drivers—and a summary of the requirements of the law is set out in easily understandable form in the *Highway Code*. A failure to observe the code does not of itself render a person liable to criminal proceedings but may be taken into account in any such proceedings. Free copies of the code are issued to all learner drivers and to motorists visiting Britain from abroad.

A National Road Safety Advisory Council was set up by the Minister of Transport in 1965 to keep under review the road accident situation in Great Britain and methods of accident prevention, and to report on other matters affecting road safety.

The Government intends to introduce legislation making it an offence to drive with more than a prescribed level of alcohol in the blood.

National campaigns to persuade people to take greater care on the roads are conducted by the Royal Society for the Prevention of Accidents, acting as the Government's agent and with the participation of the local authorities. The police and education authorities also help by arranging courses of instruction, especially courses for children.

Relief of Congestion

The Road Traffic and Roads Improvement Act 1960 permits the employment of traffic wardens (with strictly limited powers), and provides for fixed penalties (the 'ticket' system) for parking offences. Other measures in the Act, designed to reduce traffic congestion, include the granting of greater powers of action to local traffic authorities. In 1965 the Greater London Council became the traffic authority (formerly the responsibility of the Minister of Transport) for the whole of Greater London. Several extensive schemes for the improvement of road safety and the relief of traffic congestion are being undertaken: these include 'fly-overs' at road junctions; new outlet roads from cities; and the designation of certain stretches of trunk roads as

[1] For overseas visitors' licences, see Appendix.

'clearways', on which waiting on the carriageway is (with certain exceptions) prohibited. In London and many other large towns, such as Manchester and Newcastle upon Tyne, street parking in certain areas is permitted only for limited periods and on payment at parking meters, and increased off-street parking facilities are being provided.

Increasing use is being made of traffic management to promote the smoother and more rapid flow of traffic. In 1960 a Traffic Management Unit was set up in London by the Minister of Transport. This was superseded in 1965 by a Traffic Advisory Unit, with the object of making available to all traffic authorities the experience gained in London and elsewhere since 1960. The main measures introduced are comprehensive control of street parking and comprehensive one-way working systems. Others include the banning of turns, particularly right turns, peak hour clearways and 'tidal flow' arrangements.

In June 1964 the Smeed Committee, appointed by the then Minister of Transport in 1962 to study the technical possibilities of road pricing, reported that it considered it was possible, by means of various mechanical devices, to charge road-vehicles according to the extent to which they use congested areas. In June, also, the Minister announced the setting up of a group which would study how the design of vehicles (size, power, fumes and manoeuvrability) could make them more suitable for use in towns.

INLAND WATERWAYS

In 1761 James Brindley completed the Bridgewater Canal to take coal from the collieries owned by the Duke of Bridgewater at Worsley to Manchester. This marked the beginning of canal building in modern Britain, with which the names of Brindley, Telford, Rennie, Jessop and other great engineers are associated. Canals played an important part in promoting industrial and commercial expansion in the late eighteenth and early nineteenth centuries. The whole canal system was practically complete by 1830. As a result of developing competition from the railways, however, about one-third of the canal mileage had passed to the control of the railway companies by the middle of the nineteenth century. During the first world war government control of railways included railway-owned canals and, under the Transport Act 1947, most of the country's canals passed from government control, which had been re-established in the second world war, to that of the British Transport Commission in January 1948. From 1955 the canals were managed separately by the waterways division of the Commission, known as British Waterways; under the Transport Act 1962, control has been vested in the British Waterways Board since 1st January, 1963.

The System

There are about 2,500 miles of navigable inland waterways in Great Britain[1], some 2,000 miles of which belong to the British Waterways Board; the remainder are mainly still in the hands of local authorities or private companies. Many of the Board's canals are narrow waterways which can generally be used only by boats not exceeding 7 feet in width, capable of carrying a load varying from 25 to 30 tons; the remainder are broad waterways and canalised rivers which can be used by craft of up to 400 tons capacity. The canals in Scotland are all broad waterways. Of the 2,000 miles of inland waterways under the control of the British Waterways Board about 320 miles are closed to navigation or abandoned and some further 800 miles (in 1963) were no longer used for commercial navigation. Of these 'disused' canals some are unnavigable, either wholly or in part.

[1] In Northern Ireland, the only inland waterway which is still used for commercial transport purposes is the Lower Bann Navigation.

For certain operational purposes, such as maintenance engineering and estates work, the canals of England and Wales are administered from two regional centres, one at Gloucester and the other at Leeds. Sales promotion is, in the main, centrally and nationally directed by the Board's headquarters in London. In Scotland the canals (other than the Caledonian, which is run by a manager) are, for engineering purposes, under the control of an area engineer; estates work is supervised centrally.

In 1964 total traffic on British Waterways amounted to 9 million tons, of which 3·8 million tons were coal, 2·2 million tons liquids in bulk and 3 million tons general cargo. The total traffic is stated in ton-miles in Table 22. Some 90 per cent of the total traffic is carried on about 400 miles of broad waterways, which are mainly canalised rivers.

Although the British Waterways Board is the largest single carrying operator, most of the traffic is handled by independent carriers or by traders in their own craft. The Board at the end of 1964 owned 13 tugs and 860 carrying craft, with a carrying capacity of 36,700 tons, including 93 power-driven craft with a carrying capacity of 5,450 tons.

Development

Under the control of the BTC, the commercial organisation was strengthened; it concentrated on dredging methods and equipment, brought different types of craft into service, established a research organisation and undertook various development works. Following the report, issued in 1955, by a specially appointed Board of Survey, a comprehensive development plan was begun in 1956. Under this plan, nearly £6 million was invested in the improvement of navigation and the provision of modern equipment on the major waterways that carry most of the traffic—the Aire and Calder Navigation, the Sheffield and South Yorkshire Navigation, the Trent Navigation, the Lee Navigation (below Enfield Lock), part of the river Severn, including the Gloucester & Sharpness Canal, the Weaver Navigation and the Grand Union Canal (below Uxbridge). As a result the British Waterways Board now controls about 300 miles of first-class waterways linking important industrial districts with ports; further investments in improved facilities are being made.

The total revenue of the British Waterways Board in 1964 amounted to £4·5 million, of which only £0·7 million arose from carrying activities. The sale of water is an important source of revenue and has more than trebled since 1948. British Waterways encourages pleasure boating and receipts from this source are rising but as yet constitute less than 2 per cent of total revenue. British Waterways does not usually own fishing rights and income from this source is very small. In 1963 the Board issued an interim report, *The Future of the Waterways*, on its examination of the future use of the inland waterways under its control.

LONDON TRANSPORT

London is, with Tokyo and New York, one of the world's three largest cities. The area known as Greater London, within a radius of about 15 miles from Charing Cross, contains over 8 million people.

London's passenger transport system, in its modern sense, began in 1829 when the first omnibus, horse-drawn, appeared on the London streets. The first regular tram service, also horse-drawn, began in 1870. In 1863 the first underground steam railway, the Metropolitan, was built by digging a great trench for the line and roofing it over. In 1870 the world's first tube railway, the Tower Subway, was constructed under the river Thames; it was cable-operated and ran for only a few months. The first electric tube railway in the world, the City and South London line, was opened in 1890, and this was

followed in 1900 by the opening of the Central London Railway. Shortly afterwards the steam-operated underground lines were electrified. Meanwhile, horse-drawn buses and trams were being replaced by motor buses and electric trams.

Until 1933 there were many separate undertakings providing passenger transport facilities in London, but in that year they were all vested in a single public corporation, the London Passenger Transport Board. In 1948, with the establishment of the British Transport Commission, the London Transport Executive took over control as an agency of the Commission.

Under the Transport Act 1962, as in the case of the other BTC undertakings, the London Transport Executive has been replaced by a financially independent board, known as the London Transport Board.

The London Transport System

The London Transport undertaking operates all road and rail passenger transport services in the London area with the exception of the London lines of British Railways and the taxicabs. (Some 6,000 taxicabs that ply for hire in the streets are privately operated by companies or owner-drivers and are licensed annually by the metropolitan police.) London Transport's operations extend beyond Greater London to cover an area of 2,000 square miles (known as the London Passenger Transport Area) with a radius of about 25 miles from Charing Cross and with a population of 10¼ million. Between 1955 and 1964 the number of passenger journeys made annually on the London Transport system fell from 4,079 million to 2,926 million, largely owing to increased private motoring and changes in leisure-time habits and also to some shifting of population away from the centre of London.

London Transport's railway network stretches 18 miles from north to south and 32 miles from east to west. The total length of the railway over which London Transport trains operate is 244 miles, of which 88 miles are underground, including the longest tube tunnel in the world, 17¼ miles long. London Transport trains serve 273 stations. London Transport's buses and coaches travel over 3,200 miles of roads. To carry traffic over all this area, in December 1964 London Transport owned 4,174 railway cars and 8,347 buses and coaches. The total staff employed was 74,000.

Improvements carried out by London Transport since the war have included complete renewal of the bus and coach fleet, replacement of trams and trolleybuses by diesel buses, and extension and modernisation of parts of the Underground system. Since 1959 £30 million has been spent on renewal of the railway rolling stock fleet. In 1962 work started on the building of a new 10½-mile tube railway between Victoria Station and Walthamstow, in north-east London. It is estimated that the work will cost at least £56 million and it is hoped to open the line, in sections, starting at the end of 1968.

PUBLIC TRANSPORT IN NORTHERN IRELAND

Public transport in Northern Ireland is in a transitional stage. Under the law as it stands at present, road passenger transport in Belfast is provided by the Belfast Corporation and private hauliers are engaged in road freight transport in the cities of Belfast and Londonderry. All other public road passenger and freight services and all rail services in Northern Ireland are provided by the Ulster Transport Authority, a public body which was established under the Transport Act (Northern Ireland) 1948. The authority also owns and operates a chain of hotels.

In the year ended 30th September, 1964, nearly 90 million passengers, over 2·5 million tons of merchandise and 895,000 head of livestock were

carried by road and rail services run by the Ulster Transport Authority. There were 297 miles of permanent way, 56 locomotives and 159 diesel rail cars and trailers. The route mileage of regular omnibus services was 2,733 miles and there were 1,156 omnibuses and coaches and 2,468 goods motor vehicles in use. The gross revenue of the authority was £11 million.

The Government of Northern Ireland announced a policy for the reorganisation of public transport which involves (a) a planned run-down of railways; (b) the introduction of a licensing system for road freight which would allow private hauliers, under licence, to provide freight services throughout Northern Ireland; (c) the establishment of a Northern Ireland Transport Commission to take over the assets of the Ulster Transport Authority and to operate the Authority's railways, workshops and hotels; and (d) the establishment of publicly owned undertakings to provide public road passenger and road freight services. Pending the introduction of legislation, the Ulster Transport Authority has divested itself of its road freight operations. A new company (Northern Ireland Carriers Ltd.), in which the Authority holds a 50 per cent interest, has been established to provide road freight services and, where necessary, temporary consents under the Transport Act (Northern Ireland) 1948 are being issued by the Authority which allow private operators to carry road freight for hire or reward.

In February 1965, following an Order of the Northern Ireland Transport Tribunal, certain passenger rail services and all freight rail services were withdrawn by the Authority and road transport services substituted.

Roads

On 31st March, 1965, there were 13,901 miles of public roads in Northern Ireland, comprising 385 miles of trunk roads, 958 miles of Class I roads, 1,735 miles of Class II roads, 2,864 miles of Class III roads and 7,959 miles of unclassified roads.

The Ministry of Development is directly responsible for the trunk road system and bears the entire cost of maintenance and reconstruction work on these roads. In addition to major reconstruction schemes on trunk roads, a total of about 100 miles of motorway are planned by the early 1970s.

The Ministry of Development administers the Road Fund (the proceeds of motor vehicle taxation, driving licence fees, etc.), from which grants are paid to the local authorities (county, county borough, borough and urban district councils) who are responsible for the other roads. The rates of grant range from 90 per cent for major improvement works on Class I roads to 25 per cent for maintenance work on unclassified roads.

Gross expenditure on all roads in the financial year to 31st March, 1965, was £13·1 million. Expenditure in the five-year period 1965–70 is expected to be about £100 million, compared with about £52 million in the five-year period to 1964.

CIVIL AVIATION

British airmen were among the first to carry mails (at the time of the Coronation of King George V in 1911) and among the first to operate regular mail and passenger services, which were inaugurated on 25th August, 1919, when a daily passenger service was opened between London (Hounslow) and Paris (Le Bourget). The year 1919 was also marked by notable pioneer flights, including the crossing of the Atlantic by John Alcock and Arthur Whitten Brown in June (both were later knighted for their achievement) and

the first flight between England and Australia by Captain (later Sir) Ross Smith and his crew.

Commercial Organisation

In April 1924 four small British companies merged to form Imperial Airways Limited, which received a government grant of £1 million spread over the next ten years. As a substantial shareholder the Government was represented on the board of directors.

Imperial Airways Limited pioneered the commercial development of intercontinental air routes (including the organisation of ground services), following up, in many cases, the exploratory work of the Royal Air Force. By 1929 there was a through service from England to India. In 1931 the first service was established to Central Africa. The first mail service to Australia started in December 1934, followed by a passenger service in 1935. During a part of 1939 Imperial Airways operated an experimental transatlantic service for mail.

The British Overseas Airways Corporation, a public corporation, was established by the British Overseas Airways Act 1939, and took over the undertakings of Imperial Airways Limited and British Airways Limited in 1940. British European Airways was established under the Civil Aviation Act 1946 as a separate public corporation to cover the United Kingdom and Europe. In addition to the two nationalised corporations, there were in June 1965 over 30 independent air transport operators, some of them being grouped, so forming 12 principal companies in all.

The Role of the Government

General responsibility for the development of United Kingdom civil aviation is vested in the Ministry of Aviation. The Ministry supervises the development and production of civil aircraft and undertakes an extensive programme of research and development to meet civil as well as Service needs. It is also responsible for air safety and in this capacity is advised by the Air Registration Board (see p. 389).

Licensing Legislation and Policy

Under the post-war nationalisation legislation the corporations had a statutory monopoly of scheduled services and independent operators were broadly confined to charter work. From 1949 independent operators were permitted to operate certain scheduled services as 'associates' of the corporations. From 1952 the independent companies became eligible to develop new routes and new types of scheduled services. The Air Transport Advisory Council (ATAC), set up by the Civil Aviation Act 1946, advised the Minister whether permission for these services could be given without materially diverting traffic from existing services. Under the Civil Aviation (Licensing) Act 1960, the corporations' statutory monopoly was abolished and an Air Transport Licensing Board was set up in place of the ATAC; and from 30th March, 1961, the independent operators became entitled to apply for permission to operate scheduled or charter services on an equal basis with the corporations. In a statement in February 1965, however, the Government announced restrictions in the granting of new licences to British operators of scheduled services on both international and domestic routes.

The Air Transport Licensing Board (ATLB)

The ATLB consists of six to ten members appointed by the Minister of Aviation. The Board is responsible for considering all applications for licences (or their revocation or variation) and in reaching its decisions must take into account an operator's experience, financial resources, equipment, organisation and staffing arrangements, the adequacy of existing services and any objections from other interested parties. There is provision for appeals to the Minister

from decisions of the Board and the Minister appoints an independent commissioner to advise him upon every appeal. In the period from its inception to 31st March, 1965, the Board received over 5,400 applications for licences for air services of various kinds, including charters and holiday tours, of which nearly 4,000 were granted.

The Corporations: Powers and Constitutions

The existing powers and constitutions of BOAC and BEA are laid down by the Air Corporations Act 1949 (though the Corporations' monopoly of scheduled services was repealed by the 1960 Civil Aviation (Licensing) Act as noted above). Each corporation consists of 5 to 11 members, including the chairman. The merging of the two corporations has been considered on several occasions but the conclusion has been that, at any rate at present, the balance of advantage lies in keeping them as separate entities. However, to promote greater collaboration, the chairman of each board is now also a part-time member of the other.

Finance

Under the Air Corporations Act 1962, each corporation may, with the consent of the Minister of Aviation and the approval of the Treasury, borrow by raising temporary loans or by means of interest-bearing, redeemable loans from the Exchequer. The borrowing limits under the Act are £300 million for BOAC and £125 million for BEA, these sums being intended to provide for the corporations' capital requirements. In addition, the Act enabled them within these overall limits to finance from borrowings losses on revenue account of up to £100 million (BOAC) and £10 million (BEA) accruing before 31st March, 1964; under a further Act of 1964, BOAC's limit was raised to £125 million and the time limit for both corporations was extended to 31st March, 1966. However, in 1965 the Government decided to write off BOAC's accumulated deficit on operating account at 31st March, 1965 (see p. 385).

Ministerial Control

Although the Minister of Aviation has certain statutory powers of direction over the corporations, including power to give general directions as to the exercise of their functions on matters affecting the national interest, these powers are very seldom used. The corporations function as commercial undertakings with autonomy in matters of day-to-day management. However, as their activities may have an impact on matters of national policy or international relations, and as the Minister is responsible for answering for the corporations in Parliament, there is in practice close co-operation, consultation and exchange of information between them and the Ministry. It is also the practice of the corporations to seek the approval of the Minister and the Treasury for orders of aircraft, which account for the bulk of their capital expenditure, and for investments in foreign airlines, which commonly involve foreign currency and may have political implications. Under the 1949 Act the corporations are also required to render annual reports of their activities and statements of account, and the Minister lays these before Parliament.

Growth of Air Services

A selection of operating and financial statistics for the two corporations (including their associates) and the independent companies is shown in Table 23. Total capacity ton-miles offered on all services more than doubled between March 1956 and March 1961 and a further increase took place in the following three years. In 1955, 2·5 million passengers entered or left the United Kingdom by air, compared with 5·7 million who arrived or departed by sea; in 1962 there were for the first time more air than sea passengers, while in 1964 the corresponding figures had risen to 9·8 million by air and 8 million by sea.

British Overseas Airways Corporation (BOAC)

BOAC is engaged on long-haul airline operations. Its scheduled services link Britain with Europe, the Middle East, the Far East, Australasia, Africa and North and South America, and it also provides a complete round the world service. It works in close co-operation with airlines of several other Commonwealth countries; it also has financial interests in five companies operating local and regional services in the Far and Middle East, in areas adjacent to BOAC's main routes. BOAC-Cunard Ltd., a joint venture formed by BOAC and the Cunard Steamship Company in 1962, operates services between Britain and parts of North and South America and the Caribbean.

Operations

Table 23 shows that the capacity offered on its own scheduled services by BOAC reached 1,057 million capacity-ton-miles at the end of March 1965, having risen by 83·2 per cent in the last four years. Nearly three-fifths was on the western routes to North and South America. The overall load factor in 1964–65 was 49·3 per cent: the break-even load factor (the figures at which operating costs are covered) was again lower. The Corporation's passenger fleet, made up entirely of pure jets, consists (May 1965) of *Super VC 10*s (5, with a further 12 on order), *VC 10*s (12), *Boeing 707*s (20) and *Comet 4s* (17). The *VC 10*, introduced into service in 1964, operates on African, Middle East and Far East routes and has gradually replaced the *Comet 4*, which was withdrawn from scheduled services towards the end of 1965. The *Super VC 10* (a larger and more powerful version) went into service in April 1965 on transatlantic routes. BOAC plans to build its own £7 million passenger terminal at Kennedy International Airport, New York, to be opened in 1968.

Financial Results

Despite increasing revenue from operations, BOAC's annual accounts have shown deficits since 1957–58. In 1963 a White Paper [1] attributed these losses to additional amortisation provisions, interest payments on capital and past losses of associated companies. The accumulated deficit on the profit and loss account of the Corporation at the end of the financial year 1963–64 amounted to £90·5 million. In 1965, the Government decided to write off the accumulated deficit at 31st March, 1965, and to establish a reserve fund against contingencies. Measures were taken in 1964 to strengthen the management of the Corporation and plans have been worked out which are already producing better financial results. In 1964–65 BOAC had a record operating profit of £7·6 million. Of its gross revenue (£114 million) £78 million was earned in foreign currencies, of which £35 million came from the sterling area and £29 million from the dollar area.

British European Airways (BEA)

BEA operates a network of services to some 80 places in Britain, Europe, North Africa and the Middle East. Its services in Britain include a number which cannot be operated on a commercial basis but which meet a vital social need; these include services to the Highlands and Islands of Scotland. BEA maintains a close working relationship with BOAC, whose aircraft, by agreement, use a number of European stopping points. BEA also co-operates with other airlines in order to create 'through travel' facilities. It has a financial interest in several associated companies, most of which collaborate with BEA in providing a network of services.

Operations

Table 23 shows that between 1956 and 1965 BEA's capacity offered, and passenger-miles and freight ton-miles flown, trebled. For the year ended 31st March, 1965, the respective increases were 15 per cent, 9 per cent

[1] *The Financial Problems of the British Overseas Airways Corporation,* HMSO, November 1963.

TABLE 23
AIRLINE CORPORATIONS AND INDEPENDENT COMPANIES: OPERATING AND REVENUE STATISTICS

	Year ending 31st March	Capacity ton-miles offered[a] *millions*	Load ton-miles sold[b] *millions*	Overall revenue load factor[c] *per cent*	Passenger-miles sold[d] *millions*	Freight ton-miles sold[e] *millions*	Traffic revenue *£ million*
BOAC							
All services	1956	252	—	—	1,049	—	42·4
	1961	667	—	—	2,818	—	88·0
	1965	1,150	—	—	4,067	—	114·4
Scheduled services	1956	244	150	61·3	999	30·2	41·4
	1961	577	322	55·7	2,650	47·1	79·5
	1965	1,057	521	49·3	3,869	110·8	106·0
BEA							
All services	1956	124	79	63·2	709	7·5	20·9
	1961	237	155	65·2	1,393	16·6	40·7
	1965	436	254	58·4	2,179	28·5	63·8
International services (scheduled and non-scheduled)	1956	93	59	63·3	508	6·7	—
	1961	178	115	64·8	990	13·7	—
	1965	320	183	57·3	1,475	23·4	—
Domestic services (scheduled and non-scheduled)	1956	31	20	63·0	201	0·8	—
	1961	60	40	66·5	404	2·8	—
	1965	116	71	61·3	704	5·1	—
INDEPENDENT COMPANIES							
Scheduled services International	1956	32	18	55·5	88	9·4	n.a.
	1961	52	34	64·9	184	16·5	
	1965	104	28	55·3	309	29·9	
Domestic	1956	5	3	59·9	36	0·2	
	1961	14	8	59·4	93	0·3	
	1965	45	23	56·4	262	2·5	
Non-scheduled services	1956	118	—	—	—	—	
	1961	169	—	—	—	—	
	1965	318	—	—	—	—	

Sources: *Annual Reports of BOAC, BEA and British Independent Air Transport Association; Ministry of Aviation.*

[a] Usable capacity available (in short tons of 2,000 lb.) on each commercial flight multiplied by the route mileage of that flight.

[b] Load carried (in short tons), including passengers, multiplied by distance carried in miles.

[c] Load ton-miles sold, expressed as percentage of capacity ton-miles offered.

[d] Sum of miles flown by each passenger.

[e] Excluding mail.

n.a. = not available.

and 25 per cent. In the same year some 6·1 million passengers were carried, an increase of 9 per cent over the previous year; but the load factor fell by three per cent to 58·4 per cent. In only one other year has the overall load factor fallen to this level (57·8 per cent in 1950–51).

In 1965 BEA's passenger fleet consisted of *Comets*, *Vanguards*, *Viscount 800s* and *Tridents*. The *Trident*, introduced in 1964, is a three-engine 600 mph jet designed for medium-haul routes: delivery of 24 of these aircraft was completed in 1965. A 25-passenger *Sikorsky* helicopter has operated a service from Penzance to the Isles of Scilly since 1964.

In 1963 BEA disposed of the last of its fleet of *Viscount 701s*, which in 1953 had inaugurated the world's first gas-turbine airline service.

Financial Results

From 1954–55 to 1960–61 BEA earned a net profit. In the next two years, during which it introduced four new types of aircraft at an additional cost of £6 million, it incurred overall loses of £1·4 million. In the following year, i.e. to 31st March, 1964, the corporation made a record profit of £3 million.

The costs of introducing the *Trident* into service (about £9 million between 1964 and 1968) has contributed to a temporary reduction in profits, which amounted to £1·3 million in 1964–65.

The Independent Airline Companies

Of the 30 or so independent air transport companies, eight are members of the British Independent Air Transport Association (BIATA). Among the largest companies are British United Airways Ltd. (not in BIATA) and British Eagle International Airlines Ltd. In addition, there are over 30 operators engaged in miscellaneous activities, such as crop spraying and air photography and survey work. Table 23 shows that the capacity offered by the independent transport companies on non-scheduled services (comprising inclusive holiday tours and charter and contract services) has greatly exceeded that offered on scheduled services. Until 1961 the development of scheduled services by independent firms was restricted by the corporations' statutory monopoly (see p. 383) and the scheduled service activities of these companies were concentrated mainly on secondary routes and the provision of special types of service, such as vehicle ferry services from the United Kingdom to Europe, and low-fare services to Africa. Since 1961 the independent companies and the corporations have been able to apply to the Air Transport Licensing Board for licences for the development of their networks of scheduled or charter services. (For the Government's policy towards the granting of future licences see p. 383.)

Much charter business is arranged through the air section of the Baltic Exchange, the London market for shipping space (see p. 360). The Air-brokers' Association, formed in 1949, operates in London a world market for chartering aircraft to carry cargo and passengers.

United Kingdom Trade by Air

The proportion of Britain's overseas trade carried by air is steadily increasing. In 1956, 1·7 per cent of imports and 2·9 per cent of exports (by value) were carried by air. In 1964 these percentages were 5·8 per cent and 7·1 per cent respectively, and the total value of exports, imports and re-exports by air was £668 million. The chief export items were expensive machinery and parts, aircraft and vehicle parts, and electrical and electronic products; furs and skins accounted for about a third of the total value of re-exports by air.

Private Flying

At the end of 1964 the estimated number of aircraft on the United Kingdom register used for business and private purposes was about 640, while approxi-

mately 475 were owned by clubs, groups and training schools. Private pilot's licences were held by about 8,400 people.

Aerodromes

The Minister of Aviation is authorised to establish and maintain civil aerodromes; local authorities may do so subject to his approval; there are also privately owned aerodromes. Virtually all aerodromes not operated by the Government which are used for passenger operations or flying instruction are subject to the Minister's licensing, inspection and regulation.

There are approximately 120 civil aerodromes in the United Kingdom and, in addition, 55 Service aerodromes are available for civil use. Those under civil control include 19 directly controlled by the Ministry, 3 in the Channel Islands and 1 in the Isle of Man administered by the local island governments, and 34 aerodromes licensed for public use, of which 25 are owned by municipalities. Nine of the Ministry's aerodromes and 19 others are designated Customs airports; limited customs facilities are available at a further eight aerodromes.

The main airports used by international scheduled services in 1965 were:
for European services: London (Heathrow and Gatwick);
for North Atlantic services: London (Heathrow);
for Middle East, African and Far East services: London (Heathrow and Gatwick).

In June 1965 the Government set up the British Airports Authority, which will take over ownership and management of London's three airports (Heathrow, Gatwick, Stansted) and Prestwick airport on 1st April, 1966.

Aircraft and passenger movements at the principal aerodromes continue to increase. In 1964 all United Kingdom civil aerodromes handled 18·3 million passengers. Of this total, London (Heathrow) Airport dealt with 9·5 million, and London (Gatwick), 1·1 million. Outside the London area, two airports, Manchester (Ringway) and Glasgow (Renfrew), each handled over a million passengers. Other airports handling a substantial number of passengers were Belfast (Aldergrove), Southend, Birmingham, Edinburgh (Turnhouse), Liverpool and Prestwick. The three airports in the Channel Islands together handled 1·3 million passengers. The number of movements of aircraft engaged on commercial transport operations in 1964 was 480,000 for all aerodromes.

Development

London (Heathrow) Airport, already the largest and busiest airport in Western Europe, is being strained to capacity owing both to the increasing number of passengers and of large new jet aircraft; in recent years the annual increase in the number of passengers handled has totalled about one million. Domestic and European short-haul services are handled at the passenger building in the central terminal opened in 1955. An additional building for short-haul services is expected to be ready in 1966. A £3 million terminal was completed in 1962 for long-distance passengers. Travelling time from Central London to Heathrow has been appreciably shortened by the opening of a section of the M4 motorway (see p. 373) in March 1965. Freight traffic is expected to increase considerably during the next few years, and plans are being prepared for a new freight terminal in the south-west corner of the airport. The airport at Gatwick, 25 miles south of London, was opened in June 1958 as the second airport for the London area and further development is being undertaken by enlarging the terminal buildings and aprons and adding a second and third passenger pier. The second pier was completed in the summer of 1963. A £2·5 million extension, which has more than doubled the size of the

terminal buildings and added a third passenger pier, was completed in 1965. Plans have been made to extend the 7,000-ft. runway to enable it to handle the larger aircraft likely to come into use for short and medium-haul services as well as the largest jet airliners diverted from Heathrow. A second runway proposed for Gatwick will not add greatly to the airport's capacity, owing to lack of air space for an extra approach area, but is required as a reserve for both Heathrow and Gatwick. The two airports are becoming increasingly interdependent. Built alongside the main London to Brighton railway, London (Gatwick) Airport is the first in the world to contain road, rail and air transport in one unit. A privately owned helicopter terminal (or 'heliport') was opened in London, on the south bank of the Thames, in April 1959.

The Government has designated Stansted Aerodrome, 33 miles north-east of London, as the site of the third London airport. It will come into service by the early 1970s, when it is expected that Heathrow and Gatwick will have reached capacity as a result of the growth of traffic.

Prestwick, in Scotland, has been developed to accommodate large jet aircraft and a new passenger terminal and freight area were brought into use in 1964. The runways at Ringway Airport, Manchester, have been lengthened and a new terminal building was completed in 1962. Work started during 1963 at Abbotsinch, Glasgow, on a new airport which should be complete and ready for the transfer of services from Renfrew in 1966.

In the autumn of 1963 Belfast's services were transferred from Nutt's Corner to a new civil terminal built on the former RAF aerodrome at Aldergrove.

Air Safety

The role of the Government in promoting air safety lies in research and in setting up and supervising standards for both aircraft and personnel.

Aircraft Research

Research on aircraft design and construction is done at the Royal Aircraft Establishments at Farnborough and Bedford, which belong to the Ministry of Aviation and are exceptionally well equipped with testing facilities.

Flight Safety

The Ministry of Aviation also determines the policy and legislative requirements for the safe operation of civil aircraft, analyses accidents and incidents and initiates preventive measures and research in the field of flight safety.

The Air Registration Board

All aircraft registered in the United Kingdom must have a valid certificate of airworthiness issued (or rendered valid) by the Ministry of Aviation on the recommendation of the Air Registration Board. This Board was set up in 1937 and consists of 18 members, six of whom are independent, the others being representatives of constructors, operators and insurers of aircraft. No aircraft built in Britain is granted a certificate of airworthiness unless it has been constructed in accordance with British Civil Airworthiness Requirements, a code compiled and frequently reviewed by the Board. Continued airworthiness is ensured by regular inspection and by requiring aircraft to be maintained in accordance with a schedule approved by the Board.

Air Operators' Certificates

Every operator of aircraft above a certain size used for public transport must possess an Air Operator's Certificate issued by the Director of Aviation Safety (who is appointed by the Minister of Aviation) when satisfied by inspectors that all safety precautions are constantly taken by the operator.

Flight Crew Qualifications

Each member of a flight crew must hold the appropriate licence granted or rendered valid by the Minister. Operators are required to ensure that pilots employed by them have adequate knowledge of routes, and Ministry inspectors check the standards maintained by the operators, which must be adequate for purposes of the Air Operator's Certificate.

Training

In order to replace the supply of well-trained pilots for civil airlines from the Royal Air Force, which has declined in recent years, the College of Air Training was set up at Hamble in 1960. It is sponsored and financed by the Government and the two Airways Corporations. Over 130 cadets had graduated through the two-year course by October 1964. (Ultimately over 100 trained pilots a year will graduate from the College.) As it can supply only about half the pilots needed, the Government may approve independent colleges, whose standards are adequate for the training of professional pilots. So far only Airwork Services Training, Perth, has been approved.

Air Traffic Control and Navigation Services

Responsibility for policy, planning and execution of both civil and military air traffic control over the United Kingdom and the surrounding seas rests with the national Air Traffic Control Services Organisation, under the joint control of the Minister of Aviation and the Secretary of State for Defence. This organisation has an integrated policy and planning staff drawn from both ministries.

Technical Provisions

In 1950 the then Ministry of Transport and Civil Aviation introduced a system of airways covering the main traffic routes with controlled zones around the major airports. During 1957 and 1958 a revised and extended airways system was brought into use. There are three main air traffic control centres: at London (Heathrow) Airport for southern England, at Preston for the north of England and Wales, and at Prestwick for Scotland and the Atlantic Ocean to 30° W.

A variety of radar installations and equipment provide the means by which the system can accept the increasingly heavy load of air traffic. Britain was the first country to use radar for the control of civil air traffic. The radar approach system known as Ground Controlled Approach (GCA) is now in use at all major airports in the United Kingdom, in addition to the Instrument Landing System (ILS). During the next few years virtually the whole of the airspace over the United Kingdom above 5,000 feet will be brought under surveillance by the latest types of radar equipment, which will provide data to be used in two new Air Traffic Control Centres, located at West Drayton (near London) and Preston, Lancashire. A subsidiary centre will be located at Prestwick, to deal with traffic over Scotland. Extensive use will be made in these centres of automatic data-processing and other advanced electronic techniques.

The Ministry of Aviation has provided a number of radio navigational aids to help aircraft to remain safely within the controlled airspace and to make accurate estimates of their time of arrival. In addition, the Ministry supports the Decca Air and Marine Navigator System now operating over a wide area of the United Kingdom and northern Europe, which can be used, by arrangement with the Decca Company, by any aircraft fitted with the appropriate receiving equipment.

Research is in progress into automatic landing systems. A unit of the Royal Aircraft Establishment, at Bedford, in co-operation with industry, has successfully developed an instrument system which was used for the first time in a passenger-carrying aircraft in June 1965, on a scheduled flight operated by BEA, to achieve an automatic landing. This makes Britain the pioneer in all-weather landing systems. The fully automatic landing, under blind conditions, is expected to be achieved by 1968.

Eurocontrol

To cope with the new problems caused by high-flying, high-speed jet aircraft, a European international agency, Eurocontrol, formed by Britain, France,

Germany, Belgium, the Netherlands and Luxembourg, provides air traffic control at the higher flight levels for civil aircraft and for military aircraft operating according to civil procedures.

THE POST OFFICE

The Post Office, founded in 1657, provides the postal and public telecommunications services of the United Kingdom. Although formally a government department it is in effect a nationalised industry.

Organisation

The political head of the Post Office is the Postmaster General (see p. 57). Immediately under him is the General Directorate consisting of the Director General, three Deputy Directors General and the Engineer-in-Chief. They are supported by a considerable staff, organised functionally, in the task of framing plans for the Post Office as a whole and supervising its affairs generally. For most operational purposes Britain is divided into nine geographical regions, each under a Director (two in London) with his own supporting staff. Responsible to them, and forming the third tier of the organisation, are 450 head postmasters and 57 telephone managers who directly control operations in the field. In March 1965 the Post Office had 384,000 employees and 25,000 post offices.

Among the means by which the Post Office keeps in touch with public opinion are a central Advisory Council and 195 local advisory committees.

Finance

The Post Office Act 1961 recognised the commercial character of the Post Office by separating its finances from the Exchequer and giving the Postmaster General sole responsibility for them. Post Office expenditure is generally subject neither to Parliamentary control by Estimate nor to Treasury control. Income is determined by tariffs which the Postmaster General fixes, subject only to negative resolution of Parliament. The Post Office makes its own investment plans, subject only to the same need for broad government approval as applies to other nationalised industries. Like them, it is expected to aim at an adequate return on its capital and to contribute suitably to the financing of its investment. Its present financial target is an average return on net assets of 8 per cent over the period 1963–64 to 1967–68.

Table 24 gives recent figures of income, profit and capital. Nearly all the capital is invested in telecommunications, which are drawing rapidly ahead of the postal services in size and profitability. Among nationalised industries, in size of income the Post Office as a whole ranks after coal and electricity supply, and in rate of growth it is second only to the latter.

Postal Services

The development of postal communications in Britain can be traced from the time when horsemen carried dispatches to the Tudor Court up to modern airmail transport. There was a great expansion in the postal services in the eighteenth century with the introduction of mail-coaches in 1784. In the first half of the nineteenth century the Post Office was quick to take advantage of Britain's early lead in engineering and railway development and the first dispatch of mails by train was made in 1830 between Liverpool and Manchester.

The inauguration of the penny post (the uniform charge for any inland distance being prepaid by means of postage stamps, which originated in Britain) in 1840 was followed by a rapid extension of the scope of the postal services. The registered post, ensuring additional safety for valuable mail,

TABLE 24
POST OFFICE SELECTED FINANCIAL AND OPERATING STATISTICS

Millions

Years ending 31st March	1956	1961	1965
Financial Statistics			
Combined Income	£308·7	£468·6	£646·5
Profit + or Loss −	+ £2·3	+£24·3	+£20·1
Postal Income	£152·9	£223·4	£273·6
Profit + or Loss −	− £1·5	+ £5·9	−£19·6
Telecommunications Income	£155·9	£245·5	£372·9
Profit + or Loss −	+ £3·8	+£18·4	+£39·7
Expenditure on fixed assets	£88	£105	£187
Net Value of fixed assets	£533	£870	£1,274
Operating Statistics			
Postal Services			
Correspondence, Inland and Irish Republic	9,277	10,127	10,716
Correspondence, Overseas	473	473	484
Parcels, Inland and Irish Republic	221	235	203
Parcels, Overseas	16	13	13
Telegraph Services			
Inland and Irish Republic	22	14	12
Overseas Telegrams	21	20	21
Inland Telex Calls	2	5	16
Overseas Telex Calls	1	3	9
Telephone Services			
Exchange Connections	4	5	6
Inland Calls	4,198	4,722	6,336
Overseas Calls	4	7	12
Counter Services			
National Insurance Pensions, etc., paid	£623	£965	£1,392
Savings Bank Transactions	£892	£854	£980
Postal Orders Issued	£204	£438	£587
All Services			
Total transactions with public	£4,358	£6,074	£6,880

Source: *Post Office Annual Reports and Accounts.*

was introduced in 1841. The money order system, which had operated as a private venture from 1792 to 1838, was supplemented in 1881 by the issue of postal orders for fixed amounts. Letterboxes had been instituted in London in 1855 to facilitate the increased postal traffic, and in 1883 the parcel post was introduced. By the end of the nineteenth century a regular delivery of letters was assured to every house in Britain. In 1919 the Post Office inaugurated its own motor transport fleet (now 47,000 vehicles) and the first mail was carried by air in Britain in 1911. A National Postal Museum is to be opened in London in 1968: it will house the Post Office collection of registration sheets of virtually every British postage stamp issued, as well as the R. M. Phillips collection of British postage stamps, the most comprehensive of its kind in the world.

Table 24 gives statistics of items of inland and overseas mail carried. Each year about 7,000 tons of mail are carried by air within the United Kingdom

Out of the 497 million items of overseas mail carried in 1964–65, 62 per cent were carried by air, compared with 51 per cent in 1955–56. The air parcel service now operates to all countries in Europe and to over 180 countries outside Europe.

The Joint Research and Development Group of the Post Office and the Ministry of Public Building and Works has evolved a range of standard designs for sorting offices and ancillary accommodation which will reduce planning time and allow the use of industrialised methods of construction. In mechanisation and automation a simple, efficient and economic parcel sorting machine has been developed and successfully tested under working conditions. Machines are being installed which will separate mail into various classes, arrange the letters with the stamp in a common position and then automatically obliterate the stamps. In the future letters will be coded with phosphorescent dots and thereafter sorted automatically by high-speed sorting machines.

A fundamental investigation into ways of raising the level of productivity and profitability of the postal services has been commissioned from a firm of consultants.

Counter Services

At the post office counter, besides making use of its postal and telegraph facilities, the citizen can draw his pension and his family allowance, buy a licence for his gun, dog, sound radio or television receiving set, renew his car licence and buy national insurance stamps. Post offices also offer a wide range of facilities for savings and investments (see p. 413). In much of the work at its counters the Post Office acts as agent for other government departments or local authorities. Largely as a result of the widening scope of the social services and the increase in personal incomes, the volume of work at post office counters has been increasing. The total value of transactions and the value of some important items are shown in Table 24.

Telegraph Services

All private telegraph systems in Britain were transferred to the control of the Postmaster General in 1870. Teleprinter-working for the transmission of inland telegrams was introduced generally in 1928 and conversion to the present automatic switching system was completed in mid-1954. It is now one of the most up-to-date systems in the world and gives direct connection between any of the 450 larger telegraph offices. The overseas telegraph services were shared until 1950 between the Post Office and Cable and Wireless Ltd. This company was brought into public ownership in 1947. The Post Office, which acquired the British services, operates all overseas telegraph services from the United Kingdom, except those offered by foreign telegraph companies. Cable and Wireless Ltd. continues to operate its cable and wireless services in many dependencies and foreign countries.

Telegraph services to overseas countries are operated from Electra House in London, the world's largest overseas telegraph office, and from nine other London and provincial area telegraph offices. Direct connection via the Gentex system between these British offices and the larger towns in Belgium, France, Germany, Holland, Luxembourg, Italy and Norway minimises delivery delay. In addition, the Post Office is well to the fore in the development of telegraph message relay techniques for services beyond Europe.

Telex Service

The Telex Service (opened in England in 1932) combines the speed of the telephone with the accuracy of the printed word. Calls may be made direct between the rapidly increasing number of telex users in the United Kingdom (over 17,000 by the end of 1965) and also to some 250,000 subscribers

throughout the world. The United Kingdom telex service is fully automatic and immediate connection to most subscribers in Europe and to many subscribers in the United States is made by direct dialling. Other overseas calls are connected by operators at the International Telex Exchange in London.

Once a call is established the subscriber types his message on the keyboard of his teleprinter: it is then reproduced simultaneously on both the sending and receiving subscribers' installations. For call charging purposes Britain is divided into 50 charging areas, each with its own telex centre. The International Telex Exchange (first opened in London in 1936) provides a teleprinter service to over 100 countries abroad. The service is available day and night except for a few routes outside Europe, and messages may be transmitted to a subscriber even though his teleprinter is unattended, for attention when his office reopens. Some 7 per cent of overseas telex calls originating in Britain are still handled by operators but a new British-designed switchboard enables them to be connected on request instead of having to be booked in advance. The inland telex traffic is growing annually by about 25 per cent and overseas traffic by about 30 per cent; the Post Office is planning for a system of about 35,000 United Kingdom subscribers by 1970.

Telephone Services

When the Post Office bought the property of the National Telephone Company in 1912 it became the owner of almost the whole telephone service in the country. Hull Corporation was the only municipality to exercise its option of operating its own service under licence from the Postmaster General; this service (and the service in the Channel Islands, also operated under licence) is connected to the Post Office trunk network. At the end of March 1965 there were 6,019 local telephone exchanges and about 10 million telephones in Britain.

In March 1965, 92 per cent of the 6 million telephones (exchange connections) in the United Kingdom were connected with automatic exchanges and less than a tenth of the exchanges remained to be changed to automatic working. Trunk dialling by subscribers began in Bristol in December 1958; by March 1965 the facility had been extended to 912 exchanges, serving 55 per cent of all subscribers; by 1970 it will be available on over 90 per cent of all telephones. The introduction of the new group routing and charging equipment brings the advantages of quicker service, automatic accounting and cheap long distance calls of short duration, and constitutes the most radical reform of the telephone service since the Post Office assumed national responsibility for it.

Telephones transmitting messages through loudspeakers instead of through instruments held by hand were made available to the public in 1961. An electronic telephone exchange, the first of its kind in the world, was brought into experimental use in 1962 at Highgate Wood, in London. Two electronic exchange units of a different type were opened for trial with public traffic in 1965 and two more will follow in 1966.

International subscriber dialling between London and Paris was inaugurated in March 1963, and extended to the rest of France, Belgium, Switzerland, the German Federal Republic and the Netherlands in 1964. Some of the larger towns in Britain were also brought into the network in 1964. Further inland and international connections to the system are planned.

Operator-connected calls are handled at the London Continental Exchange, from which over 1,260 direct telephone circuits give service to European countries. These circuits are also used to send and receive pictures, and special circuits are used for broadcast transmissions.

A radio tower, 580 feet high, has been erected in London to provide more microwave radio links for carrying long-distance telephone and television circuits; the first microwave link was brought into use in 1965.

Special Telephone Services

There are several specialised services available by telephone, including the '999' emergency dialling service (used for some 489,000 calls in 1964) enabling subscribers to be connected as quickly as possible, and free of charge, to the police, ambulance or fire brigade services; the speaking clock; and a telephone weather forecast service available in 17 centres. In London a telephone information service provides details in English, French, Spanish and German of important events being held in and around the capital on the day of the call and a similar service (in English) in Edinburgh exists during the summer months. A recorded daily cooking recipe is provided at several centres. A test match cricket score service operates at more than 30 centres during the cricket season and a road weather service is provided in collaboration with the Automobile Association at 11 centres from 1st October to 30th April each year.

A public radiotelephone service, introduced in 1959, enables the users of vehicles fitted with suitable radio equipment to make calls to, or receive them from, any telephone in the United Kingdom network. The area of this service was initially restricted to South Lancashire and parts of Cheshire but a service to cover the Greater London area was opened in 1965.

Private Telecommunications Services

In March 1965 there were 97,000 private circuit stations not connected with the public exchange networks. These are associated with circuits rented for private use for telephone conversations, teleprinter connections, photo-telegraphy, television, music, or for the transmission of signals which represent data for computers or operate other devices.

Radio Communications with Ships at Sea

In addition to the radio stations for overseas telecommunications, the Post Office has 11 coast radio stations in the United Kingdom. These stations provide radiotelegraph and radiotelephone communications with ships at sea at ranges of up to some 500 and 300 miles respectively. There is also the long-distance radiotelegraph station, Portishead-Radio, which communicates with ships in all parts of the world.

These coast stations play an important part in the services concerned with safety of life at sea. They keep continuous watch on the international radio-telegraph and radiotelephone frequencies for distress calls from ships or aircraft and take immediate action to obtain assistance for any vessel in distress. During 1964–65 the stations handled 695 urgent and SOS calls from ships and aircraft.

In addition to the services for safety of life at sea, the stations exchange radiotelegrams with ships and connect radiotelephone calls between telephone subscribers ashore and suitably equipped ships; they also broadcast navigational warnings and weather bulletins.

The stations also operate a free medical advice service whereby the Master of a ship of any nationality may obtain advice from appropriate medical authorities on the treatment to be given in cases of sickness or injury aboard ship. During 1964–65 the stations dealt with 423 medical inquiries in this service.

Transoceanic Cables

The first transatlantic telephone cable, to the United States and Canada, was laid in 1956 and its high quality, speed and reliability opened up a new era in the world of communications. The Post Office, in co-operation with Cable

and Wireless Ltd., is taking part in the extension of the Commonwealth submarine cable links. The first of these (*Cantat*), which links Britain with Canada, was laid and opened in 1961; the second link, between Australia and New Zealand, started working in 1962 and the trans-Pacific link between Canada and New Zealand (*Compac*) towards the end of 1963; these links provide a 16,000-mile all-Commonwealth connection between London and Sydney. A second cable to the United States from Britain came into use in 1963. A further route to Canada was established by the linking of the *Scotice* cable (Scotland–Iceland) with the *Icecan* cable (Iceland–Canada) towards the end of 1962 but at present this transatlantic routing is used only for special services. The transatlantic cables supply 96 public telephone circuits from Britain to the United States, 34 to Canada, 79 circuits linking the United States and Canada with Europe, and a number of telegraph channels. The first two sections of the Commonwealth South-East Asia cable (*Seacom*) linking Singapore, Sabah and Hong Kong were opened in 1965. The complete *Seacom* system, linking Singapore and Malaysia with Hong Kong and Australia, is expected to be finished by the end of 1966.

Many more circuits between Britain and Europe have been provided by four new cables laid across the North Sea since 1964. Two further cables will be laid by 1967.

Satellite Communications

Research on the use for long distance communications of satellites, with a probable capacity of 1,000 circuits, is being done in co-operation with the United States and in consultation with Commonwealth countries.

In 1962 a satellite communications earth station was brought into operation at Goonhilly Downs, in Cornwall, and it participated in the first television transmissions via the *Telstar* satellite; it subsequently worked with the *Relay* satellite. Experiments and demonstrations were carried out over these two satellites until September 1964 when the 85 ft. diameter fully steerable parabolic aerial was taken out of service to modify it for the *Early Bird* project. *Early Bird* was launched in April 1965 and the Goonhilly earth station took part, from the outset, in the first tests with this synchronous satellite in preparation for the operational transmission of telecommunications traffic via a satellite across the Atlantic.

14
FINANCE

PUBLIC FINANCE

Public finance is concerned with the way public authorities (i.e. the central Government and local authorities) finance their activities—how their expenditure is decided upon and how their revenue is obtained.

Money administered by public authorities[1] can be roughly divided into two categories:

1. The funds of the central Government, raised mainly by taxation, but also in part by borrowing, and paid into and out of the Exchequer[2] in accordance with the proposals of the Government, as approved by Parliament (principally the House of Commons).

   There are also funds administered for special purposes by central government departments and wholly or partially maintained by receipts which do not pass through the Exchequer. The most important one is the National Insurance Fund, administered by the Minister of Pensions and National Insurance and used for the payment of benefits under the National Insurance Scheme.

2. The funds of local authorities, obtained partly from rates (local taxes on dwelling houses and other real estate) and income from property and trading receipts, partly from grants and loans from the Exchequer, and partly from loans raised in the open market (see p. 74).

The following broad account of government finance is concerned mainly with the Exchequer and only incidentally with local government and other public funds.

Financial control, as exercised by the House of Commons, is based on law, parliamentary rights and custom.

As the power of Parliament grew in late medieval and Tudor times, the principle that taxation by the Crown required parliamentary consent was gradually evolved. The principle was established, at the end of the constitutional struggles of the Stuart period, by the Bill of Rights 1689.

In medieval, Tudor and Stuart times, it is broadly true to say that once the King was granted the right to raise a given sum by taxation, he was free to spend it as he chose. In the eighteenth and nineteenth centuries, the House of Commons gradually developed the modern system of controlling expenditure through the device of Appropriation which was embodied in the Exchequer and Audit Departments Act 1866.

From the very early days of Parliament it had been established that such financial control as Parliament possessed should be exercised by the House of Commons. This control became effective, as regards taxation, in the seventeenth century, but as regards expenditure it was not effective until the nineteenth century. The controlling power of the House of Commons is

[1] For an account of public finance in Northern Ireland and its relationship to that of the United Kingdom, see p. 406.

[2] The term 'Exchequer' took its name from the 'chess-board', or table with chequered cloth, round which the King's financial officials sat for accounting purposes in the twelfth century.

acknowledged today in the Speech from the Throne at the opening of a new session of Parliament, which is addressed to both Houses but contains a special paragraph on expenditure addressed to the Commons alone.

The Commons have traditionally claimed that the Lords have no power to modify financial provisions, though they may reject such provisions; thus, to minimise the chance of rejection, the practice was started in 1861 of embodying the main financial provisions for the ensuing year in a single Bill. Since the passing of the Parliament Act 1911, however, a Bill certified by the Speaker to be a Money Bill may be presented to the Queen for the Royal Assent and become law without the consent of the House of Lords if it has not been passed by them within one month (see p. 39).

Today, the authority of the House of Commons has to be obtained for all expenditure by the central Government itself and for the raising of revenue by taxation or borrowing. All government revenue, other than sums received by government departments in the course of their normal activities (known as appropriations-in-aid), is paid into the government account with the Bank of England—known as the Exchequer Account or the Consolidated Fund. With certain exceptions (the main one, as previously stated, being National Insurance benefits), all payments by the Government come out of this account.

The following sections outline the machinery by which expenditure and revenue are authorised and controlled, the purposes on which public money is spent and the sources from which revenue is obtained.

ESTIMATES AND EXPENDITURE

Classification of Expenditure

Central government expenditure falls into two main groups:

1. Expenditure which is specifically authorised by Acts of Parliament other than annual Appropriation Acts. This expenditure includes the loans made by the Government to nationalised industries, local authorities and other public and private concerns for which the Treasury has specific statutory authority to borrow. It also includes the Consolidated Fund Standing Services which represent a permanent charge on the Consolidated Fund, covering the interest on and cost of management of the National Debt, the financial provision made for members of the royal family, and salaries and pensions of judges and certain high officers whose independence of the Government is thought to be better guaranteed by permanent grant than by annual vote.
2. All other government expenditure is authorised by annual Appropriation Acts and includes expenditure on defence, on the social services and on the general administration of the country. These are called Supply Services because the House of Commons, when voting money, is granting to the Crown 'such aids or supplies as are required to satisfy . . . the pecuniary necessities of the Government'. It should be noted that some of this expenditure may also depend on legislation, such as the National Health Service Acts, which relates to a specific object of expenditure.

Authorisation of Expenditure

The Estimates for these Supply Services are considered by the House of Commons in Committee of Supply (that is, in Committee of the whole House with the Chairman of Ways and Means, instead of the Speaker, in the Chair). The committee usually discusses general questions of policy relevant to the Estimates, though any Estimate may be examined in detail if members wish and if time allows (see p. 41).

Estimates for Supply Services in the financial year beginning on 1st April are submitted to the Treasury by each department in the preceding December. Estimated expenditure is grouped under main headings called 'Votes' which are further broken down into subheads and items. If the House of Commons approves the Estimates, the sums asked for are voted and later confirmed in the Appropriation Act; this Act appropriates the money to specific Votes. Within each Vote, 'virement', that is, the spending of money on one subhead instead of on another, is permissible so far as Parliament is concerned, but only with Treasury consent. The Service departments may spend money on one Vote instead of another, but only with Treasury sanction which, in turn, requires the retrospective authorisation of Parliament. Departments are free to distribute expenditure within subheads as they please subject to Treasury approval of the type of expenditure involved.

An insufficient Estimate, or a new service not covered by the Vote, or virement of a magnitude or character which the Treasury considers should be brought to the attention of Parliament, requires a Supplementary Estimate. The Treasury exercises the same power of scrutiny over this as over the ordinary Estimates.

Scrutiny of Expenditure

Control of expenditure is maintained by the Treasury, by the Comptroller and Auditor General, and by the Public Accounts and Estimates Committees of the House of Commons.

The Treasury

The power of the Treasury to control expenditure derives from the responsibility of the Chancellor of the Exchequer for the financial policy of the Government.

A central function of the Treasury is to present the Civil Estimates to the House of Commons. In considering the Estimates submitted by departments, the Treasury has to look at the proposals for expenditure in relation to prospective national resources and to weigh the advantages of administrative proposals against the monetary and economic cost, taking into account current government policy; to decide the relative merits of expenditure proposed by different departments; and to eliminate any overlapping, uneconomic or wasteful expenditure where this has escaped the net of departmental financial control. Quite apart from the scrutiny of Estimates, throughout the year the Treasury keeps a close control over such matters as rates of pay and the aggregate size of the staff in all government departments, in addition to exercising a general supervision over all departmental expenditure. The Treasury also lays down general rules of financial and accounting procedure for departments and prescribes the principles on which departmental contracts shall be made and the limits within which losses may be written off.

In 1961 the Plowden Committee on the Control of Public Expenditure recommended in their Report (*Cmnd.* 1432) that regular surveys should be made of public expenditure as a whole over a period of years ahead and in relation to prospective resources, and that decisions involving future expenditure should be taken in the light of these surveys. Surveys, therefore, are now made annually and have become an established part of the Government's machinery for the appraisal and control of expenditure. Expenditure in the public sector, excluding the nationalised industries, is currently being related to the prospective increase in national production.

The Comptroller and Auditor General

Control over issues of money to departments and the audit of accounts is exercised by the Comptroller and Auditor General, who holds a permanent

appointment with the status of an officer of the House of Commons. Since 1866 he has had two functions: as Comptroller of the Exchequer he controls receipts and issues of public money to and from the Exchequer Account; and as Auditor General he audits departmental accounts and submits his report on the Appropriation Accounts and other accounts, as required by statute, to Parliament. His statutory function is to ensure that all expenditure is properly incurred, e.g., that no payments are made which go beyond any relevant statutory authority, and that Treasury sanction has been obtained wherever necessary. In addition, however, he has been encouraged by successive Committees of Public Accounts (see the next paragraph) to examine departmental expenditure with a view to drawing attention to any cases of apparent waste or extravagance.

The Public Accounts Committee

The accounts of each department and the reports on the accounts made by the Comptroller and Auditor General are considered by a select committee called the Public Accounts Committee. This was first set up in 1861, on the motion of Mr. Gladstone, for the purpose of ensuring that expenditure was properly incurred in accordance with the purpose for which it was voted and with any relevant Acts of Parliament. The terms of reference of the committee are to examine the accounts and these terms have been widely interpreted by successive committees which have investigated whether full value has been obtained for the sums spent by departments and have examined cases in which the administration appears to have been faulty or negligent. The committee has therefore become a powerful instrument for the exposure of waste and inefficiency. It embodies its findings in reports which may be debated in the House of Commons. Its recommendations are considered by the Treasury in consultation with departments and put into effect, so far as they are accepted, according to Treasury instructions. A reply to each report is submitted by the Treasury to the committee of the following session and where the recommendations have been unacceptable to the Treasury the committee may either accept the objections or return to the charge in subsequent reports.

The Estimates Committee

This committee was originally set up in 1912 and has been reappointed annually except during the war years. In 1960 it was made a select committee set up each session under standing orders. The committee's functions are to examine the Estimates, to report how, if at all, the policy implied in the Estimates can be carried out more economically and to consider the principal variations between the Estimates of the current year and those of the previous year and the form in which the Estimates should be presented. Usually, the committee selects each year a few Votes for review.

Through the medium of seven sub-committees, the committee carries out extensive investigations into the departments under consideration. In practice the Estimates for the current year are not affected, but the committee's recommendations produce changes in future Estimates and strengthen Treasury control. In 1960 a sub-committee was set up to examine the spring supplementary estimates and the principal variations between the estimates presented and those of the previous year. Additional parliamentary time has been allocated for discussion of the reports of the Estimates and the Public Accounts Committees.

THE BUDGET

'Budget' is an old word meaning a bag containing papers or accounts. The use of the word in public finance originated in the expression 'The Chancellor of the Exchequer opened his Budget', which was applied in Parliament to

the annual speech of the Chancellor of the Exchequer explaining his proposals for balancing revenue and expenditure.

The Budget speech is normally the main occasion of the year for reviewing the Exchequer finances and the economic state of the nation, and its formal basis is the Chancellor's proposals for raising money by taxation. By the time the Budget is introduced (usually in April) the Estimates of expenditure under various headings will have been presented to Parliament and published, and the expected total of government expenditure for the year will be known. The Chancellor estimates the yield of the revenue on the basis of existing taxation and proposes such changes in taxation as he considers desirable on economic grounds. These proposals are later embodied in detail in a Finance Bill. The interval between the Budget Statement and the Royal Assent to the Finance Bill (usually given in July) is covered by the Provisional Collection of Taxes Act 1913, whereby changes in income tax and customs and excise duties have immediate statutory effect if adopted by Resolution of the House of Commons. In 1957 the Act was extended to include purchase tax.

The Budget speech also gives figures relating to loans from the Consolidated Fund for which the Government has statutory power to borrow. In 1964–65 over half the net issues from this fund were loans to nationalised industries; about a quarter were loans to other public bodies, largely the local authorities; the remainder were loans to overseas governments, private industry, housing associations, and other bodies. Since 1961 they have been set out in a White Paper[1] issued immediately before the Budget.

Budget Policy

The original purpose of the Budget was purely financial—to provide money for government expenditure. From an early stage, however, it was appreciated that taxation would affect the distribution of income and property and the level of expenditure on particular goods and services. At a later period it was realised that taxation also affected the nation's total expenditure and therefore the general level of economic activity. Since the second world war, Budgets have been consciously designed in greater or lesser degree to bring the total demand for goods and services into balance with the supplies which could be made available.

Direct taxation on income and property affects the distribution of wealth because the rates vary according to the size of income and property, the proportion of a high income taken in tax being much greater than the proportion of a small one; at the same time, the services provided by the Government (whether in cash or kind) are generally available to all, irrespective of wealth, but in some cases they are specially designed to benefit people with lower incomes. Indirect taxes, or taxes on expenditure (see p. 403), do not affect the distribution of income; their main purpose has always been the raising of revenue, but by discouraging or encouraging consumption of particular goods they can be used to influence the allocation of resources and the pattern of trade.

The Budget affects the general level of expenditure and, therefore, the total demand for goods and services in the following way: if there is an increase in government expenditure without an increase in taxation then total demand for goods and services will tend to rise; the same thing will

[1] In 1965 the title of this White Paper was altered to *Loans from the Consolidated Fund 1965–66* (formerly it was known as *Government Expenditure Below the Line*). This follows from changes in the presentation of the Exchequer Accounts, giving less prominence to the concept of 'the Line', which distinguished between expenditure which can be met from borrowing and all other expenditure.

happen if there is a decrease in taxation without a decrease in government spending. In this way the Budget can be used to counter unemployment. On the other hand, if there is an increase in taxation without an increase in government expenditure or a decrease in government expenditure without a decrease in taxation then the total demand for goods and services will tend to fall. In this way the Budget can be used to counter inflation or deflation. For example, the aim of the Budget of April 1959, which provided for some important reductions in taxation, was to give a further stimulus to economic activity. The 1960 Budget was designed to consolidate and fortify the progress of the economy, and that of 1961 to counter inflation and encourage exports. The 1962 Budget's aim was to keep the economic position in balance. The purpose of the 1963 and 1964 Budgets was to contribute towards achieving the target of a 4 per cent growth rate in the national economy: in 1963 by giving a stimulus to demand and in 1964 by restraining consumption. A second Budget was introduced in the autumn of 1964 to give effect to the Government's proposals to improve the balance of payments (see p. 434) and to adjust the level of demand. The 1965 Budget aimed at reducing the net outflow of long-term capital and decreasing the pressure on domestic resources.

Sources of Revenue

Money to meet 'Ordinary' (mainly current) Budget expenditure of the central Government is in normal years derived from taxation. Taxes can be divided into two groups, direct and indirect, which correspond roughly to the duties collected by the Board of Inland Revenue and by the Board of Customs and Excise. The most important inland revenue duties—income tax (including surtax), profits tax and estate duty (death duty)—are levied directly on the income or property of those who, in general, have to bear them. Income tax on individual (though not on corporate) incomes and estate duty are progressive taxes, that is, larger incomes and estates bear a proportionately higher rate of tax. A capital gains tax was introduced in 1965 on gains accruing after 6th April, 1965 on the disposal of most assets. A corporation tax will come into operation in April 1966, replacing the profits tax and the income tax levied on companies. Stamp duties, although not a direct tax, are also collected by the Board of Inland Revenue.

Income Tax, Surtax, and Profits Tax

Income tax is imposed at a standard rate for the year of assessment beginning on 6th April. The standard rate was increased for the year 1965–66 from 7s. 9d. in the £ to 8s. 3d. in the £ (41·25 per cent). The tax imposed on an individual is graduated by means of personal allowances and reliefs, by reduced rates of tax on the first sections of taxable income[1] and by the surtax.[2] In the case of a married couple the incomes of husband and wife are aggregated and are treated as one income, but higher allowances are given than for a single person. Earned income bears less tax than other income as certain fractional deductions ('earned income relief') are allowable.

[1] The balance of income remaining after deduction of the personal allowances and reliefs is taxable income. For 1965–66 the reduced rates are: 4s. 0d. in the £ on the first £100; and 6s. 0d. in the £ on the next £200. The remainder is charged at the standard rate.

[2] The surtax, which is essentially an income tax at higher rates, is charged on personal incomes exceeding £2,000 a year after deducting certain personal allowances in excess of the single person's basic allowance. In addition, the same earned income relief as for income tax and a special earnings allowance (not exceeding £2,000) are deductible from earned income only. Surtax is imposed at rates which increase progressively until for a single person (for 1964–65) on investment income above £100,000 a year, income tax and surtax combined amount to 17s. 1½d. in the £.

A single person earning £1,000 a year pays £186 in income tax, while a married couple with the same earned income pay £137; if the couple have two children under the age of 11, their tax falls to £52; when the children are between the ages of 11 and 16, the tax is only £37; if the children are over 16 and receiving full-time education, only £22 is paid. The range of tax payable by a single person varies from, for example, £41 on an earned income of £500 a year to £1,515 on an earned income of £5,000; if the income is unearned, tax liability on £500 will be £54, and on £5,000 will be £2,433.

Most wage and salary earners pay their income tax under a PAYE ('Pay-as-you-earn') scheme, under which tax is deducted at source, thus enabling them to keep up to date on tax payments.

Companies are liable to income tax at the standard rate of tax on their total income irrespective of its amount and to a profits tax at the rate of 15 per cent. The rate at which the corporation tax (see p. 402) will apply will be fixed in the 1966 Budget.

In general, income tax is charged on all income which originates in the United Kingdom and on all income arising abroad of persons (including companies) resident in the United Kingdom. The main exceptions are that interest on certain United Kingdom government securities belonging to persons not ordinarily resident in the United Kingdom is exempt; and income from certain classes of possessions abroad is chargeable not on the amount of income arising but on the amount of income remitted to the United Kingdom. The United Kingdom has entered into agreements with many countries providing for relief from double taxation; where such agreements are not in force unilateral relief is allowed.[1]

Estate Duty

Estate duty is chargeable on the value of property (whether legally settled or not) which passes or is deemed to pass at death. Thus, it is not limited to property owned by the deceased. It may, for example, extend to trust funds to the income of which the deceased was entitled during his lifetime, and to gifts made by the deceased within five years of his death (one year in the case of a gift for public or charitable purposes). Estates with a net capital value of £5,000 or less are exempt from duty, but on estates of a higher value there is a progressive duty ranging from 1 per cent to 80 per cent.

Indirect Taxes

Indirect taxes or taxes on expenditure are levied on commodities or services. They are called indirect because the importer, manufacturer, wholesaler, or provider of commodities or services pays them first and then adjusts his prices to his customers accordingly.

Customs and excise duties form the largest group of indirect taxes. Customs duties are levied on imported goods, and excise duties on goods produced, and services provided, at home. The purchase tax, which is also collected by the Board of Customs and Excise, applies equally, and at the same rate, to home-produced and to imported goods.

The system of customs duties is twofold in its purpose: it has the function of providing a measure of protection for British industries or preference for products imported from Commonwealth countries overseas and it has also the function, in association with the excise system, of providing revenue.

The major part of the revenue collected by the Board of Customs and Excise accrues from the duties on tobacco, hydrocarbon oils and alcoholic drinks

[1] The information in this paragraph is not legally authoritative. For this purpose reference should be made to the relevant Statutory Instruments. Inquiries should be addressed to the Secretary, Board of Inland Revenue, Somerset House, London, W.C.2.

and from the purchase tax. There are other smaller revenue duties, for instance, on betting and matches. The protective customs duties cover a wide range of goods but the revenue from them accounts for about 5 per cent only of the total yield of indirect taxation.

Purchase tax is charged on a wide range of goods, nearly all of them consumer goods, at three rates, 10 per cent, 15 per cent and 25 per cent of the wholesale value. Articles subject to revenue duties of customs and excise are in general exempt from this tax; other goods free of purchase tax include food (other than confectionery, soft drinks and ice cream), fuel, books and newspapers, young children's clothing and footwear, certain non-proprietary drugs and medicines, some household appliances and textiles. Since 1961 the Chancellor of the Exchequer has had power to vary by order the rate of purchase tax and of the other main customs and excise duties (except the protective duties) by up to 10 per cent in either direction. In the 1964 Finance Act this power was amended so as to allow one or more of the five groups of indirect taxes, that is, tobacco, alcohol, oil, purchase tax and the minor revenue duties, to be excluded from its use. Provision was also made for the surcharges or rebates to be applied at different percentages for different groups. This power is intended to be a regulator of the economy and requires annual renewal.

Taxes on motor vehicles, which are also treated as indirect taxes, are collected by the local taxation authorities (the county or county borough councils in England and Wales and the corresponding councils in Scotland); the proceeds are paid by the local authorities into the Exchequer.

THE EXCHEQUER ACCOUNTS 1965–66

In the Budget of April 1965–66 total expenditure for the financial year ending 31st March, 1966, was estimated to reach £8,482 million, including £1,348 million for Consolidated Fund Standing Services and £7,134 million for Supply Services. The estimate for total revenue (after allowing for the Budget changes) was £9,026 million of which £8,199 million was receipts from taxation. There was therefore a surplus of £544 million. Loans from the Consolidated Fund (see p. 401) to industry were estimated to reach £743 million and for other purposes £525 million. After allowing for the surplus of revenue over expenditure, there was an estimated deficit of £724 million to be met by Exchequer borrowing and special transactions.

Table 25 shows the Budget estimates for 1965–66 in comparison with the outturn (Exchequer receipts and issues) for the previous year and Table 26 gives a general functional analysis of the Estimates.

CAPITAL PAYMENTS AND RECEIPTS

Capital expenditure dealt with in the Budget statement consists chiefly of loans from the Consolidated Fund to the nationalised industries, the local authorities and other public bodies, such as the New Towns Development Corporations; it also includes loans under the Export Guarantees Acts and loans for overseas assistance. If, on balance, there is a deficit on capital expenditure, it is met from the proceeds of government borrowing and special transactions, for instance, borrowing from the Exchange Equalisation Account, from extra-budgetary funds such as the National Insurance Fund, or from the surplus, if any, in revenue and expenditure; while if there is a surplus it goes to reduce the National Debt.

Exchequer borrowing may be in the form of direct borrowing from the public either through the National Savings Movement (see p. 412) or by borrowing on the market by means of new issues of securities. New issues of government securities are made from time to time for the purpose of

refinancing maturing issues (conversion issues) or to raise new money (issues for cash). Since 1956 capital requirements of the nationalised industries have been met in full by the Exchequer, while those of the local authorities are met partly by the Exchequer through the Public Works Loan Board (see p. 76) and partly by the local authorities borrowing direct from the public in the form of mortgages or stock issues.

TABLE 25
EXCHEQUER RECEIPTS AND ISSUES 1964–65 AND 1965–66

£ million

	1964–65		1965–66 Estimate	
	Original Budget Estimate	Outturn	Before Budget Changes	After Budget Changes
REVENUE				
Inland Revenue				
Income Tax	3,043	3,088	3,600	3,592
Surtax	195	184	200	200
Death Duties	310	297	280	280
Stamps	75	79	75	75
Profits Taxes	415	423	445	445
Total	*4,038*	*4,071*	*4,600*	*4,592*
Customs and Excise				
Tobacco	958	982	980	1,054
Purchase Tax	605	633	647	647
Oil	621	674	711	711
Spirits, Beer and Wine	551	576	567	616
Other Revenue Duties	51	50	42	42
Protective Duties	165	181	165	165
Temporary Charge on Imports	—	77	138	138
Total	*2,951*	*3,173*	*3,250*	*3,373*
Motor Vehicle Duties	180	187	185	234
Total Taxation	7,169	7,431	8,035	8,199
Miscellaneous Receipts				
Interest and dividends	481	476	533	533
Broadcast Receiving Licences	57	55	57	57
Other	173	195	237	237
TOTAL REVENUE	7,880	8,157	8,862	9,026
EXPENDITURE				
Supply Services (see Table 26)	6,549	6,480	7,134	7,134
Consolidated Fund Standing Services	1,243	1,233	1,348	1,348
TOTAL EXPENDITURE	7,792	7,713	8,482	8,482
SURPLUS	88	444	380	544

Continued overleaf

TABLE 25 (*contd.*)

£ million

	1964–65		1965–66 Estimate	
	Original Budget Estimate	Outturn	Before Budget Changes	After Budget Changes
CONSOLIDATED FUND LOANS (NET)				
To Industry	602	586	743	743
Other	235	244	485	525
TOTAL LOANS	837	830	1,228	1,268
EXCHEQUER BORROWING AND SPECIAL TRANSACTIONS (NET)	749	386	848	724
LENDING MET FROM SURPLUS ..	88	444	380	544

Source : *Financial Statement 1965–66.*

The National Debt

So far, borrowing on a large scale has been undertaken only to finance deficits during or immediately after a war. The National Debt rose from £651 million in 1914 to £7,435 million at the end of the first world war, and from £7,131 million in 1939 to £23,637 million in 1946. On the 31st March, 1965, the total National Debt was £30,438 million, of which £1,806 million was repayable in currencies other than sterling, mainly to the United States and Canadian Governments. Of the £27,699 million of internal debt, £5,016 million was short-term debt, mainly in the form of 91-day Treasury bills, while the long-term loans included a variety of stocks, bonds, loans, and certificates carrying fixed rates of interest (ranging from 2½ to 6 per cent) and with fixed or indeterminate dates of repayment.

PUBLIC FINANCE IN NORTHERN IRELAND

The general system of public finance in Northern Ireland is, in its main features, similar to that operating in the United Kingdom as a whole, under which public revenues, with a few minor exceptions, are paid into the Exchequer, from which no money can be withdrawn except on the authority of Parliament. That authority is expressed in the case of Consolidated Fund charges in permanent legislative form, and in the case of Supply Services by annual Appropriation Acts based on estimates prepared by departments and sanctioned by the Ministry of Finance.

The major portion of taxation (customs duties and most excise duties, purchase tax, income tax, surtax and profits tax) is imposed by the United Kingdom Parliament over the whole country, and is paid, in the first instance, into the United Kingdom Exchequer. From the amount attributable to Northern Ireland, known as 'Reserved' Revenue, there is deducted and retained by the United Kingdom Treasury, under the Government of Ireland Act 1920, the sum contributed by Northern Ireland towards Imperial Services (called the 'Imperial Contribution'), the cost of the administration of the Supreme Court, and other Reserved Services, and the cost of collecting Reserved Revenue. The balance, termed the 'Residuary Share of Reserved Taxes' is paid over to the Exchequer of Northern Ireland and joins with the proceeds of taxes levied and collected by the Government of Northern Ireland,

TABLE 26
GENERAL FUNCTIONAL ANALYSIS OF THE ESTIMATES 1963–64 TO 1965–66
SUMMARY

	1963–64 Outturn		1964–65 Budget Estimates		1964–65 Total Estimates		1965–66 Estimates	
	As in Appropriation Accounts		As in Financial Statement		Including Supplementaries		As presented to Parliament	
	£m.	% of total	£m.	% of total	£m.	% of total	£m.	% of total
Support of External Policy:								
Defence	1,914	31·8	2,127	32·5	2,134	31·7	2,231	31·3
External relations	181	3·0	197	3·0	267	4·0	230	3·2
Economic Services:								
Roads and transport	330	5·5	341	5·2	348	5·2	365	5·1
Employment, industry and trade	75	1·2	105	1·6	107	1·6	117	1·6
Industrial research and research councils	116	1·9	132	2·0	131	2·0	140	2·0
Agriculture, fisheries and forestry	347	5·8	372	5·7	378	5·6	348	4·9
Community Services:								
Housing and environmental services	113	1·9	127	1·9	127	1·9	136	1·9
Arts	8	0·1	9	0·1	9	0·1	10	0·1
Law and order	123	2·0	139	2·1	143	2·1	154	2·2
Social Services:								
Education	192	3·2	225	3·4	236	3·5	264	3·7
Health and welfare	744	12·4	796	12·2	833	12·4	913	12·8
Children's services	265	4·4	272	4·2	276	4·1	291	4·1
Benefits and assistance	573	9·5	584	8·9	588	8·7	701	9·8
Local Authority Grants not Allocated to Specific Services:								
Non-specific grants to local authorities	821	13·6	887	13·6	902	13·4	970	13·6
Administration, &c.:								
Financial administration and common services	217	3·6	242	3·7	250	3·7	262	3·7
Miscellaneous services	6	0·1	−6	−0·1	−2	——	2	——
Supply Services	6,025	100	6,549	100	6,727	100	7,134	100

Source : *Memorandum by the Financial Secretary to the Treasury.*

called 'Transferred' Taxes, and with other non-tax receipts of a miscellaneous nature, to form the public income. Among items of Transferred Tax Revenue are estate duties, stamp duties, pool betting duty, bookmakers' licence duties, various excise licence duties and motor vehicle duties.

A Joint Exchequer Board, representative of the Treasury and the Ministry of Finance for Northern Ireland, constituted in accordance with the Government of Ireland Act 1920, determines the amount of Reserved Revenue and the cost of Reserved Services attributable to Northern Ireland for each year, the amount of the Imperial Contribution, and such other questions affecting the financial relations of the two Governments as may be referred to it.

o

In the Northern Ireland Budget for 1965–66 (year ending 31st March), total revenues were forecast at £177 million and expenditure at £173 million. After allowing for the Imperial Contribution, provisionally estimated at £3·5 million, there was a Budget surplus of £57,960.

The Public Debt of Northern Ireland, totalling £140 million on 31st March, 1965, is fully covered by repayable advances and investments held by the Ministry of Finance.

Outside the Exchequer system in Northern Ireland, various funds have been established, in addition to statutory Reserve and Sinking Funds, for specific purposes. In general, these funds follow the United Kingdom pattern, the principal funds being those relating to National Insurance and government loans. The latter constitutes a pool of capital money available mainly for local and public authority borrowings; on 31st March, 1965, a sum of approximately £123 million was outstanding against such borrowers.

BANKING AND PRIVATE FINANCE

The British banking system is long established and well integrated. It comprises a central bank; commercial banks which carry on the usual main banking services; the United Kingdom offices of various banks whose main business is in other countries; and various specialised banks and similar financial institutions.[1]

The Bank of England

The Bank of England is the central bank and its principal business is to act as banker to the Government and to the other banks, as the agent of the Government for important financial operations and as the central note-issuing authority; it also maintains relations with central banks overseas. It was established in 1694 by Act of Parliament and Royal Charter as a corporate body, and its entire capital stock was acquired by the Government under the Bank of England Act 1946.

As the central bank, the Bank of England is responsible for co-ordinating the application of the Government's monetary policy. One of the main instruments for this purpose is the Bank Rate—the minimum rate at which the Bank of England will discount approved bills of exchange and a key factor in the general pattern of interest rates.

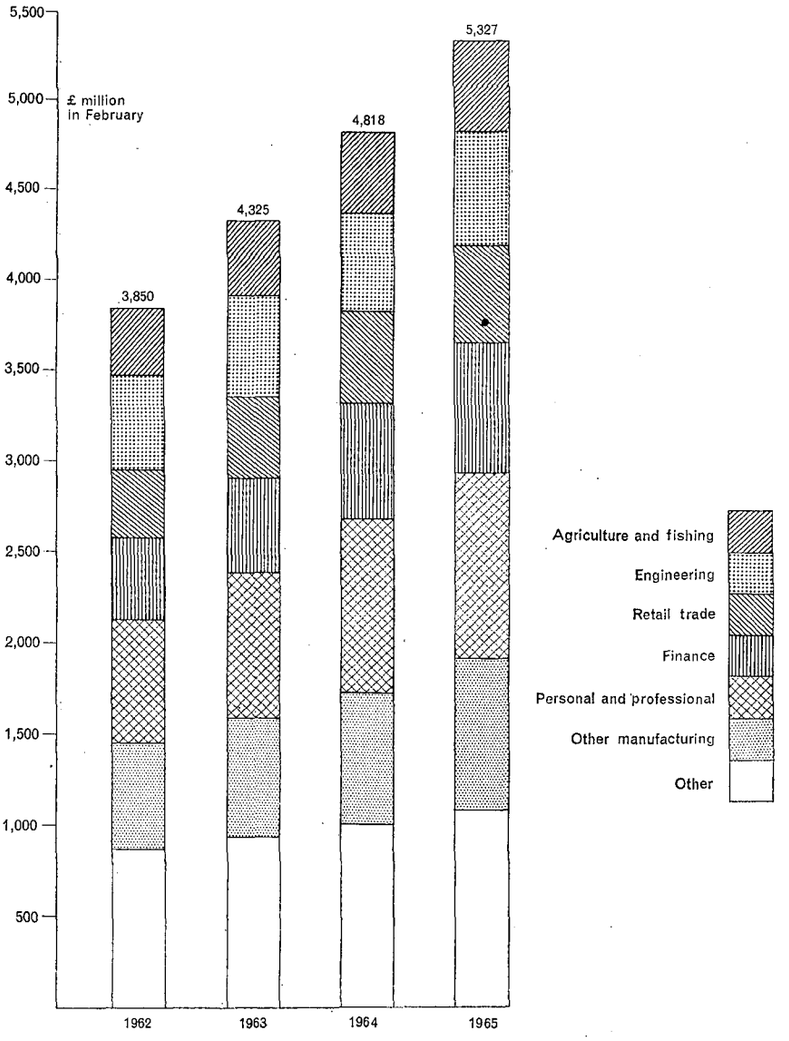
As banker to the Government, the Bank of England holds the main government accounts and it acts as the Government's agent for the issue and registration of government loans. It also operates, as agent for the Treasury, the administration of exchange control which has been in force since 1939.

The commercial banks maintain large balances with the Bank of England and these balances form part of the banks' cash reserves. In addition, under an arrangement made with the London clearing banks and Scottish banks in 1958, the Bank of England might call on these banks for 'special deposits' which, not being freely disposable, do not rank as part of their liquid assets. Deposits under this scheme, designed to restrict the liquidity of the banking system should the need arise, were made with the Bank of England between June 1960 and December 1962 and again in May 1965. The Bank of England has also given guidance on a number of occasions to the main banking and financial organisations on the advances policy the authorities wish them to adopt.

[1] For a detailed description of the British financial system see the *Report of the* [Radcliffe] *Committee on the Working of the Monetary System* (*Cmnd.* 827), published in August 1959.

The Bank of England has the sole right in England and Wales of issuing bank notes. Notes thus issued need a 100 per cent cover in gold and securities, together with a limited amount of coin, the part covered by securities and coin being the 'Fiduciary Issue', the level of which is subject to parliamentary control. In practice very little gold is now held by the Issue Department of the Bank of England, the bulk of the United Kingdom gold (and foreign exchange) reserves being in a separate government fund, known as the Exchange Equalisation Account; this account was originally established in 1932 for the purpose of checking undue fluctuations in the exchange value of sterling, and is operated by the Bank of England as agent for the Treasury. The provision of coin for circulation is the responsibility of a government department, the Royal Mint.

ANALYSIS OF BANK ADVANCES 1962-65



The Commercial Banks

The banks handling the major part of the domestic banking business in the United Kingdom are limited liability companies which, in the main, are subject to the ordinary law relating to such companies.

Some of the main features of the United Kingdom commercial banks are:

1. A relatively small number of banks control a large number of branches. United Kingdom members of the British Bankers' Association include 11 London clearing banks,[1] 5 banks in Scotland and 3 in Northern Ireland; they control some 13,000 branches and had total net deposits of over £9,250 million at the end of 1964.
2. The volume of cheques handled is very large and, in spite of a stamp duty of 2d. on each cheque, many payments—and even relatively small payments—are made by cheque. The average monthly value of cheques, drafts, bills and bankers' effects cleared in 1964 through the London and Provincial Clearing Houses was £29,889 million; and many cheques do not, for various reasons, pass through clearing houses. In addition, a growing volume of payments is effected through the credit transfer scheme introduced in 1960: the average monthly value of the credit clearing through the London Clearing House in 1964 was £657 million.
3. It is the practice of the London clearing banks to maintain a ratio of about 8 per cent between cash reserves and total deposits[2] (of which rather more than a half are repayable on demand, the remainder being mainly deposits at interest and subject to notice).

   The banks make advances to customers partly in the form of overdrafts and partly in the form of loans (with or without collateral security); in either case, the advance is normally for a short term only unless renewed.

   The ratio of London clearing bank advances to total deposits declined from about 43 per cent in 1938 to about 17 per cent at the end of the war, but gradually climbed back to settle down to a level of 26 to 30 per cent for a number of years from 1951. After the withdrawal in 1958 of official requests to the banks to restrict the level of their advances, the percentage again moved up, and by July 1961, when the banks were again asked to restrain their lending, was over 47 per cent. In May 1965 the ratio of advances to total deposits was 53·5 per cent, well above the 1938 level. The diagram on p. 409 shows the relative size of bank advances outstanding in recent years to different sectors of the economy.

   The increase in the volume of advances since 1958 has been accompanied by innovations in bank lending practice, including the introduction of schemes for personal loans repayable by fixed monthly instalments over periods up to two years, and facilities for limited service accounts at low cost. Another development was the acquisition by many banks of share capital in hire-purchase finance companies.
4. Certain banks in Scotland and Northern Ireland have retained limited rights to issue notes; these issues, apart from an amount specified by legislation for each bank, must be fully covered by Bank of England notes and by coin.

[1] Three of these banks are members of the London Clearing House but have headquarters outside London (at Liverpool and Manchester).

[2] Until 1963 it was a convention that at least 30 per cent of deposits should be covered by cash and other liquid securities; but since then this ratio has been varied, and now stands at 28 per cent.

United Kingdom Offices of Banks Operating Mainly Overseas

The importance of London as a financial and trading centre and as the largest city of the British Commonwealth has encouraged many banks whose main business is in other Commonwealth countries and foreign countries to maintain London offices[1]; in some cases, indeed, the institutions concerned are United Kingdom companies and the London office is the head office. These London offices form part of the complex structure engaged in the financing of trade not only between Britain and other countries but also in connection with trade between third countries.

The Merchant Banks

The merchant banks have helped to give London an international reputation as a world financial centre for short-term and long-term borrowing. They are of two kinds, and are known as accepting houses and issuing houses, according to whether they specialise predominantly in the work of acceptance credit[2] or in transactions involving the sponsoring of capital issues on behalf of their customers. They participate in the issue of long and short-term loans to governments of, or concerns in, overseas countries in sterling (where permitted by exchange control regulations) or in other currencies which have been deposited with them; this latter type of transaction has increased considerably in recent years. They are also engaged in the work of the gold and foreign exchange markets, and they have many other functions in connection with the financing of trade, investment management, and the insurance world.

The Discount Market

The main business of the discount market consists of trading in and holding commercial bills of exchange, United Kingdom Government Treasury bills and other short-term securities. In recent years holdings of commercial bills have increased considerably. In 1964 they accounted for about one-quarter of the assets of the discount market, the remainder of its assets being short-term bonds and Treasury bills in roughly the same proportions. Tenders for Treasury bills are invited by the Government each week and the firms which comprise the discount market acquire the bulk of their Treasury bills in this way. They finance the purchase of the bills and securities they hold, chiefly by loans from the banks; about half of these loans come from the London clearing banks, and most of the remainder from other United Kingdom and overseas banks. In the main these loans and deposits may be called in at any time.

The commercial banks do not, in the ordinary way, buy Treasury bills at the weekly tenders except on behalf of customers, but they purchase, from the discount market, bills which have been taken up by the market and held until they become of a maturity required by the banks.

The Bank of England acts as lender of last resort to the twelve members of the London discount market. The clearing banks do not borrow money directly from the Bank of England; if they need to add to their cash resources they call in part of their loans to the discount market. If, as a result, any particular discount house is unable to cover its needs for cash elsewhere, it is obliged to borrow from the Bank of England, normally at bank rate. Since the beginning of 1963 the Bank of England has reaffirmed its right to charge a

[1] Twenty-nine overseas banks are members of the British Bankers' Association.

[2] Acceptance credit has been defined as fundamentally a three-month operation financing exports from and imports to Britain and to other markets. The expression is derived from the method of financing trade by which commercial bills are 'accepted' or guaranteed by a merchant bank against documents, after which they may be discounted for cash by a discount house.

rate higher than bank rate, in order to allow more flexibility in its control of short-term interest rates.

Savings Banks and the National Savings Movement

The function of Trustee Savings Banks and the Post Office Savings Bank is to provide readily available facilities for the investment of small savings. Both these types of banks were already well established during the nineteenth century. The growth of their business was, however, encouraged in the first world war when the War Savings Committee was set up under government auspices to promote an official savings drive. A new type of long-term security for the small investor was inaugurated at that time. This was the National Savings Certificate, encashable at par at any time, with interest payable only on encashment, but free of income tax. From this war-time drive originated the present National Savings Movement, which encourages the widespread investment of savings in Trustee Savings Banks and the Post Office Savings Bank and in National Savings securities. The movement is led by the National Savings Committee for England and Wales and similar committees for Scotland and Northern Ireland.[1] The committees are bodies of independent persons representing regional savings organisations and various national institutions connected with such matters as finance, industry and education. They are assisted by a salaried staff of civil servants. Voluntary local savings committees, often assisted or promoted by local authorities, co-ordinate the work of voluntary local savings groups.

Three National Savings securities are now on sale: the National Savings Certificate, the National Development Bond, and the Premium Savings Bond. The National Development Bond was first issued in May 1964 (when it replaced the Defence Bond). National Development Bonds are repayable at par on one month's notice; interest is half-yearly and is taxable. Premium Savings Bonds, which were first issued in 1956, give investors (after an initial period of three months and thereafter monthly) a chance to win prizes ranging from £25 to £5,000 instead of receiving interest. At the end of June 1965, £502·4 million was invested in this form of savings. Nearly all British government securities are held on the Post Office Register and can also be bought or sold at most post offices in the United Kingdom.

Trustee Savings Banks are managed by boards of honorary trustees and managers; the greater part of the funds deposited with them are ordinary deposits which are withdrawable on demand or at short notice. These deposits are invested with the National Debt Commissioners, and the Government is responsible to the trustees for the repayment of the money so invested, with accrued interest, as and when required. In certain circumstances, Trustee Savings Banks also accept deposits of up to £3,000 for special investment. These deposits, which may receive a higher rate of interest than ordinary deposits, are invested by the trustees under the supervision of the National Debt Commissioners, but the Government is not responsible to the trustees for the repayment of these investments. There are about 1,350 Trustee Offices controlled by 80 independent banks and depositors number over 8½ million. At the end of June 1965 deposits in the Ordinary Departments of the Trustee Savings Banks totalled £1,037·5 million and deposits of the Special Investment Departments totalled £951·2 million.

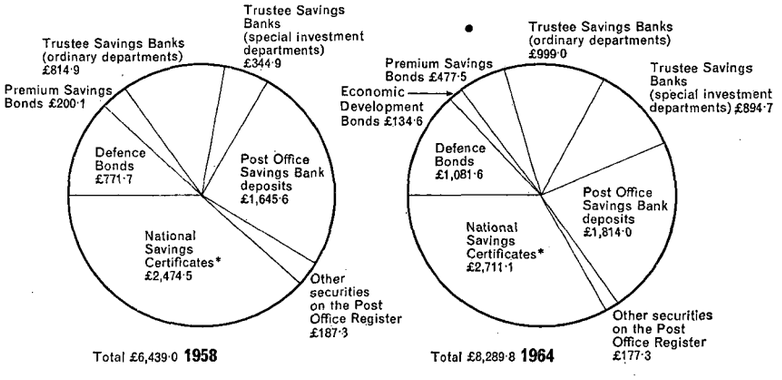
[1] The Northern Ireland Ministry of Finance is responsible for the administration of Ulster Savings, but the furtherance and organisation of the savings movement in Northern Ireland is the concern of a central voluntary committee, which is assisted by county and local committees and district groups, all of a voluntary nature.

The Post Office Savings Bank, which celebrated its centenary in 1961, is the largest organisation of its kind in the world. It has over 22 million active accounts; in June 1965 total balances, which carry a government guarantee, amounted to £1,838·4 million, roughly £83 per depositor. Through a centralised system of accounting, a depositor can pay in money or make a withdrawal at any one of some 20,000 post offices throughout the country. The Post Office Savings Bank pays only a low rate of interest (2½ per cent) on its ordinary deposits but in April 1965 the intention was announced to introduce 'Investment Accounts' which would pay a higher rate of interest if a minimum balance is maintained and one month's notice of withdrawal is given.

A person may have deposits in only one Trustee Savings Bank and his holdings in the ordinary department is limited to £5,000. He may also hold up to £5,000 in the Post Office Savings Bank. The maximum amount of National Savings Certificates which may be held by any one person is at present £600 worth of the current (eleventh) issue, introduced in May 1963, in addition to holdings of previous issues, and £1,000 worth of Premium Savings Bonds. The limit on individual holdings of the current issue of National Development Bonds is £2,500. By June 1965 National Savings had reached a total of £8,414 million, about a quarter of the National Debt.

The diagram below shows the distribution of national savings between the different outlets in 1958 and 1964.

NATIONAL SAVINGS
Amounts outstanding at end-year in £ million



*Principal and accrued interest

Co-operative Banks

The Co-operative Wholesale Society formed a deposit and loan department about the year 1870, and the right of a co-operative society to engage in banking was legally defined in the Industrial and Provident Societies Act of 1876. The primary purpose of the Co-operative Wholesale Society Bank was to serve the co-operative movement, whose financial centre it has become, but the clients of the bank now include trade unions and other mutual societies, local authorities and individual depositors. The bank's headquarters are in Manchester. The Scottish Co-operative Wholesale Society, which has its headquarters in Glasgow, has similarly engaged in banking since 1948.

OTHER FINANCIAL INSTITUTIONS

It has been the policy of the commercial banks to leave the provision of many special financial facilities to other financial institutions. These facilities,

which are supplementary to the credit facilities of the banking system, are mainly provided through the savings banks, finance corporations, hire-purchase finance companies, the Stock Exchange, investment trusts, building societies and the insurance market. The firms engaged in such activities are in the main highly specialised, e.g., discount and other finance houses, stockbrokers, insurers, insurance underwriters and brokers.

Finance Corporations

Two corporations, the Finance Corporation for Industry Limited and the Industrial and Commercial Finance Corporation Limited, were set up in 1945 to assist in dealing with the problems of post-war reconstruction and development. Although the Government displayed considerable interest in their formation, the corporations themselves are ordinary limited companies with no official representation on their boards and having no recourse to public funds. Another finance corporation, the Commonwealth Development Finance Company Limited, was established in 1953 to assist development projects in the Commonwealth. Among other financial corporations of note are the Agricultural Mortgage Corporation Limited, and the Scottish Agricultural Securities Corporation Limited.

Finance Corporation for Industry Limited

The FCI was formed to assist in the provision of capital (in amounts of £200,000 and upwards) for the re-equipment and development of major industries in the national interest with a view to promoting efficiency and thereby assisting in the maintenance and increase of employment.

The FCI has an authorised and issued capital of £25 million and may borrow up to four times this amount, making a possible total of resources of £125 million. The share capital is held as follows: 40 per cent by insurance companies, 30 per cent by investment trust companies and 30 per cent by the Bank of England. At 31st March, 1965, the capital called and paid up was 2 per cent (£500,000); the Bank of England paid £5 million in advance of call in 1958–59. The liability of the shareholders in respect of the uncalled capital represents security to the banks providing loans for the corporation's working capital.

The enterprises assisted by the FCI are concerned with a variety of products, such as steel, oil, chemicals, shipping, diesel engines, and electrical components.

Industrial and Commercial Finance Corporation Limited

The ICFC has a smaller issued capital than that of the FCI and has as its main object the provision of credit and finance by means of loan and share capital for industrial and commercial concerns in Great Britain, particularly in cases where the existing facilities provided by banking institutions and the Stock Exchange are not readily or easily available.

The authorised and issued share capital of the ICFC at 31st March, 1965 was £22·5 million paid up fully and a line of credit of £8·25 million, both provided principally by the London clearing banks and the Scottish banks in proportion to their size, with a token participation by the Bank of England. In addition, public debenture issues have been made to a total of £30 million. The current resources of the ICFC, including reserves shown in the balance sheet, therefore total more than £72 million.

The corporation's function is to provide finance in sums ranging between £5,000 and £300,000 or more for small and medium-sized concerns. It has 13 branches established in large industrial cities through which it provides services covering the whole of the country. By March 1965 the total amount advanced by the corporation since its inception had exceeded £116 million. At the same date its loans and investment holdings outstanding to 1,068 customers were over £66 million.

Commonwealth Development Finance Company Limited

The Commonwealth Development Finance Company was set up in 1953 as a new channel for the investment of private capital in Commonwealth development schemes. Its authorised share capital is £30 million, of which about 14½ million 'A' ordinary shares of £1 (2s. paid) are held by industrial, shipping, mining and banking interests in the United Kingdom, and 11¾ million 'B' ordinary shares of £1 (10s. paid) are held by the Bank of England and certain central banks in the Commonwealth. Commitments entered into from its inception in 1953 up to the end of March 1965 amounted to the sterling equivalent of approximately £31 million.

Agricultural Mortgage Corporations

The primary function of the Agricultural Mortgage Corporation Ltd., established in 1928, is to grant long-term loans against first mortgages on agricultural lands and buildings in England and Wales. The share capital was subscribed by the Bank of England and other banks, but the funds are mainly derived from public issues of debentures, of which about £62 million was outstanding in March 1965.

The Scottish Agricultural Securities Corporation Limited was established in 1933 and fulfils broadly similar functions in Scotland. Its share capital is subcribed by three Scottish banks.

The Stock Exchanges

There are 23 stock exchanges in the British Isles, of which 15 are in England and Wales, five in Scotland, one in Northern Ireland and two in the Irish Republic. In addition the Provincial Brokers' Stock Exchange operates in 110 cities and towns throughout Britain and the Irish Republic. The Federation of Stock Exchanges in Great Britain and Ireland, comprising with one exception all these organisations, was set up in July 1965 to co-ordinate their work. Four of the Scottish stock exchanges are linked, as are also the stock exchanges in the north of England.

The London Stock Exchange is by far the most important of these stock exchanges and is one of the world's two foremost free markets in securities. Some 9,300 securities are quoted on the London Stock Exchange; at the end of March 1965 these had a total market value of £75,000 million. Nearly 8,400 companies are quoted, including a number of leading overseas companies. At nominal values 38 per cent of the securities represented company issues and the remainder British and overseas government and corporation stocks; at market values the proportion was about three-quarters.

The London Stock Exchange is linked by cable or telephone with stock exchanges all over the world. Therefore, a quoted company, subject to any limitations imposed by the exchange control regulations, has a world-wide market for its issues. This is an important factor in the raising of new capital by government and commercial borrowers. Arbitrage transactions by brokers —the buying or selling of a particular security on one stock exchange with the intention of reversing it on another—play an important part in equating price differentials between different markets and maintaining a continual flow of business between centres.

The stock exchanges do not fix dealing prices; the terms on which bargains are made between members reflect the interaction of supply and demand for the securities concerned. All the stock exchanges operate under strict rules of conduct which they formulate themselves.

In recent years there has been a constantly rising demand for ordinary (equity) shares, partly in expectation that such shares will maintain their real value or grow in value in periods of rising prices. Insurance companies and pension funds now invest a larger proportion of their assets in these shares than formerly, and the Trustee Investments Act of 1961 permits trustees,

under certain conditions, to invest up to half the funds they hold in trust in equity shares.

The ownership of Stock Exchange securities in the United Kingdom is much more widespread than formerly: it is estimated that there are about 3 million shareholders and that their shareholdings are widely distributed. The largest public company in Britain has nearly 600,000 shareholders and there are several others with more than 100,000.

Investment Trusts and Unit Trusts

Through investment trusts and unit trusts, investors may spread their risks and obtain the benefit of skilled management.

The ordinary type of investment trust is constituted as a public company registered under the Companies Acts with limited liability; its business is to invest its capital in a range of stocks and shares. Like other companies, it may issue several types of stocks or shares and may retain part of its profits to build up reserves. Investment trusts grew to importance in the latter half of the nineteenth century and have been prominent in directing capital towards overseas investment.

Unit trusts are constituted by trust deed between a management company and a trustee company which holds the securities. Normally, the managers sell units to the public and invest the proceeds in a fairly wide range of Stock Exchange securities. The costs of running the trust are defrayed partly by an initial charge which forms part of the price of a unit, and partly by a semi-annual service charge which is taken usually out of the income of the trust. The level of both charges is controlled by the Board of Trade, whose authorisation is required before units can be offered to the public; this is only granted if the Trust Deed is satisfactory to them.

The first British unit trust was formed in 1931 and by 1939 there were 98 trusts, with assets estimated at £80 million. This medium of saving suffered a decline after the war, owing mainly to government restrictions on new capital issues, but has grown considerably since 1957. At the end of June 1965 there were 1·37 million unit holdings in 114 authorised unit trusts, having total funds valued at £446 million.

The Insurance Market

Although a certain amount of insurance is provided by Friendly Societies and trade unions, most insurance services in Britain are in the hands of either mutual or joint stock companies or Lloyd's underwriters.

TABLE 27
INSURANCE COMPANIES—NET PREMIUM INCOME 1963

£ million

	Life[a]	Marine	Other general business	Total
Companies incorporated in the U.K. . .	985	90	1,002	2,077
Lloyd's underwriters	—	145	215	360
TOTAL	985	235	1,217	2,437

Source : *Board of Trade.*

[a] Including Industrial Life assurance, which is a type of life assurance in which the premiums are collected at frequent intervals of two months or less by house to house collection. It is conducted by both friendly societies (called collecting societies) and companies, the former accounting for a net premium income of £35 million in 1963 and the latter for a further £185 million.

Table 27 shows the distribution of business in terms of net premium income in 1963, the latest year for which figures are available.

Insurance Companies

There are over 350 insurance companies incorporated in the United Kingdom but most of the business is in the hands of about 100 companies. Most British insurers write several of the main classes of business although some specialise in one class, particularly in life assurance where about 40 companies write only that type of business. A few specialise in re-insurance.

In addition over 150 overseas companies carry on business (and even more companies are represented) in the United Kingdom, thus emphasising the international nature of the market. The natural centre of the market is in London, but some of the large companies have their administrative head-quarters elsewhere.

In 1963 the total insurance funds of the British insurance companies and collecting societies amounted to £11,000 million, the bulk of which is in respect of life assurance business. With the growth of group pension schemes the rate of accumulation of life funds is gradually increasing.

There is no government control over the investment policy of insurance funds and these represent one of the most important sources of funds for investment in commerce and industry. More than a third of the total assets of British insurance companies are invested in equity shares and debentures, and this proportion is gradually increasing.

Lloyd's

Lloyd's is an incorporated society of underwriters in London. The name 'Lloyd's' is derived from Edward Lloyd's coffee house, established in the late seventeenth century, where merchants with maritime and other interests gathered to transact business. By the middle of the eighteenth century, Lloyd's coffee house had become the principal centre of underwriting business and of intelligence about shipping movements. Although in its earlier history the activities of Lloyd's were confined to the conduct of marine insurance business, there has also been built up at Lloyd's a very considerable world-wide market for the transaction of other classes of insurance business, except life assurance of which the amount transacted at Lloyd's is negligible.

Lloyd's is now regulated by a series of special Acts of Parliament starting in 1871; the affairs of the Society of Lloyd's in its corporate capacity are administered by the Committee of Lloyd's, which does not itself transact insurance business.

Lloyd's is not a company but a market for insurance, where business is transacted by individual underwriters for their own account and risk and in competition with each other. Insurance may only be placed through Lloyd's brokers, who negotiate with Lloyd's underwriters on behalf of the insured. Only elected underwriting members of Lloyd's, who must transact insurance with unlimited liability and who have met the most stringent financial regulations laid down by the Committee of Lloyd's, are permitted to transact business at Lloyd's; these financial safeguards give a security behind the Lloyd's policy which is second to none.

Today there are over 5,800 underwriting members of Lloyd's grouped into some 300 syndicates and represented at Lloyd's by underwriting agents who accept risks on behalf of the members of their syndicates.

In conjunction with its marine insurance business Lloyd's has built up a world-wide organisation for the collection and diffusion of shipping intelligence.

Insurance Brokers

The insurance market is completed by the insurance brokers, acting on behalf of the insured; brokers are an essential part of the Lloyd's market and a valuable part of the company market. Many brokers specialise in re-insurance

business, acting as intermediaries in the exchange of contracts between companies, both British and overseas, and often acting as London representatives of the latter.

International Insurance Services

Over two-thirds of the fire, accident and marine insurance business comes from abroad, partly by direct placing in London and partly from branches and agencies established in over 100 countries. The basic principle of this international business is that resources capable of meeting any potential loss are instantly available for use in any part of the world.

Behind this large and international volume of business stand the very substantial assets of the companies, in addition to substantial reserves of uncalled capital, and the whole of the deposits, underwriting trust funds and personal fortunes of Lloyd's underwriters.

Building Societies

The principal function of building societies is to supply long-term loans on the security of private dwelling-houses purchased for owner occupation, though loans are occasionally made on the security of commercial and industrial premises and farms. The funds of building societies are derived mainly from the general public who invest in shares or deposits. The amount of share capital is not fixed; shares, which have a fixed value, are not dealt with on the Stock Exchange but may be withdrawn in cash if notice is given. The Building Societies Acts 1874 to 1962 prescribe the general way in which societies must conduct their business. The Chief Registrar of Friendly Societies has discretionary powers to stop a society either advertising or accepting money from investors if he considers that the way in which the society's business is conducted is jeopardising investors' money. The rapid expansion of building society activity in the twentieth century has been accompanied by a concentration of most of the business in the hands of a few very large societies. At the end of 1964, 635 societies were in operation, with total assets of £4,863 million. Ten of the largest societies, however, each with assets of over £100 million, account for 60 per cent of the total funds. The amount advanced on mortgage in 1964 was £1,043 million, a record total.

15
TRADE AND PAYMENTS

OVERSEAS TRADE

Although relatively small in area and accounting for less than 2 per cent of the world's population, the United Kingdom is the world's third largest trading nation, conducting nearly 10 per cent of international trade.

In the nineteenth century Britain attained a pre-eminent position in international trade. At the end of the century Britain's share of exports of manufactures entering into world trade was about 33 per cent. Its share of world imports of all goods was somewhat larger than that of world exports, as imports into Britain were paid for both by exports of goods and by interest on overseas investments and net receipts from shipping and a variety of financial services. As other countries followed Britain in becoming fully industrialised, it was natural that Britain's share of world exports of manufactures should fall. Even before 1914 this supremacy was being increasingly challenged by other nations, including Germany and the United States, and, although Britain's imports and exports increased in absolute terms over the years, its share of the world total tended to decline. By 1937 Britain's share in world exports of manufactures, measured by value, had fallen to 20 per cent compared with 22 per cent in 1929 and 32 per cent in 1914. In the years immediately following the second world war, Britain's share rose again and in 1950 was 26 per cent; but by 1964 it had fallen to about 14 per cent.

For over a century international trade has been of vital importance to Britain's economy. Britain relies upon imports for half its total consumption of foodstuffs and nearly all the raw materials needed for its industries. Its exports of goods and services together represent over a fifth of the gross national product. It is a major supplier of machinery, vehicles, aircraft, metal manufactures, electrical apparatus, chemicals and textiles. It is the world's largest market for foodstuffs, and among the largest for metals, cotton, wool, petroleum and many other products.

For some hundreds of years Britain has also been an important centre of entrepôt trade, the importance of which, however, in relation to total United Kingdom trade, has declined in the last half-century.

PATTERN OF TRADE

Changes in value, volume, composition and geographical distribution of imports and exports are outlined in the following paragraphs.

Value and Volume

The value of imports (c.i.f.) passed the £2,000 million mark in 1948 and, with rapidly rising prices of raw materials, totalled £3,892 million in 1951. Because of the tendency in subsequent years for import prices to fall, the 1951 level was not reached again until 1957. Since then, imports have recorded peak levels of £4,541 million in 1960, £4,820 million in 1963, and £5,513 million in 1964. The increase in exports has been at a steadier rate. The 1948 total of £1,579 million (f.o.b.) had increased to £2,566 million by 1951, and thereafter increased in most years, but with marked expansion in 1955 and 1959. In 1964 exports reached a new record of £4,254 million, an increase of

4½ per cent over 1963. This was the sixth successive year in which the previous total was surpassed.

Between 1961 and 1964 the volume of exports rose by 12 per cent and that of imports by 19 per cent. In 1961 and 1962 the terms of trade, i.e. the ratio between the general level of export prices and that of import prices, moved in Britain's favour. In 1963 and 1964, however, there were small adverse movements for the first time since 1955.

The value and volume of exports and imports in selected years from 1954 to 1964 are shown in Table 28.

TABLE 28
IMPORTS AND EXPORTS: ANNUAL FIGURES

	1954	1956	1958	1960	1963	1964
Value (£ million)						
Imports c.i.f.[a]	3,359	3,862	3,748	4,541	4,813	5,513
Exports of U.K. produce and manufactures, f.o.b.[b] ..	2,650	3,143	3,176	3,555	4,081	4,254
Re-exports f.o.b.[b]	98	144	141	141	154	153
Volume Index Nos. (1961 = 100)						
Imports	73	81	84	102	107	119
Exports	82	92	90	98	108	112
Price Index Nos. (1961 = 100)						
Imports	104	110	103	102	103	107
Exports	91	95	99	100	104	106
Terms of Trade[c] (1961 = 100)	87	87	96	97	101	99

Source : *Report on Overseas Trade.*

[a] 'Cost-insurance-freight', i.e. including shipping, insurance and other expenses incurred in the delivery of goods as far as their place of importation in the United Kingdom. Most of these expenses represented earnings by United Kingdom firms.

[b] 'Free-on-board', i.e. the cost of the goods to the purchaser abroad, all costs and charges accruing up to the time of placing the goods on board the exporting vessel having been paid by the seller.

[c] The ratio of export to import price index numbers: a fall indicates an adverse movement.

Commodity Composition

Imports

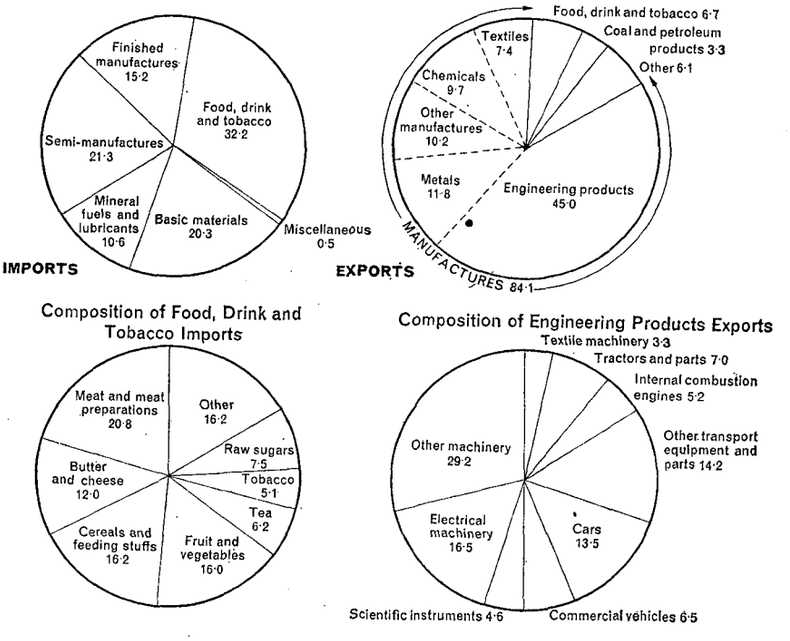
The expansion of domestic agriculture has reduced Britain's dependence on imported food supplies and the proportion of imported foodstuffs to total imports has not been above 40 per cent since before 1954. Imports of foodstuffs in 1964 (representing 32 per cent of total imports by value) nevertheless reached a peak total of £1,773 million, partly because of increases in the prices of some commodities, especially of meat, but also because of a 3 per cent increase in volume. There has been a similar downward trend in the proportion accounted for by basic materials—from 30 per cent in 1954 to 20 per cent in 1964, but in both cases the rate of change has been slow in recent years. Industrial production has tended to increase faster than the consumption of imported raw materials. This is partly because there has been a growing economy in materials' consumption per unit of output, partly because of a gradual switch from the production of goods with a high material content (e.g., textiles) to those with a relatively low material content (e.g., engineering products), and also because of increasing use of substitutes and synthetic materials.

Imports of crude petroleum and lubricants are by far the biggest single item by value among Britain's imports: they accounted for 11 per cent (£585 million) of the total value of imports in 1964, compared with 7½ per cent in 1948 and 10 per cent in 1954.

Imports of manufactured goods into Britain have been growing much more rapidly than imports as a whole in recent years. Imports of semi-manufactures have also been increasing steadily and in 1964, for the first time, accounted for a greater proportion of the total import bill than basic materials. Imports, by value, of semi-manufactured and manufactured goods amounted to £1,173 million and £838 million respectively in 1964, accounting for 21 per cent and 15 per cent of Britain's total imports, compared with 15 per cent and 5·2 per cent in 1954.

COMMODITY COMPOSITION OF IMPORTS AND EXPORTS IN 1964

(Percentages of total values)



Exports

More than five-sixths of Britain's exports consist of manufactured goods. By far the most important group are engineering products, which in 1964 accounted for 45 per cent of the total, compared with 38 per cent in 1954. Within this group, exports of many types of machinery, electrical equipment, road vehicles, tractors and scientific instruments have expanded markedly over this period. The share represented by chemicals grew steadily until 1960, when it represented 9 per cent of total exports, but then showed little change until 1964, when it rose to 10 per cent. The proportion accounted for by metals has fallen slightly in recent years and has been about 12 per cent since 1960. Exports of textiles have fallen from over 19 per cent of the total in 1948

to 13½ per cent in 1954 and 7 per cent in 1964. Exports of coal in 1964 were less than 1 per cent of the total, in contrast to their importance in the pre-war period. Exports of petroleum products, which have been about 3 per cent of the total in the last few years, fell slightly in 1964; exports of foodstuffs rose to nearly 7 per cent. But these were small shifts and neither has shown much change in the past few years.

An analysis of the commodity composition of total imports and exports and the composition of engineering exports and food imports is given in the diagram on p. 421.

TABLE 29
UNITED KINGDOM EXPORTS AND IMPORTS IN 1964 BY MAIN COUNTRIES

EXPORTS				IMPORTS			
	Value (£ million) f.o.b.	% change on 1959	% change on 1963		Value (£ million) c.i.f.	% change on 1959	% change on 1963
United States and dependencies ..	360	− 1	+ 5	United States and dependencies ..	640	+ 73	+ 5
Australia	256	+ 12	+ 8	Canada	452	+ 45	+ 6
South Africa ..	222	+ 49	+ 13	German Federal Republic ..	266	+ 85	+ 8
German Federal Republic ..	219	+ 54	+ 3	Australia	251	+ 13	+ 11
Sweden	198	+ 77	+ 17	Netherlands ..	236	+ 48	+ 6
Netherlands ..	192	+ 70	+ 15	Sweden	209	+ 63	+ 4
Canada	187	− 1	+ 8	New Zealand ..	208	+ 14	+ 3
France	185	+140	+ 2	Denmark	187	+ 41	+ 8
Irish Republic ..	165	+ 54	+ 10	France	184	+ 77	+ 17
Italy	130	+ 81	− 21	Irish Republic ..	171	+ 64	+ 9
India	127	− 35	− 7	India	141	− 1	+ 4
Denmark	119	+ 37	+ 13	Italy	132	+ 42	− 2
New Zealand ..	117	+ 19	+ 2	South Africa ..	126	+ 42	—

Source : *Board of Trade Journal.*

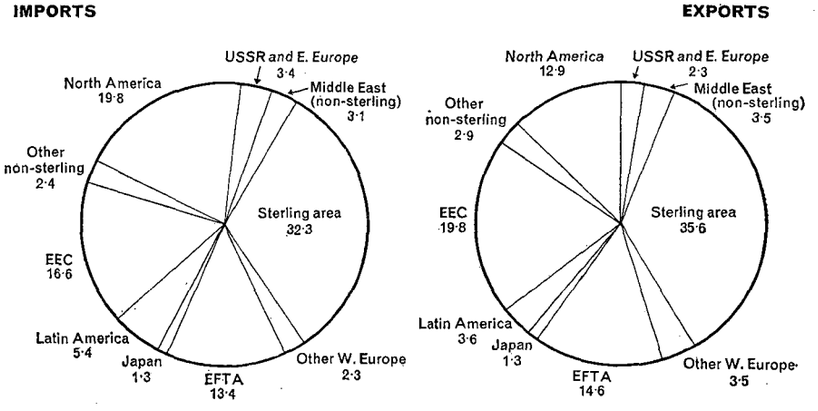
Geographical Distribution of Trade

The growth of trade between Britain and Western Europe has been a feature of the area distribution of trade in recent years, but conversely there has been a decline in the proportion of Britain's exports going to primary producing countries. In 1953, 27 per cent of exports went to Western Europe, but in 1962, for the first time, these exports began to exceed those to the sterling area and by 1964 they formed 36 per cent of the total. The rise in exports to Western Europe in 1964 (6 per cent) was modest compared with the annual average rate of growth (14 per cent) in the three previous years. This was because the rate of growth in exports to the European Economic Community (EEC) which had been particularly marked up to 1963, slackened in 1964. Exports to the European Free Trade Area (EFTA), on the other hand, rose in value by 11 per cent, a greater increase than in the previous two years. In 1964, 31 per cent of total imports came from Western Europe, with increases from both the EEC and the European Free Trade Association (EFTA).

Relatively, trade with other members of the Commonwealth and with the sterling area as a whole has tended to decline. Exports to the sterling area rose in the early 1950s, but there were some falls in later years and the 1957 total was not regained until 1963. In 1964, 36 per cent of Britain's exports went to the sterling area, compared with 47 per cent in 1953. There has been a similar fall in respect of imports. Canada, Australia, India and New Zealand, however

AREA PATTERN OF TRADE IN 1964

(Percentages of total values)



are among Britain's most important trading partners. The United States has been both Britain's largest single market and source of supply since 1957. The proportion of total exports going to North America rose to a peak in 1959 but by 1963 had fallen to 13 per cent, only slightly more than in 1953. This proportion remained the same in 1964, despite a rising trend in exports in the second half of the year. Expanding oil consumption in Britain has given rise to a substantial expansion of imports from the Middle East. Trade with Latin America has increased in recent years. There was a recovery in the second half of 1964 after the heavy fall in exports in 1963. The trade accounted for 4 per cent of exports and 5 per cent of imports. Britain's trade with the Soviet Union and Eastern Europe has been growing rapidly over the past decade but is still small in relation to trade with other parts of the world.

Re-Export Trade

Re-exports are goods which are exported (1) in the condition in which they are imported or (2) after having undergone minor operations—such as simple blending, husking, repacking—which leaves them essentially unchanged. Traditionally, the greater part of United Kingdom re-export trade is in raw materials and foodstuffs, for example, wool, rubber, tea, non-ferrous metals and fur-skins. In recent years a considerable re-export trade has developed in machinery. Commodities imported from Commonwealth countries and sent on to countries in Europe, particularly traditional re-exports such as tea and wool, account for a considerable proportion of the total value.

In 1964 the value of re-exports was £153 million, £6 million below the peak total reached in 1961, and the principal items were: fur-skins, rubber, raw wool, tea, non-ferrous metals, beverages, aero-engines and electrical and other machinery. About half of the re-exports went to countries in Western Europe. Re-exports of rubber, which tend to fluctuate widely from year to year, fell to £3 million from £18 million in 1962 and £10 million in 1963.

Invisible Transactions

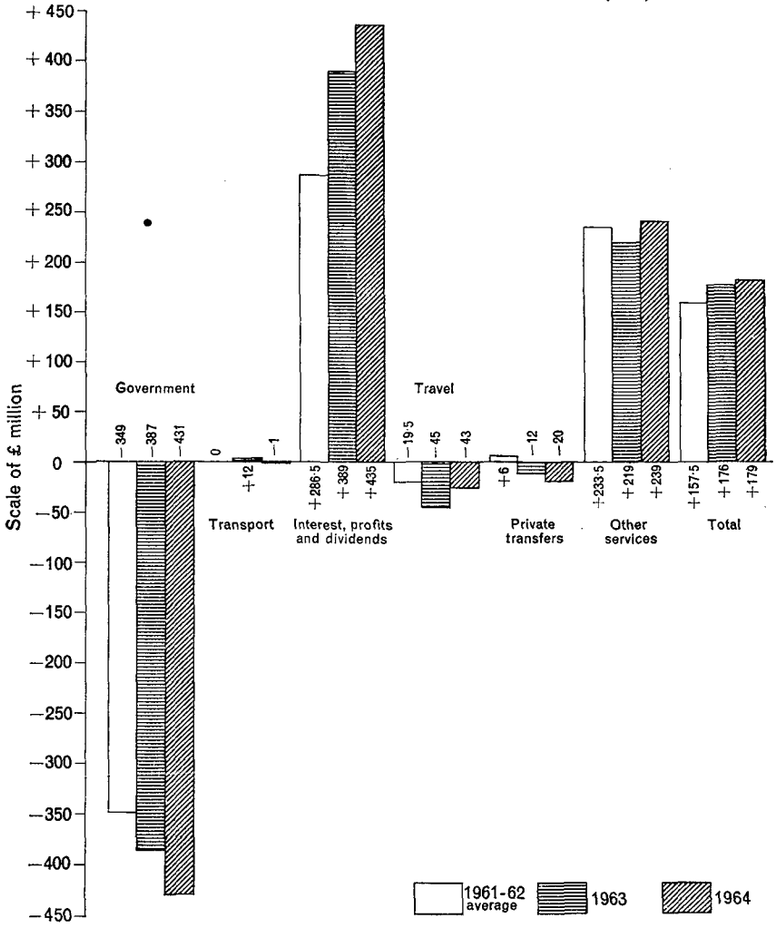
As previously mentioned, the United Kingdom has usually imported more goods than it exports; until a few years ago the gap was normally covered by net earnings from invisible transactions, but between 1958 and 1961 this source of foreign earnings declined sharply from £295 million to £127 million. The invisible balance improved, however, in 1962 and has fluctuated little

since then. In 1964 it was £179 million; total credits were valued at £2,651 million and total debits at £2,472 million.

Invisible transactions are divided for statistical purposes into six main groups: government; transport (mainly shipping); interest, profits and dividends; travel; other services; and private transfers. Some of these figures are precise (for instance, for government transactions), others are estimates. The diagram below shows the breakdown of the figures from 1961 to 1964.

Under the heading of Government current transactions, the main items on the debit side are rising military expenditure overseas and gifts, mainly to less-developed countries. Shipping receipts come mostly from export freights and cross trades between other countries and also from passenger traffic. Shipping payments, on the other hand, arise mainly on account of foreign tramp shipping services. Shipping transactions produced a net credit until 1959 but have registered net deficits since then, ranging from £32 million in 1960 to £11 million in 1963. The net deficit in 1964 was £27 million. Net earnings from civil aviation in 1962 and 1963 were enough to

BRITAIN'S INVISIBLE OVERSEAS TRANSACTIONS (net) 1961-64



offset the shipping debits and produce a small favourable balance on the transport account; in the other years since 1960, however, the account has shown a small deficit.

About three-fifths of Britain's receipts under the heading interest, profits and dividends come from investments in the sterling area. The recovery in net earnings under this heading, which started in 1961, has been an outstanding feature of the invisibles account since then, benefiting in 1964 from the postponement of interest due on long-term loans from Canada and the United States. On the debit side, major items include interest paid on sterling held by other countries (which fluctuates with changes in short-term interest rates in Britain) and interest payments on the North American loans. Receipts from travel have increased greatly since 1950, reflecting the growing importance of the British tourist industry (see below), but expenditure on travel and tourism overseas has also expanded, and the net debit, which fluctuated only slightly around an annual average of £19 million between 1959 and 1962, more than doubled in 1963 and 1964. Major components of other services include payments and receipts in respect of insurance and films; expenditure of United States and Canadian forces in Britain; net earnings of merchants; and royalties, commissions, banking and other services.

Tourist Trade

The tourist industry continues to be one of Britain's largest earners of foreign currency. In the ten years 1955–64, overseas visitors spent over £1,600 million in this country. For 1964 alone these tourist receipts were estimated at about £220 million. United Kingdom residents on holiday, or travelling for business or other purposes overseas, spent about £260 million in the same year. The United Kingdom usually has a large net surplus on earnings from tourism with North America and the overseas sterling area, but a substantial net deficit with Western Europe. The total number of visitors to the United Kingdom in 1964, excluding visitors from the Irish Republic, was estimated at about 2·5 million—an increase of some 14 per cent over the 1963 figure, and more than twice the number of visitors in 1955.

Britain's national tourist office is the *British Travel Association*, which derives the major part of its income from a government grant-in-aid. The Association undertakes publicity overseas aimed at attracting visitors to Britain and works towards the improvement of hotel accommodation, catering, transport, entertainment and other amenities for the tourist in Britain. It maintains offices (see Appendix, p. 519) or agencies in 14 overseas countries. The Association works in close collaboration with the Scottish Tourist Board and the Wales Tourist and Holidays Association (contributing to their information and publicity services), as well as the Northern Ireland Tourist Board, which is a statutory body receiving a grant from the Government of Northern Ireland. In Northern Ireland the Ministry of Commerce can assist, by way of grant, schemes submitted by local authorities for the promotion of tourist traffic.

COMMERCIAL POLICY

Britain's prosperity depends on the prosperity of those who buy her exports and theirs will depend on how they sell their exports elsewhere. Thus Britain is a strong advocate of the removal of artificial barriers to trade and to this end has taken a leading part in setting up such organisations as the International Monetary Fund (IMF), the General Agreement on Tariffs and Trade (GATT), the Organisation for Economic Co-operation and Development (OECD) (formerly the Organisation for European Economic Co-operation) and the European Monetary Agreement (formerly the European Payments

Union). Britain has had a large share in these organisations' activities, especially those to free trade from the restrictions which grew up in the second world war and post-war periods. It also played a full part in the United Nations Conference on Trade and Development that was held in 1964, as well as in the Conference's subsequent work.

Customs duties on imports into Britain are divided into two broad categories: revenue duties (to which there correspond excise revenue duties on comparable British produced goods) and protective duties. Purchase tax is chargeable on imported as well as home produced goods but in the main the charge on imports is deferred until the goods are sold by a registered to a non-registered trader. Customs revenue duties in the financial year 1964–65 yielded £1,750 million, by far the greatest part of which came from tobacco and hydrocarbon oils (petroleum products). The yield from protective duties in the financial year 1964–65 was £181 million, or about 3 per cent of the value of all imports.

At the beginning of the twentieth century the only customs duties were those imposed for revenue purposes on a small range of products. Certain duties were imposed during the first world war (the McKenna Duties), in 1921 (for strategic reasons) and in 1925 (initially for revenue purposes) but it was not until the Import Duties Act 1932 that any serious departure was made from the principle of free trade. This measure provided a degree of protection for British industry and, at the same time, a basis for negotiations with foreign countries already in possession of a tariff structure. A series of bilateral trade negotiations between 1932 and 1939 led to some modification in the level of protection but in the next ten years, because of government purchase and import controls introduced during and immediately after the second world war, the tariff lost much of its importance. The substantial relaxation of quantitative import controls from 1949 onwards re-established the tariff as the main instrument of protection.

The Import Duties Act 1958 replaced the existing legislation relating to the protective tariff (i.e. four main Acts and some 70 Finance Act provisions) and brought it up to date in a single measure. Following the passing of the Act, the tariff was recast into an internationally agreed form (the Brussels Nomenclature), which came into use from 1st January, 1959. By the Customs Duties (Dumping and Subsidies) Act 1957, the Board of Trade is empowered to impose duties on imported goods of any description which have been dumped or subsidised and which are causing or threatening material injury to a particular industry.

In October 1964, as part of its immediate measures to deal with the balance of payments situation, the Government imposed a temporary charge on imports at 15 per cent *ad valorem*. In broad terms it applied to all imports except food and feedingstuffs, fuel, unmanufactured tobacco and raw materials. Its purpose was different from that of the protective tariff in that it was designed to curb imports of manufactures and semi-manufactures, which had been rising rapidly, while other measures to improve the balance of payments position took effect. The Government's *Statement on the Economic Situation*, issued at the time, made it clear that the charge was essentially temporary and would be reduced as soon as the balance of payments position permitted and abolished at the earliest opportunity. On 22nd February, the Chancellor of the Exchequer announced that enough progress had been made to enable the Government to reduce the rate of the charge to 10 per cent from 27th April, 1965, on a non-discriminatory basis. The receipts from the charge in the period up to March 1965 amounted to £77 million.

General Agreement on Tariffs and Trade

The United Kingdom's protective tariff has been considerably modified in recent years as a result of a series of multilateral tariff negotiations held under the auspices of the GATT, which seeks to increase the volume of world trade by reducing tariffs and other barriers to trade, and by eliminating discrimination in international commerce. Tariff reductions, and bindings against increase, negotiated between countries under the GATT are applied equally to all other GATT countries under the 'most favoured nation' clause. Customs duties and preferences have been reduced, or bound against increase, on goods which account for about half of Britain's normal imports from other countries which are parties to the GATT, in return for concessions by those countries. In May 1964 GATT Ministers formally launched the new round of tariff negotiations (the 'Kennedy Round') to which Britain has attached the greatest importance. It is hoped that these negotiations will lead to a substantial linear cut in tariffs (50 per cent has been adopted as a 'working hypothesis') together with a reduction of non-tariff barriers and suitable arrangements for agriculture. Exceptions to the linear cut in the industrial tariff were tabled by the major industrial countries in November 1964 and it was planned that specific offers aimed at liberalising trade in agricultural products should have been tabled by September 1965.

Commonwealth Preference

The principle of Imperial Preference had been introduced into the United Kingdom customs duties in 1919 and at the Ottawa Conference in 1932 agreements were concluded with independent Commonwealth countries, providing for reciprocal preferential tariff treatment over a wide range of goods. The Import Duties Act 1932 had already provided for the duty-free entry of goods from the United Kingdom dependencies.

Broadly speaking, goods from Commonwealth countries can enter Britain free of duty or at preferential rates of duty. A few foodstuffs, whatever the country of origin, come in free of duty, but for most others imported from non-Commonwealth sources there are duties, which are quite low except for certain horticultural products.

Imports of most raw materials from all sources are free from protective duties; the only exceptions are where duties are charged on foreign products to give a margin of preference to Commonwealth suppliers. The full rates of duty on semi-manufactures are mainly 15 per cent or less. The range of duties on manufactured goods is much wider, ranging from 10 to 33 per cent *ad valorem*, or higher on a few items. The preferential tariff arrangements have encouraged some of the developing countries in the Commonwealth to build up valuable outlets in Britain for the less complex types of manufacture.

In May 1964 at the United Nations Conference on Trade and Development in Geneva, Britain declared itself prepared to extend tariff preferences to all the developing countries if other major industrialised countries would do the same, if the Commonwealth countries concerned would agree and provided that preferences were not created by introducing new, or increasing existing, general tariff rates.

European Free Trade Association

The European Free Trade Association (EFTA) was set up under the Stockholm Convention of January 1960 by Austria, Denmark, Norway, Portugal, Sweden, Switzerland and Britain, with the object of promoting the harmonious development of trade and reducing trade barriers. Under the Convention, customs tariffs on trade in industrial products between members of EFTA were to be eliminated by 1st January, 1970; but the reductions have been greatly accelerated. Already EFTA duties have been reduced by

70 per cent: that is, to 30 per cent of the basic duty; they will be reduced by a further 10 per cent at the end of 1965, the remaining 20 per cent being eliminated at the end of 1966. An Agreement of Association between Finland and EFTA provides for the extension of EFTA tariff concessions to Finland and for the elimination of Finland's import duties on most EFTA manufactures on 31st December, 1967.

The moves made by the European Economic Community (EEC) and EFTA towards establishing closer economic unity in Europe have a direct and far-reaching influence on tariff policy. In August 1961 the British Government applied formally to join the EEC but negotiations were suspended in January 1963.

Methods of Trading

The export trade and virtually all the import trade of the United Kingdom are conducted by private firms.

Methods of export trading vary considerably, according to the firm, the industry, the product and the market. A good deal of United Kingdom export trade, especially of the smaller manufacturing firms, is conducted through exports merchants in the United Kingdom; many firms, however, sell to importers and consumers abroad through their own agents or resident representatives in the countries concerned; in other cases, sales are made through a firm's own branch offices, distributing organisations or subsidiary sales companies established in overseas markets.

Similarly, in import trade, many large firms engaged in manufacture or domestic trade buy directly from overseas suppliers, while smaller firms may find it more convenient to buy through intermediaries such as import/export houses, commission agents, and the representatives of overseas firms. Since January 1957 overseas trading undertaken directly by the Government has been confined to jute goods; the purpose of this is to protect employment in Dundee, where the jute industry is concentrated and forms the mainstay of employment.

CONTROLS ON TRADE AND PAYMENTS

Most of the restrictions imposed on the movement of goods and services during and immediately after the second world war have been progressively abolished. Because of the heavy balance of payments deficit in 1964 exchange control requirements for investments outside the sterling area have been revised and made more stringent.

Exchange Control

Exchange control is confined mainly to transactions between residents of the United Kingdom and residents outside the sterling area and has been greatly relaxed in the past few years. Since the end of 1958 residents of all countries outside the sterling area have been able to settle transactions between themselves in sterling. Sterling held by non-residents of the sterling area on an external account is freely convertible into other currencies, including dollars.

The only remaining important restrictions relate to the movement of capital from the United Kingdom to non-sterling countries. Exports of goods to destinations outside the sterling area are subject to exchange control and, in general, have to be paid for within six months in an acceptable currency or by sterling from an external account. Control is also exercised over imports to ensure that currency authorised for their payment is, in fact, used for that purpose.

Exchange control policy is the responsibility of the Treasury, but most of the administration is, in practice, carried out by the Bank of England as agent

of the Treasury; and, in turn, the Bank of England has delegated to the commercial banks a wide variety of powers to deal with applications.

Overseas Travel

Since November 1959 there has been no limit on the amount of foreign currency that United Kingdom travellers may take abroad but a closer supervision over the use of foreign exchange for travel purposes was introduced in the 1965 Budget. The amount of sterling notes that British travellers may take out of the country has been reduced from £50 to £25 a journey. Up to £250 in foreign currency (including travellers' cheques) for any one journey is still allowed on demand, but is now recorded in the passports of travellers. Anyone buying more than this in any calendar year is asked to provide evidence to the Bank of England that the funds are required for genuine travel expenditure and will not be used for any other purpose.

Import and Export Control

The Import, Export and Customs Powers (Defence) Act 1939 empowers the Board of Trade to make statutory orders prohibiting or regulating the import or export of goods. The powers of both import and export control derive from the same legislation, but the purpose and mechanism are quite distinct.

Import Licensing

In accordance with its international obligations under the GATT and the IMF, the United Kingdom Government has progressively removed quantitative restrictions from almost all imports from the countries of the free world. The very short list of goods on which controls remain includes some items of special difficulty and a few where restrictions are recognised internationally, such as arms, ammunition and radioactive materials. They require a specific import licence and quotas have been set up for most of them. Some quotas refer specifically to individual countries and are usually shared out among exporters by the authorities of the countries concerned. Others are accorded on an overall or global basis; these are generally allocated by the United Kingdom authorities to United Kingdom importers, usually on the basis of their share of the trade in the commodity in the past. Apart from these quantitative controls, some further restrictions or prohibitions are applied on health grounds (e.g., on animals, plants and drugs).

Export Controls

Except for the control necessary to ensure that exports to destinations outside the sterling area are paid for in the proper manner, United Kingdom exports are not, except in a very minor way, subject to any government control or direction. The few controls that are in operation are imposed to supervise exports of military and strategic importance, to conserve materials, such as metal scrap, which may be in inadequate supply, to assist exchange control operations in preventing the export of capital in the form of valuable goods, and to prevent the export of works of art classed as national treasures, such as paintings, manuscripts and antiques. Normally, individual licences are required for specific consignments of goods subject to export licensing control. Goods controlled for strategic reasons, not included in the category of atomic energy materials and appliances, arms and ammunition, may, with certain exceptions, be exported to the Commonwealth, the Irish Republic, the Republic of South Africa and the United States of America without licence.

GOVERNMENT ASSISTANCE TO OVERSEAS TRADE

The British Government assists exporters[1] by its efforts to create conditions favourable to the export trade and by providing credit insurance facilities and

[1] Export promotion is also assisted by the Scottish Council (Development and Industry) and the Development Corporation for Wales. In Northern Ireland, the Ministry of Commerce provides a liaison service with the Board of Trade Export Services Branch and the overseas posts.

information and advice about opportunities for trade in other countries. Its general economic policy includes the use of fiscal, credit and other measures to maintain a stable economy and to control excessive demand for goods and services by the home market, and action through international negotiation to reduce barriers to the free flow of trade and payments. In October 1964 the Government introduced a scheme for repayment to exporters of sums broadly equivalent to the amounts of certain indirect taxes which enter into the cost of production of exported goods.

Information and Advice to Exporters

Exporters wanting assistance and advice can consult the Board of Trade or the commercial posts overseas. There are posts in all the principal cities and trade centres abroad and they supply the Board of Trade with information of every kind affecting trade with their territories.

Overseas officers regularly report on local economic and commercial conditions, pay special attention to local demand for particular commodities, and generally assist the exporter to overcome any difficulties he encounters in trade with the country in question, particularly those arising out of governmental regulations. These officers investigate potential markets for British products, advise about methods of trading with particular areas, and seek out and pass on opportunities for export business and inquiries for British goods. Assistance is also given to United Kingdom exporters in appointing agents and locating potential importers. From records kept in London, brought up to date by reports from its overseas officers, the Export Services Branch of the Board of Trade can provide information concerning any country on:

(1) prospects for United Kingdom exports and requirements of particular markets;

(2) governmental regulations affecting trade, including import restrictions and tariffs and duties on particular commodities;

(3) methods of trading;

(4) local tastes and preferences in design; and

(5) the commercial standing of firms with which an exporter contemplates business relations.

The Government's official information services overseas help to promote trade by publicising British industrial achievements and providing information on new developments in British industry.

Export Credit Insurance

The Export Credits Guarantee Department is an autonomous government department responsible to the President of the Board of Trade. ECGD carries on a commercial business, providing insurance for exporters against the main risks in selling overseas. These facilities have been progressively developed since the Department was first formed in 1919. From very small beginnings the amount of business covered by ECGD has grown to reach 27 per cent of the country's export trade. ECGD is obliged to carry on its business on a self-supporting basis, and in no way does it provide subsidies to exporters, nor is it a charge on the taxpayer.

The risks covered include insolvency or protracted default of the buyer, governmental action which blocks or delays transfer of payment to the United Kingdom exporter, imposition of new import licensing restrictions in the buyer's country, war between the buyer's country and the United Kingdom, cancellation or non-renewal of a United Kingdom export licence, or 'any other cause of loss occurring outside the United Kingdom and not

within the control of the exporter or the buyer, and not normally insurable with commercial insurers'. Cover may commence from the date of contract or (at lower premiums) from the date of shipment.

The main types of export insurance policy are:

1. *Comprehensive policies* normally covering goods sold on terms of up to six months' credit. The exporter insures the whole of his trade, or the whole of his trade with an agreed group of markets, for the twelve months (or, in some cases, three years) covered by his policy. For certain engineering goods this type of cover is extended to goods sold on credit terms of up to five years.
2. *Specific policies* which cover capital goods sold on credit terms normally not exceeding five years. Specific policies are negotiated for each individual contract.

In April 1961 ECGD introduced financial guarantees for United Kingdom banks providing finance on a long-term basis for overseas purchasers of large capital goods and works, and in January 1962 the London Clearing Banks, the Scottish Banks and a number of insurance companies agreed to provide finance at fixed rates of interest for such loans, and also in respect of other export financing on longer than three years' credit which was secured by an ECGD guarantee to the bank concerned. In April 1965 bank guarantees covering 100 per cent of the credit, instead of the previous 90 per cent, were made available for two or more years' credit and at the same time the premium was halved. The value of export contracts financed through such guarantees totalled more than £106 million in 1964–65. Cover is also available for British concerns carrying out services (including construction projects) for overseas firms or, under certain conditions, entering into an international consortium.

The exporter or merchant is normally required to retain an interest in the debt or risk involved and, consequently, guarantees are given up to a maximum of between 85 and 95 per cent of loss. In February 1962 this was extended to 100 per cent for transactions involving over three years' credit which had already operated satisfactorily for two years. The percentage of cover on insolvency and protracted default losses was increased from 85 per cent to 90 per cent in April 1965. At the same time the two years' 'trouble free' period was reduced to one year. Premium rates are assessed separately for each country and vary according to the risks and the terms of payment.

Trade Fairs

Some 300 exhibitions, of which about 200 were trade fairs, were held in 1965, compared with 154 in 1954. The number of trade fairs has more than trebled in the last ten years. Some of the specialised fairs, such as the Motor Show and the Royal Agricultural Show, attract large numbers of the public as well as many trade buyers from home and overseas and provide an important means of advertising and selling British goods.

United Kingdom products are shown at most of the large international trade fairs throughout the world. For example, the United Kingdom is usually well represented at the Milan, Hanover and Poznan Fairs. In addition, since 1954 through a subsidiary company, British Overseas Fairs, Ltd., the FBI has organised British Trade Fairs in ten major cities abroad, including the British Exhibition in Tokyo in September 1965. British Trade Fairs were also organised by Industrial and Trade Fairs Ltd., in Moscow in 1961 and Peking in 1964. United Kingdom manufacturers have been prominent at the many important specialised international fairs which are held in North America and Europe.

Participation in trade fairs, 'British Weeks' and store promotions overseas is a form of export promotion for which the Government provides information, advice and, in certain cases, free facilities. The amount allocated to the Board of Trade for these purposes has risen from £60,000 in 1955–56 to £1·165 million in 1965–66. British weeks differ from trade fairs and exhibitions in that they are primarily designed to promote consumer goods in shops and other retail outlets in chosen commercial centres overseas.

Exports Councils

The British National Export Council (BNEC), sponsored by representatives of industry, trade, finance and organised labour in Britain, was established in July 1964. The Council is an independent body but has the support of the Government. Linked with it are the Export Council for Europe, established in 1960, the Committee for Middle East Trade (formerly the Council for Middle East Trade set up in 1963) and three committees also formed in July 1964, to continue and develop the work formerly carried out in Canada, the United States and Latin America by the Western Hemisphere Export Council.

A Commonwealth Export Council was set up early in 1965 in conjunction with the BNEC to promote British exports to the Commonwealth. In addition to the Committee for Exports to Canada referred to above, five new Area Committees have been formed to cover Australia, New Zealand and Commonwealth countries in Africa, Asia and the Caribbean.

The tasks of the BNEC are to keep all British export activity under review; to initiate, guide and inspire export efforts of British industry; to co-ordinate the work of the associated Area Committees whose purpose is to encourage exports to particular areas of the world; and to provide the necessary finance and services for this purpose.

FINANCING OF INTERNATIONAL TRADE

In the nineteenth century, the rapid growth of British industry, commerce and shipping under the stimulus of the industrial revolution made Britain the market as well as the workshop of the world. It became the site for the chief world markets in raw materials (see below), freight, insurance, and precious metals. A sound commercial banking system and a flexible system of central bank control have been built up, while specialised institutions such as discount houses, merchant banks, accepting houses, the stock exchanges, investment trusts and finance corporations have evolved to satisfy particular needs for short-term or long-term finance. The facilities provided by merchant banks and accepting houses, for example, have long been used to finance shipments of goods not only to and from Britain, but also between overseas countries themselves.

At the same time, the banks which were already engaged in financing trade naturally developed to become channels for finance for longer-term ventures. British capital invested in overseas countries has assisted their development, increased their output and exports, and provided markets for manufactured goods. Since the end of the war there has been a substantial volume of loans floated in the London capital market by Commonwealth Governments (see p. 437). A number of specialised institutions have also been established in recent years to assist the provision of financial services for overseas countries (see p. 438).

Commodity Markets

Britain is the traditional centre for marketing many of the world's basic commodities. Most of these markets were closed during the war but most, if not all, have now reopened and many have fully regained—some even surpassed—their previous position. Among the more important are the Baltic

Exchange (the market for shipping and air transport, grain, seeds and vegetable oils), the London Commodity Exchange (cocoa, coffee, copra, hides and skins, rubber and sugar), the London Wool Exchange, the London Metal Exchange, the Liverpool Cotton Exchange and the Liverpool Corn Exchange. These markets not only cater for the import of goods for home consumption but do much business in effecting transactions between buyers and sellers in other countries. In addition to these formal markets, there is scarcely any product which cannot be traded through an intermediary in the United Kingdom. For example, London is the world's most important philatelic market and also the leading international centre for the sale of works of art.

The Foreign Exchange Market

The Foreign Exchange Market is subject to United Kingdom exchange control regulations governing the purchase and sale of foreign currencies in the sterling area, but these regulations have been progressively relaxed in recent years. The turnover of the market has increased materially since the introduction in December 1958 of external convertibility for the principal European currencies.

The market consists of about 130 authorised banks and nine firms of brokers, all linked together by telephone in the United Kingdom, and by telephone, telex and cable with overseas centres.

The London Gold Market

The London Gold Market, which had remained closed from the outbreak of war in 1939, was reopened in March 1954, under the general supervision of the Bank of England. It has regained its pre-war position as the leading centre for dealings in gold, handling the major part of the gold coming on to the free markets of the world. All authorised banks may deal in gold but, in practice, dealings are largely concentrated in the hands of the five members of the gold market plus one or two others. Membership of the market confers the right to be present at the daily price-fixing when the official London gold price is settled.

An important development has been the setting up of a gold pool, initiated in 1960 to co-ordinate the gold operations in London of certain European central banks and the Federal Reserve Bank of New York. The pool consists of a selling consortium, which is not in operation all the time but may be invoked, to stabilise the market, when conditions demand, and a buying syndicate.

The Sterling System

As a result of Britain's early lead in international trade and finance, several countries tended not only to use sterling as their natural currency for international transactions, but also to maintain central currency reserves in Britain. When Britain abandoned the gold standard in 1931 these countries, which came to be known as the 'sterling bloc' and later as the 'sterling area', did likewise, and pegged their currency exchange rates to the pound sterling. In 1939, after the outbreak of war, the pound sterling was no longer freely convertible into other currencies and the sterling area became more formally defined as a currency area for exchange control purposes. The United Kingdom imposes no exchange control on transactions with residents of other sterling area countries.

All the Commonwealth countries (except Canada), together with Burma, Iceland, the Irish Republic, Jordan, Kuwait, Libya, the Republic of South Africa, South West Africa, the British protected States in the Persian Gulf, and Western Samoa are members of the sterling area. These countries contain one-quarter of the world's population and account for one-quarter of the world's trade. The main feature of the sterling area is that the greater part of

the overseas trade of member countries is financed in sterling; they keep their foreign reserves largely in the form of sterling and generally maintain a fixed relationship between their currencies and sterling. Member countries for the most part sell their foreign currency earnings in London in exchange for sterling and can purchase for sterling the foreign currency they require. They generally also sell gold in the London market for sterling. The United Kingdom reserves of gold and foreign currencies are held in the Exchange Equalisation Account, which buys and sells exchange in the market as appropriate. All these currency arrangements are voluntary; there are no strict or centralised rules of conduct.

THE BALANCE OF PAYMENTS

Estimates of the United Kingdom's balance of payments are published quarterly and provide a summary of the most important transactions with other countries, classified by type of transaction and by area.

The transactions fall into three main groups—current account, long-term capital account and monetary movements. The balance on current account is composed of the balance of visible trade (i.e. the difference between merchandise imports and exports and re-exports) and the balance of invisibles. On long-term capital account, the main groups of items are intergovernmental loans (including amortisation) and other identified net long-term investment abroad by United Kingdom residents, or in the United Kingdom by non-residents. The third heading, monetary movements, reflects in part the United Kingdom's position as an international banker. It includes identified capital transactions not of a long-term character (e.g., changes in acceptances); changes in overseas sterling holdings and changes in the United Kingdom reserves of gold and convertible currencies.

Britain has for long been a net exporter of capital. To support this outflow and, in particular, to give financial assistance to developing countries, it needs a surplus on current account. The country tends to import more than it exports but its trade deficit has usually been more than offset by the surplus earned on invisible transactions. Britain's invisible earnings are now running at a lower level than some ten years ago, so that expanding its exports and narrowing the gap between imports and exports are aims of ever-increasing importance.

Between 1945 and 1951 the balance of payments on current account fluctuated widely. From 1952 to 1963 there were surpluses in each year except in 1954, 1960 and 1961. In 1964 there was a substantial deficit of £374 million made up of a surplus of £167 million in the current balance with the overseas sterling area and a deficit of £541 million in the balance with non-sterling area countries.

In almost every year from 1950 to 1959 the deficit on visible trade was more than balanced by invisible earnings, but in 1960 and 1961 the trade deficit rose and the favourable net balance on invisibles fell to a level insufficient to provide a current account surplus. There was a significant improvement in the net balance on both visible trade and invisibles in 1962 and 1963; in 1964, however, although the net credit on invisibles remained at about the same level as in the previous two years (see p. 424), the trade deficit rose sharply.

In the ten-year period 1955–64 private investment abroad (net of disinvestment) averaged about £300 million a year and in 1964 rose to £423 million. Overseas private investment in Britain (also net of disinvestment) averaged around £200 million a year, so that the net outflow of long-term capital on private account averaged about £100 million a year. In 1964 it was

£251 million. The net outflow of official capital has risen, reflecting mainly expansion of the economic aid programme: in 1955–64 it averaged £70 million a year and it was £120 million in 1964. Net investment abroad in all forms, official and private, has thus averaged nearly £170 million a year, whilst the average surplus on current account has been £25 million. In his Budget statement, presented to the House of Commons on 6th April, 1965, the Chancellor of the Exchequer announced measures to strengthen Britain's balance of payments, some of which will moderate the heavy net outflow of private investment.

Movements of capital, both short-term and long, may mean that changes in balance on current account are not necessarily reflected in the reserves of gold and convertible currencies. These rose by £31 million in 1961, strengthened by borrowing from the International Monetary Fund (IMF), but fell by £183 million and £53 million in 1962 and 1963 and by a further £122 million in 1964. At the end of 1964 they amounted to £827 million, of which £763 million was in gold. Britain's net external liabilities in sterling amounted to £4,050 million at the end of 1964. Nearly two-thirds of these were towards countries in the overseas sterling area. Table 30 summarises Britain's balance of payments from 1958 to 1964.

TABLE 30
UNITED KINGDOM GENERAL BALANCE OF PAYMENTS

£ million

	1961	1963	1964	Average 1955–64
Visible Trade[a]				
Imports (f.o.b.)	4,041	4,367	5,024	3,891
Exports and re-exports (f.o.b.)	3,892	4,287	4,471	3,727
Visible Trade balance	− 149	− 80	− 553	− 165
Invisible balance	+ 127	+ 176	+ 179	+ 192
Balance on current account	− 22	+ 96	− 374	+ 27
Balance on long-term capital account[b]	+ 50	− 174	− 371	− 165
TOTAL	+ 28	− 78	− 745	− 139
Balancing item[c]	− 8	− 73	+ 1	+ 56
Balance of monetary movements (change in external position)[b]	− 20	+ 151	+ 744	+ 83

Source: *Economic Trends.*

[a] The values of exports and imports shown in this table differ from those in the Report on Overseas Trade used in Table 28 because of differences of coverage, valuation and methods of recording.

[b] An increase of assets is shown by a minus sign and a decrease by a plus sign. An increase in liabilities is shown by a plus sign and a decrease by a minus sign.

[c] The balancing item is introduced to balance the account. It represents the net total of errors and omissions in other items.

In addition to its reserves of gold and convertible currencies, Britain has drawing rights on the IMF based on its quota, which was raised to £696 million in 1959. Under its stand-by arrangement with the IMF, made in August 1962 and renewed annually since then, Britain drew $1,000 million (£357 million) in eleven different currencies in December 1964. At the end of May 1965 a further $1,400 million (£500 million) was drawn. Britain has

had recourse to the IMF on three previous occasions, of which the most recent was in 1961 when $1,500 million was drawn. The final instalment in repayment of this drawing was made in August 1962.

Informal arrangements between the central banks of certain European countries to hold each other's currencies, together with the gold pool (see p. 433), provide further means of safeguarding the position of sterling. In November 1964 the Bank of England arranged for $3,000 million to be made available for the support of sterling from eleven central banks, including those of the United States, Canada and Japan, as well as the Bank for International Settlements and the US Export-Import Bank. All short-term assistance outstanding under this facility was repaid in May 1965, but the swap facility with the Federal Reserve Bank of New York was reconstituted at the figure of $750 million, to which it had been raised in November, and the Export-Import Bank facility remained available at the level of $250 million. At the end of May 1965 the reserves stood at £1,021 million.

An additional line of reserves is provided by the dollar securities held by the Exchange Equalisation Account, with a market value which has recently fluctuated around $1,250 million.

EXTERNAL ASSETS AND LIABILITIES

In March 1964 the Bank of England brought together for the first time a number of component items relating to Britain's external assets and liabilities at the end of 1962. The incompleteness or unavailability of statistics for several important items had the effect of understating Britain's external assets more seriously than the corresponding external liabilities. But two main features of Britain's international capital position were clearly apparent. One was the heavy net long-term indebtedness of the United Kingdom Government to overseas Governments. This amounted to £1,532 million, composed of a net liability of £1,793 million to countries outside the sterling area and a net claim of £260 million against overseas sterling area countries.

In marked contrast to this heavy official long-term debt stood the much larger overseas assets of the private sector, which amounted in aggregate to about £8,000 million. Roughly £3,400 million of these investments were in overseas sterling countries and £4,600 million in countries outside the sterling area. By comparison, the corresponding external liabilities of the private sector were in aggregate about £2,800 million (due mainly to residents of non-sterling countries). It is estimated that by the end of 1964 the assets of the private sector were approaching £10,000 million, of which direct investment, including oil, accounted for some £6,000 million (at book value) and portfolio investment for under £4,000 million (at current market prices).

Official External Liabilities

Britain's official long-term liabilities have mostly arisen from the second world war and its aftermath. At the end of 1963, £1,884 million was still outstanding, of which the greater part (£1,759 million) was owed to the United States and Canada.

The largest item among official external long-term claims is British Government aid (see p. 438).

Private Investment in Britain: Incoming

Overseas investors in Britain are allowed to repatriate the proceeds of the sale of their direct investments, including any capital gains that may have accrued, provided that the investment was made after 1st January, 1950. Earned profits and dividends can be transferred, irrespective of the amount; transfers of this kind have never been restricted.

Overseas long-term investment in the private sector of the British economy has increased substantially since the war. According to a survey by the Board of Trade, it is estimated that overseas portfolio holdings of British ordinary shares at the end of 1962 (the latest year for which figures are available) were of the order of £700 million, with roughly a further £35 million in debentures and preferences shares. Overseas direct investment in Britain of companies incorporated abroad (except banks, oil and insurance companies) was about £1,400 million, and the approximate book value of the net assets of United States and European oil companies was some £700 million.

By far the largest proportion of private investment by overseas countries in Britain is made by United States firms. It has been estimated[1] that the total value of United States direct investments in Britain amounted to $4,216 million (£1,506 million) at the end of 1962, compared with $847 million (£303 million) in 1951. Just under two-thirds of these investments were in manufacturing and rather less than a quarter in petroleum; most of the remainder were in distribution and other trade enterprises.

Private Investment: Outgoing

Private investment abroad may take several forms: portfolio investment, including the raising of loans on the London capital market; or direct investment by the establishment of subsidiary companies, by the ploughing back of profits earned overseas and participation, jointly with domestic capital, in enterprises overseas.

The United Kingdom imposes no restriction on investment in the sterling area by United Kingdom residents and about 60 per cent of Britain's total supply of private long-term capital abroad and 40 per cent of its direct investment goes to Commonwealth countries. Direct investment is frequently made from a firm's existing resources. However, borrowers outside the United Kingdom must normally obtain the consent of the Treasury (which is advised by the Capital Issues Committee) if the amount borrowed exceeds £50,000 in any one year. Borrowing by Commonwealth and Colonial Governments in the London capital market has fallen in recent years, but averaged about £50 million a year in the 1950s. The market's facilities have been made available to the member governments of EFTA. Finance is also made available by the Commonwealth Development Finance Company (see p. 415).

Investment outside the sterling area is subject to Exchange Control regulations and, broadly speaking, official exchange is only available for direct investment projects which promise benefit to the United Kingdom balance of payments in the short term. Direct investment projects which do not satisfy this test may be financed by borrowing abroad or by using the proceeds of the sale of foreign securities.

Britain's private long-term capital assets abroad include portfolio investments which, at the end of 1962, had a total estimated market value of some £3,000 million. Published statistics show that £1,200 million was in the hands of financial institutions other than banks (of which assets are mainly short-term), implying that £1,800 million belonged to private individuals and companies.

In addition, there are direct British investments abroad, for which figures are published regularly by the Board of Trade, relating to all companies excluding oil and insurance up to 1962 and excluding oil only from 1963.

[1] United States Department of Commerce's *Survey of Current Business*, August 1964.

These indicate a book value of about £3,600 million at the end of 1962. The approximate book value of oil companies' assets at the end of 1962 was some £1,100 million. The total value of the overseas interest of British insurance companies is not known but, according to United States official estimates, the value of direct investments by these companies at the end of 1960 in the United States alone amounted to about £350 million. The British insurance industry also operates extensively in other foreign countries and throughout the Commonwealth. The annual survey by the Board of Trade estimated that the flow of private direct investment abroad by United Kingdom companies (excluding oil) was about £262 million in 1964, a rise of £10 million compared with the previous year; in 1963, 57 per cent was directed to the sterling area, some 13 per cent to North America and about 21 per cent to Western Europe. The figures include long-term and short-term investment and reinvested profits.

Official External Assets

Owing to the increase in recent years in British Government aid to developing countries, inter-governmental loans form the largest item among official external long-term claims. The total of such loans outstanding at the end of 1963 was £449 million and included £314 million in loans to governments of overseas sterling area countries. Amounts owed by countries outside the sterling area are mostly in respect of advances by the British Government in the second world war. Other official lending includes investments of the Commonwealth Development Corporation (see below) and the United Kingdom Atomic Energy Authority.

In addition, there are the official subscriptions to, and shareholdings in, international financial organisations (see below) and the substantial government portfolio of dollar securities. The British Government also owns real estate overseas, such as embassy buildings and military installations.

UNITED KINGDOM GOVERNMENT AID FOR DEVELOPMENT

Loans and gifts to the less-developed countries for economic development, technical assistance, budget support and emergency relief from the United Kingdom Exchequer since 1951 have amounted to nearly £1,550 million and in the four years 1961–64 averaged £165 million a year (see Table 31). The greater part of such assistance goes to developing countries in the Commonwealth. The department responsible is the Ministry of Overseas Development (ODM, see p. 56).

This assistance takes two forms: gifts and loans, and payments for technical assistance arranged directly with the country receiving help (bilateral assistance); and contributions to international bodies (multilateral assistance). The division of assistance is shown in Table 31. In 1964 bilateral assistance totalled £174·5 million and multilateral assistance was £16 million. Bilateral technical assistance, in so far as it is quantitatively assessable, accounted for about £25·1 million, being nearly four times greater than it was in 1960. About half of Britain's governmental aid goes to Commonwealth countries in Africa.

The terms of aid have been progressively softened over the last few years. A substantial amount has always been provided in the form of grants. Since 1958 the maturity period of development loans has lengthened from a norm of 15 years to between 20 and 25 years. Grace periods on the repayment of capital during periods extending up to the first seven years of the life of the loan have been granted on a widening scale. In 1963 the Government announced its readiness to grant waivers for periods of up to seven years of the interest payable on loans by countries whose position justified such a concession. In some cases this has reduced the effective rate of interest

payable over the life of the loan by nearly half, compared with the normal rate (which is based on that at which the Government can itself borrow), plus a small management charge. In June 1965 the Minister of Overseas Development stated that the Government recognised that the value of the waiver was in some respect limited and that some more flexible means were needed of giving relief in certain cases. It had decided, therefore, to make loans free of interest to certain developing countries.

There are several public sources of finance from which United Kingdom funds are made available for overseas development. The following are the principal forms of machinery through which funds are provided.

TABLE 31
ASSISTANCE BY THE UNITED KINGDOM GOVERNMENT FOR DEVELOPING COUNTRIES, 1960–63

£ million

	1961	1962	1963	1964
Commonwealth countries (including dependent territories)	144·5	126·6	119·1	154·1
Gifts	47·7	44·4	39·5	47·9
Loans	80·8	61·9	57·8	82·9
Technical assistance (mainly grants)[a]	16·0	20·2	21·8	23·3
Other countries	10·9	16·6	19·8	20·4
Gifts	8·5	7·8	6·5	9·1
Loans	1·6	7·2	11·9	9·6
Technical assistance (mainly gifts)[a]	0·9	1·6	1·5	1·8
Contributions to international organisations	6·5	7·2	18·9	16·0
TOTAL	161·9	150·4	157·9	190·5

Source : *Financial Statistics*, April 1965

[a] The figures do not cover all technical assistance provided by the United Kingdom, some of which cannot be assessed in quantitative terms.

Commonwealth Assistance and similar Loans

Under the Export Guarantees Acts 1949–64, the Government has authority to give economic assistance to overseas countries. Securities issued by the borrowing country are acquired by the Export Credits Guarantee Department (ECGD), and their purchase price used to pay for British exports. The loans, most of which are those known as Commonwealth Assistance Loans, are made through these powers to overseas Governments and bear interest at rates related to the notional rates for British Government borrowing.

From 1949 to February 1965 sixty agreements with a total value of over £426 million had been made, of which all but eight had been made since mid-1958. The total includes twenty-nine loans to India amounting to about £335·5 million, twelve to Pakistan to a value of £64·1 million, seven to Yugoslavia totalling £24·6 million and five to Nigeria valued at £30·1 million. For the more recent loans, repayment periods are up to 25 years and in most cases there is a grace period before repayments begin. During 1963–64, twenty-six agreements, to the value of £55·9 million, were concluded.

Dependent Territories

The Colonial Development and Welfare Acts are the principal machinery for providing assistance for development in British dependent territories: £340 million in grants has been made available for the period 1946–66. The 1959

and 1964 Acts enable Exchequer loans to be made, to a total of £105 million for the years 1959–66, to finance development expenditure. By the end of the 1964–65 financial year £82·2 million had been disbursed.

The Commonwealth Development Corporation (CDC) (formerly the Colonial Development Corporation), which is financed from Exchequer funds, provides capital for development projects in Commonwealth countries. Up to the end of 1964, the CDC had capital commitments totalling £125 million, of which two-thirds were in Africa.

The CDC is empowered to undertake schemes in British dependent territories and in independent Commonwealth countries in which it operated before independence.

Technical Assistance

About one-seventh of Britain's governmental aid contribution is directed to technical co-operation efforts. Under the Colombo Plan for Co-operative Economic Development in South and South-East Asia it is providing £5 million in the three years to 1966 for technical assistance, and over 5,650 people have come to Britain for training under the plan. (The United Kingdom's total development assistance to the area from the beginning of the Colombo Plan in 1951 to the end of June 1964 amounted to £294·4 million.)

Technical assistance is an important element in the Special Commonwealth Assistance Plan for Africa (SCAAP); the largest item in the estimated expenditure for 1965–66 of the ODM on grants and services connected with bilateral overseas aid is £34 million to the SCAAP. British contributions include technical services, educational and training facilities in Britain, the provision of specialist advisers, and of teachers under the Commonwealth Educational Co-operation Scheme. During the academic year 1963–64 some 64,000 students and trainees from overseas were studying in Britain, about 50,000 from developing countries. Under the Overseas Service Aid Scheme overseas Governments can retain the services of trained and experienced staff (at present numbering between 15,000 and 20,000) until they can be replaced by local people.

Arrangements are also made for supplying technical assistance under the Central Treaty Organisation (covering Pakistan, Iran and Turkey) and through the Foundation for Material Assistance in Africa (FAMA).

Inter-governmental Organisations

Britain's subscription to the International Bank for Reconstruction and Development (IBRD) and its two affiliated organisations, the International Finance Corporation and the International Development Association (IDA) is the second largest of any country. Britain's contribution of £47 million to IDA is being increased by a further £35 million over the three years 1965–67.

For technical aid through the machinery of the United Nations, Britain's subscription in 1965 to the Expanded Programme of Technical Assistance amounted to $4·75 million and to the United Nations Special Fund $7 million.

INTERNAL TRADE

The internal trade of the United Kingdom can be divided into two broad categories: trade in raw materials, capital goods and intermediate products (for example, vehicle components) and trade in consumer goods, involving the network of distributive trades by which home produced or imported goods reach the consumer. (The pattern of consumers' expenditure is outlined in Chapter 10, The National Economy.)

There have been a number of official statistical inquiries into the distributive trades. Most recently, during 1963 and 1964, the results of a full Census of Distribution for 1961 were published by the Board of Trade, covering the retail and (related) service trades in Britain (but not Northern Ireland). This census was only the second of its kind undertaken in Britain; the first, covering also the wholesale trades, related to 1950. A sample inquiry, however, was conducted by the Board of Trade into the retail and service trades in 1957 and a full-scale inquiry into the wholesale trade for 1959. Sample monthly and annual inquiries are also undertaken, covering a few aspects of the distributive trades; for instance, turnover, stocks and capital expenditure.

WHOLESALE TRADES

Only a proportion of the trade in consumer goods passes through wholesalers: sales are also made to consumers through producers' own selling organisations (including their own retail outlets and mail order business); and other sales are made directly by producers to retailers. Wholesale channels are particularly in evidence in the distribution of textiles, agricultural produce and foodstuffs. The inquiry made by the Board of Trade in respect of 1959 showed that out of a total of 19,000 business units engaged in wholesale distribution in Great Britain, over 3,000 dealt in clothing, footwear and textiles, 2,000 in grocery and provisions, 2,000 in vegetables and fruit, and over 3,000 in other food and in drink. In addition, there were 8,000 dealers (wholesale or retail) in coal, builders' materials, grain or agricultural supplies, and 7,000 dealers in other industrial materials and machinery.

The value of stocks held by wholesalers and dealers at the end of 1964 is estimated to have been £1,100 million; expenditure on capital assets during the year was about £150 million.

Methods of wholesale distribution vary according to the type of merchandise handled. Fish, for example, is auctioned at the ports to port wholesalers who sell to inland wholesalers at the main distribution centres or, in some cases, direct to retailers; fruit and vegetables, on the other hand, may be sold by growers to commission agents who dispose of the produce either to wholesalers or direct to retailers, or alternatively the grower may deal only with wholesale firms.

London's wholesale markets are of outstanding importance in the distribution of foodstuffs, particularly imported supplies. Covent Garden handles about 1·2 million tons of fruit and vegetables each year; nearly 8,000 tons of meat pass through Smithfield market each week; Billingsgate is the principal distributing centre in Britain for fish. Other markets in London include those at Leadenhall (poultry) and Spitalfields (fruit and vegetables).

The co-operative movement in Britain has established its own wholesale societies, the two largest being the Co-operative Wholesale Society Ltd. (CWS) and the Scottish Co-operative Wholesale Society Ltd. (SCWS) to serve the needs of retail societies, membership being restricted to incorporated co-operative organisations. The CWS had sales of £480 million in 1963 and the SCWS had sales of £89 million.

Two kinds of voluntary wholesale chains have developed in recent years. Firstly, local retailers' buying groups were formed and later (since 1954) wholesaler-sponsored voluntary chains were set up. The latter are groups of independent traders linked to a wholesaler or a group of wholesalers. Both kinds benefit from the lower operating costs of large-scale trading without losing their independence and both are of roughly equal importance. The 1961 Census of Distribution showed that about 27 per cent (or 40 per cent in terms of turnover) of smaller grocers—mostly the medium-sized inde-

pendents and small multiples with not more than nine branches—belonged to these chains.

TABLE 32
MAIN GROUPS OF RETAIL BUSINESS

	Number of Establishments	Turnover £ *million*		Percentage change in turnover	
	1961	1957	1961	1957–61	1961–64
Independent Businesses	480,612	4,799	5,379	+ 12	+ 9
Multiple Traders ..	67,299	1,884	2,580	+ 37	+ 23
Co-operative Societies ..	29,396	905	959	+ 6	+ 2
Electricity and Gas Showrooms	2,791	62	104	+ 67	+ 45
Mail Order Businesses ..	556[a]	126	227	+ 79	+ 42
TOTAL	580,654	7,776	9,250	+ 19	+ 13

[a] Number of organisations.

RETAIL TRADE

Types of Retail Shop

Retail businesses in Britain may be classified under three main headings: (1) retail co-operative societies (see p. 446); (2) multiple traders, that is, organisations other than co-operative societies with ten or more branches; and (3) independent retail businesses, including for this purpose the small multiple stores (i.e. chains of stores with nine or fewer branches). Businesses in each of these categories may own department stores, defined as shops with 25 or more persons engaged and selling a wide range of commodities, one of which must be clothing. Other retail outlets include gas and electricity showrooms owned by the area gas and electricity boards and mail order businesses (see p. 445). Table 32 shows the number of establishments and turnover for some of the main groups of retail business between 1957 and 1964.

Out of a total of over 580,000 establishments recorded by the 1961 Census of Distribution, and shown in Table 33, grocery and other food retailing groups numbered over 278,000 establishments, and the clothing and footwear group about 92,000.

A very wide range is covered in the size of retailing establishments. On the one hand there were ten shops (nine of them department stores) with sales in 1961 exceeding £5 million or having takings of more than £2,000 an hour; at the other extreme there were more than 70,000 establishments taking less than £2,000 in a year. Some of these are market and street traders, whose volume of business may be very small.

The 1961 census showed that, in comparison with 1957, a larger volume of trade has been handled by almost exactly the same number of shops and by much the same number of people. A notable feature was the continued expansion of the large multiple firms; these showed a further increase between 1961 and 1964 relative to other types of shops. Independent shops, however, still account for half of Britain's retail trade.

Multiples and Large Establishments

According to the Census of Distribution there were nearly 70,000 shops owned by multiples (including multiple departmental stores) in 1961, having a total turnover of £2,580 million. This form of organisation showed the largest rise in numbers between 1957 and 1961 and their share in total sales went up from 25 per cent to 29 per cent. In the food trades their turnover increased by 42 per cent, compared with 11 per cent for independent retailers and only 3 per cent for co-operative societies. Other large retailers (small chains with from five to nine branches and other firms with 25 or more

persons engaged) appear to have about maintained their relative position from 1957 to 1961. Large traders of all kinds (including co-operative societies) accounted for nearly 50 per cent of sales in food shops as a whole and for 60 per cent of the sales of all clothing shops. The number of co-operative stores increased slightly between 1957 and 1961 but their share in total retail trade dropped from 12 to 11 per cent. They account for a fifth of the turnover of all grocers and a third of the turnover of all dairymen.

TABLE 33
RETAIL AND SERVICE TRADES BY KIND OF BUSINESS

	Number of Establishments	Turnover £ *million*		Percentage change in turnover	
	1961	1957	1961	1957–61	1961–64
Retail Trades					
TOTAL ..	580,654	7,776	9,250	+ 19	+ 13
Grocers	149,548	2,031	2,353	+ 16	+ 12
Other food retailers ..	128,910	1,552	1,785	+ 15	+ 12
Clothing and footwear shops	92,426	1,146	1,339	+ 17	+ 10
Durable goods shops ..	48,550	703	902	+ 28	+ 16
Confectioners, tobacconists, newsagents	70,662	703	800	+ 14	+ 13
Other non-food shops ..	86,252	752	915	+ 22	+ 14
Variety and other general stores	2,966	308	384	+ 25	
Department stores ..	784	454	545	+ 20	+13[b]
Mail order businesses ..	556[a]	126	227	+ 79	+ 42
Service Trades					
Boot and shoe repairers ..	11,154	23	25	+ 13	—
Hairdressers	40,152	62	97	+ 56	—
Laundries, launderettes and dry cleaners	4,573[a]	—	112	—	—

[a] Number of organisations.
[b] Excluding department stores owned by co-operative societies.

Independent Shops

Smaller independent shops have been giving ground only slowly in the face of increased competition from the larger undertakings. The proprietors of many of the smaller shops often have other means of livelihood. Average turnover per shop increased, though by less than for the retail trade as a whole. None the less, allowing for a 4 per cent increase in prices, the average small independent shop sold more goods in 1961 than in 1957.

Department Stores

There were nearly 800 department stores in Britain in 1961, having a turnover of nearly £550 million—about 6 per cent of the total turnover of all retail establishments. Department stores were defined for the purposes of the 1961 census as having 25 or more persons engaged in selling clothing and at least four other major commodity groups. Women's, girls' and infants' wear, haberdashery and other drapery was the most important category of goods sold, accounting for over a third of turnover. A firm or a group of firms frequently owns several department stores. Three groups of this kind owned 145 stores in 1961 and co-operative societies owned a further 210 stores. In 1961 there were 53 stores each with a turnover above £2 million, accounting

for nearly 40 per cent of the turnover in this kind of business. Of the nine department stores, mentioned on p. 442, which had a turnover of over £5 million, six were in the London area.

Recent Trends in Retail Trade

In broad terms, the kinds of retail trade which have been expanding most rapidly since 1957 are the household goods shops—especially radio and television shops and do-it-yourself shops—and chemists and booksellers. The share of foodstuffs in total retail trade has been roughly constant, though off-licences (shops and other establishments selling beer, wines and spirits), dairies and bread and flour confectioners have increased by more than the average.

Value of Retail Sales

The value of retail sales increased by 13 per cent between 1961 and 1964 (an increase of just over 4 per cent per year), roughly the same as between 1957 and 1961 but less than between 1950 and 1957 (6 per cent). For 1964, as a whole, retail sales increased compared with 1963 by 5 per cent in value and by 2 per cent in volume. Food sales rose by 5 per cent in value and 1 per cent by volume but for non-food shops there was an increase in real terms of 4 per cent. Sales of durable goods increased by 7 per cent in 1964, the business of gas and electricity showrooms being particularly buoyant. Clothing and footwear sales, however, showed a smaller increase. Other kinds of business which contributed heavily to the rise in sales in 1964 were mail order businesses and jewellers.

In Northern Ireland, it is estimated that the value of retail sales increased by 6 per cent in 1964, compared with an increase of 4 per cent in 1963 and 3 per cent in 1962.

Prices

Retail prices, which had previously been rising for some years until 1958, were relatively stable in 1959 and 1960, but again moved upwards between 1961 and 1964. The rise was relatively large in 1964 on account of higher import prices and increased taxes.

Development in Methods of Retailing

The development of self-service in retail establishments since 1950 has probably helped the multiple stores and, to a lesser degree, the retail co-operatives to achieve a higher rate of expansion in sales. According to the 1961 Census of Distribution, self-service sales exceeded £525 million, two and a half times the level of 1957, and the average turnover in fully self-service grocery shops was over £55,000 compared with £13,000 in other grocery shops. About 9,500 stores, of which 9,100 were grocers, were operated wholly or partly on self-service lines towards the end of 1961, compared with 4,000 in 1957, less than 500 in 1950 and 10 in 1947. By the end of 1964 it is estimated that there were probably over 16,000 and the number was growing at a rate exceeding 100 a month. The share of different forms of organisation in the total of self-service business changed considerably between 1957 and 1961. The share of co-operative societies in total turnover decreased from 61 per cent to 39 per cent, while that of larger multiples (with ten or more branches) increased from 28 per cent to 42 per cent and that of independents (with up to nine branches) increased from 11 per cent to 20 per cent. A quarter of all self-service grocers were in London and the south-east of England.

Supermarkets

Supermarkets may be defined as self-service shops with a minimum selling area of 2,000 square feet and having three or more check-out points. There were about 750 supermarkets in 1961, according to the Census of Distribution. of which 506 were owned by multiples, 203 by co-operative societies and

40 to 50 independents. It has been estimated that by the end of 1964 about 1,600 had been opened. The number of really large self-service shops in Britain, however, is still relatively small.

Shopping Centres

New trading ventures in Britain are enclosed shopping centres. One was opened at the Bull Ring, Birmingham, in 1964 and one at the Elephant and Castle, in south-east London, in 1965. A further centre is due to be opened at Chester in 1966. Each centre has cost between £2 and £5 million to build. They comprise a large number of shops on more than one level, well served by transport and parking facilities. About 140,000 people go to the Bull Ring to shop every week, and the Elephant and Castle centre has 3 million people living within a three-mile radius.

Automatic Vending Machines

New forms of automatic vending machines have come to the fore since 1955, and an increasing number of coin-operated machines are being installed in factories and commercial premises as well as in normal retail outlets. The range of goods sold is widening, with hot and cold beverages and prepared foodstuffs among the most popular. Various estimates have been made of the trade done through automatic machines; about 300,000 machines are in use, and total sales may be of the order of £20 million to £25 million a year. Traders who owned and operated automatic vending machines, but were not otherwise engaged in retail trade, had sales of over £4 million in 1961.

Mobile Shops

Some 11,700 mobile shops[1] were reported in the Census of Distribution for 1961, with sales amounting to £93 million. Nearly a quarter of this turnover was concentrated in Scotland (compared with a tenth of all retail sales). Co-operative societies accounted for 39 per cent of sales through mobile food shops, against 16 per cent in ordinary food shops. For the most part, mobile shops were concerned with food sales; about 40 per cent were travelling grocers, and over 25 per cent and 20 per cent respectively were greengrocers and butchers. Only a very small proportion (about 6 per cent) were non-food shops, and these specialised mainly in paraffin supplies and hardware.

Stamp Trading

Stamp trading—the practice of giving stamps in proportion to the value of goods sold, which may be exchanged later for a 'free gift'—has expanded rapidly in recent years. There are, however, signs that the rate of growth is levelling off. According to an unofficial estimate made in 1964 they are saved, on average, by about 36 in every 100 women in Britain, with a possibly higher proportion in the London area, and are given by some 50,000 retail outlets, the majority of which are food shops and petrol stations. The two largest stamp companies in Britain claim about 90 per cent of the business, the rest being shared among a number of small companies. Since July 1965 issuers of stamps have been required to mark them with their cash value and redeem them in cash if so requested. Gifts distributed by the companies had a retail value of about £8 million in 1964.

Mail Order Sales and Direct Selling

Mail order trading has been one of the most rapidly growing forms of selling in Britain in recent years, especially in the north of England. Mail order sales through all channels reached £276 million in 1961. The 1961 Census of Distribution showed that the sales of specialist retail mail order businesses had risen from £126 million in 1957 to £227 million in 1961, a rise of 80 per cent; they showed a further increase of 42 per cent between 1961 and 1964. Mail order sales in 1961 by large retailers amounted to £12 million, by manufacturers to £34 million and by wholesalers to £4 million.

[1] Excluding roundsmen and vans selling ice-cream.

Mail order houses operate through advertising in the press or through recruiting agents who have at their disposal elaborate catalogues. General mail order houses still largely dominate the trade, with sales of £205 million in 1961. About half of the goods sold by mail order are clothing and about a third are household goods; sales of radio and electrical goods have increased considerably since 1957. The smaller mail order businesses generally specialise in a single commodity, notably in the sale by post of seeds, plants and small horticultural requisites.

An inquiry conducted by the Board of Trade showed that sales by manufacturers direct to the public totalled £144 million in 1961, compared with £70 million in 1950. Mail order sales accounted for 24 per cent of the former total, sales to employees for 11 per cent, and charges for work done for 9 per cent. Other direct sales, including sales by door-to-door salesmen, accounted for the balance of 56 per cent. Included in these sales were items as various as carpets, washing machines, brushes, books and soft drinks.

Retail Co-operative Societies

The retail co-operative societies are voluntary non-profit-making organisations engaged in retail trade and controlled by their members, who are also their customers. An operating surplus is returned periodically to members as a dividend, and the amount distributed is proportionate to the value of the member's purchases.

Retail co-operatives also sell to the general public, but membership is open to anyone paying a small deposit on a minimum share, which entitles the member to an equal voice with other members in determining the policy of the society. Investment by individual members is limited to £1,000 but the rules of some societies fix lower limits. Only a low rate of interest is paid on the shares.

At the end of 1963 there were 871 retail co-operative societies registered under the Industrial and Provident Societies Act. Amalgamations are slowly diminishing the number of societies, the total having fallen by 84 in three years. More than a quarter of the total membership of the co-operatives (12,961,000) was provided by the ten largest societies, each of which had a membership of more than 150,000. One, the London Co-operative Society with just under 1·3 million members and a turnover of over £50 million a year, is the largest retail co-operative in the world. Total sales of the retail co-operative societies in 1963 reached £1,025 million (this figure includes certain activities not covered by the Census of Distribution figure in Table 32); and of the total trading surplus, £40 million, or about three-quarters, was allocated to dividends on sales.

Service Trades

About 1·3 million people are employed in Great Britain in industries providing services directly to the public which are closely connected with the distributive trades. The largest number are in the catering and hotel trades, employing about 580,000; in the garage and motor repair trades there are over 390,000; and in sport and other forms of entertainment, 180,000.

Catering

An inquiry undertaken by the Board of Trade relating to 1960 showed that there were 124,000 establishments primarily concerned with catering with a total turnover in that year of £1,300 million. (Catering was defined to cover public houses, canteens, and fish and chip shops, as well as hotels and restaurants, etc.). Hotels and holiday camps (i.e. excluding boarding houses and unlicensed hotels) had receipts of about £170 million, of which £70 million was from residential accommodation. Nearly half the total turnover of the catering trades was from the sale of alcoholic drinks. Between 1960

and 1964 the turnover of all caterers increased by 26 per cent: the increase was spread throughout all branches of catering.

Laundries

There are about 1,400 commercial laundries with an annual turnover of about £67 million, of which some £45 million is domestic laundry. (The latter figure has tended to decline with the increasing popularity of coin-operated washing machines and launderettes.) Dry cleaning firms in 1961 had a turnover of £40 million.

Motor Trades

An inquiry undertaken by the Board of Trade for 1962 showed that there were nearly 47,000 businesses in the motor trades in Britain, with nearly 58,000 establishments. Their total turnover amounted to £2,962 million, including transactions between traders amounting to roughly £600–£800 million. Traders classified as new vehicle dealers had nearly 14,700 establishments and accounted for two-thirds of the total turnover. Over 14,000 establishments were classified as being primarily petrol stations, and 12,600 were also general repairers.

Hairdressing

Takings in hairdressing establishments have increased very rapidly—from £38 million in 1950 to £62 million in 1957 and £97 million in 1961. Over two-thirds of total receipts are from women. The number of establishments (currently about 40,000) has also increased, though less rapidly.

Shoe Repairs

Boot and shoe repairers (excluding repairs handled through footwear shops) had takings of £25 million in 1961, representing a steady increase since 1950. The share of multiple firms and co-operative societies in this trade increased at the expense of independent establishments.

Packaging

The Institute of Packaging has estimated that British industry now spends over £650 million annually on packaging, which is equivalent to between £12 and £13 per head of the population a year. The expansion of self-service shops and the growth of sales in the form of branded and standardised products have been major factors in the great changes which have taken place in packaging methods. Paper packaging remains the most extensively used material with a turnover of £275 million a year, including cartons and boxes. New uses are being found for tinplate (output, £110 million a year), especially in sales of soft drinks and beer. Sales of glass containers reached a new peak in 1964 at 5,000 million units, research having succeeded in reducing the weight and the cost of a bottle without sacrificing strength. The turnover of plastic packaging, however, has shown the greatest rate of growth, rising from an insignificant level to over £30 million a year in the last decade; new uses include crates for milk bottles, sachets for liquids and bottles for detergents. Aerosol dispensers, almost unknown ten years ago, were being produced at a rate of over 112 million in 1964, compared with 28 million in 1959. Their principal uses are for insecticides and air fresheners, but important new uses are in paints, anti-perspirants, disinfectants and hair sprays.

Hire-Purchase Sales

The rapid growth of sales of household and durable consumer goods, such as cars, furniture, washing machines, refrigerators and cookers, has been greatly helped by instalment purchasing. The Board of Trade has powers to regulate the terms of hire-purchase and credit sales agreements. The current terms are: a minimum deposit of 15 per cent on most durable consumer goods except cookers, heaters, furniture and bedding (10 per cent) and cars and motor cycles (25 per cent). There is usually a maximum repayment period of 30 months for most goods except furniture and bedding (three years) and cookers and water heaters (four years). The Hire-Purchase Act 1964, which

came into force on 1st January, 1965, gives improved protection to purchasers; agreements up to £2,000 (formerly £300) now come within the scope of the Act.

Total hire-purchase debt outstanding rose by about £450 million to £937 million during the period between October 1958 and April 1960 when controls were removed; it amounted to £1,205 million at the end of July 1965. Of this, about two-thirds was owed to finance companies and the remainder to durable goods shops and department stores. There are a large number of hire-purchase finance companies but a high proportion of the business is done by a small number which operate on a national scale. It is estimated that in 1964, 50 per cent or more of all washing machines, gas and electric cookers and radiograms were bought on hire-purchase and between roughly 30 per cent and 45 per cent of all vacuum cleaners, electric irons, floor polishers, tape-recorders, record players and radio sets were similarly acquired.

Hire-purchase in Northern Ireland directly financed by the major finance houses operating from offices in Northern Ireland amounted in 1964 to nearly £14 million and at the end of 1964 the hire-purchase debt owed to them amounted to £14 million.

Advertising and Industrial Information

The expansion of productive capacity and consumption in Britain has been accompanied by a steady upward trend in expenditure on advertising. About £501 million is estimated to have been spent on all forms of advertising in 1963, £22 million more than in 1962. About £161 million was expended on press advertising, well over half of it in the national and provincial press and the rest in periodicals and magazines and in the technical trade press; and £85 million (including tax) was spent on television advertising. The remainder was divided between other media, such as posters, films, catalogues, window displays, exhibitions, and free samples and gift schemes. Most of the advertising is carried out by advertising agencies, which, in some cases, also provide marketing, consumer research and other services; their representative organisation is the Institute of Practitioners in Advertising. The trade association for the industry as a whole, including the agencies, owners of advertising media, and all others concerned in advertising, is the Advertising Association. The latter was responsible for the setting up in 1962 of the Advertising Standards Authority, an independent body whose objective is the promotion and enforcement of the highest standards of advertising.

An independent body, the Advertising Inquiry Council, seeks to represent the interests of the general public in scrutinising advertisements and trends in advertising. The results of its inquiries are published in a quarterly bulletin called *Scrutiny*.

Public Relations

Industry and commerce have in recent years paid increasing attention to improving public understanding of their work and objectives. Public relations consultancy firms and the public relations departments of advertising agencies provide general services, apart from the increasing employment by industrial organisations and trade associations of staff specialists in public relations. Their professional body, founded in 1948, is the Institute of Public Relations: not only commerce and industry, but the professions, national associations, central and local government are represented within the Institute.

Consumer Protection

Various legislative measures exist in the United Kingdom to protect the consumer against specific abuses. Independent organisations have also sought to establish voluntary minimum standards of quality. Weights and measures legislation, one of the earliest forms of consumer protection, was brought

up to date and extended in scope by the Weights and Measures Act 1963; it is strictly enforced by qualified inspectors. The Merchandise Marks Acts 1887–1953 are designed to ensure that the marking of goods is both accurate and honest. The purity, hygiene and description of food are controlled by the Food and Drugs Acts 1955, 1956 and 1958. The Consumer Protection Act 1961 gives the Home Office power to make regulations to ensure the safety of any class of goods.

The British Standards Institution (see p. 275) has established a number of standards for consumer goods, and the Council of Industrial Design (see p. 228) helps to foster improvements in the design of consumer goods.

The Consumer Council

The Consumer Council, financed by a grant-in-aid from the Board of Trade, was set up in 1963 to concern itself with and promote the consumer's interests. As a fully independent body it is free to make uninhibited criticism of government departments and to bring pressure to bear on other bodies. Its terms of reference are wide but it is specifically debarred from engaging in comparative testing of products and from taking up complaints on behalf of individual consumers. As recommended by the Molony Committee (see below), it works in close touch with the Citizens' Advice Bureaux (see p. 130).

Consumer Associations

Advice to its members on the merits of consumer goods is provided by the Consumers' Association, a private body financed by the subscriptions of members. It tests and reports on the quality of goods bought on the open market and its finding are published in its monthly bulletin *Which?*, issued to subscribers. In addition to the Consumers' Association there are a number of local independent consumer groups, which in 1963 formed themselves into a national Federation of Consumer Groups. Assistance with certain aspects of consumer guidance is also given by a number of other private bodies and by certain government departments. Special arrangements, in the form of consumer councils and consumer committees, have been made for the nationalised industries. Individual trades and industries have also taken measures to raise standards of quality.

A prospective purchaser of a second-hand car can obtain guidance as to whether the car is the subject of a hire-purchase agreement. Virtually every hire-purchase agreement on a car is registered with H.P. Information Ltd., a non-profit-making company whose members are car dealers or finance companies concerned with car sales, and this company will answer inquiries made through its members, the police, solicitors, the motoring associations, or the Citizens' Advice Bureaux.

The Molony Report

The Molony Committee on Consumer Protection, set up by the President of the Board of Trade in 1959 to consider and report whether changes in the law and other measures were desirable for the further protection of the consumer, presented its final report in July 1962. Some of its principal recommendations have now been implemented, namely those concerning the setting up of a Consumer Council and most of the suggestions for the revision of hire-purchase law. Other recommendations of the committee included the consolidation and modernisation of the Merchandise Marks Acts, and amendment of the Sale of Goods Act 1893. (New legislation is now being prepared to amend the Merchandise Marks Acts.)

Resale Price Maintenance

The practice of resale price maintenance and its enforcement by the cutting off of supplies is made unlawful under the Resale Prices Act 1964, though exemptions may be granted on certain grounds by the Restrictive Practices Court (see p. 276).

16
LABOUR

MANPOWER

The total working population of Great Britain at the middle of June 1965 was about 25 million, some 48 per cent of the total population, and included about 73 per cent of persons of normal working age (15 years to 59 years for women, 15 to 64 years for men). About 93 per cent of the men of working age are today in or seeking gainful work. The remaining 7 per cent consist mainly of those continuing their education, of the severely disabled and of some persons of private means. The proportion of women of working age in or seeking gainful work is much lower, about 50 per cent, as many housewives have no wish to take employment outside the home or, if they have, are prevented by household duties from doing so. Besides those of normal working age, there are probably over a million older men and women still at work. The great majority of the working population work for a wage or salary, but 1·6 million are employers or self-employed.

The situation is markedly different in Northern Ireland, where the ratio of working to total population is about 40 per cent, and farmers and smallholders working their own holdings account for about one-tenth of the working population. Northern Ireland, however, has under 3 per cent of the United Kingdom population (but with a higher proportion of young persons under 15 years of age), so that the figures for Great Britain are broadly representative of the position in the United Kingdom.

During the present century, decreases in both birth and death rates have had the effect of increasing the proportion of persons over the age of 45 years in both the total population and the working population (see p. 8). Changes in laws and customs have also had an effect. The school-leaving age has been raised to 15 years and more young people aged 15 and over are engaged in full-time education. The proportion of those over the normal working age who are still working has declined (though the great increase in the number of older persons has meant that the actual number who are working has increased). The proportion of men aged 20 to 64 who are at work has remained very high at all ages. Among women, on the other hand, there has been a steady increase during the century in the proportions employed in the age groups 15 to 59, but this has been offset by the raising of the minimum working age. There has been an increase in the employment of married women, particularly in the last twenty years.

The proportion of single women at work tends to decrease with age. Over 95 per cent of women aged 20 to 29 are in, or seeking, employment, compared with about 60 per cent in their late fifties; among married women, however, the proportion at work which is nearly 40 per cent for women in their early twenties, declines for the age-groups 25 to 34 but rises again for those aged between 35 and 50. A higher proportion of women are marrying. An increasing proportion of women in the middle age groups are taking up employment (including part-time work) and about 54 per cent of the women at work are married.

Between 1950 and 1959 the total working population of Great Britain rose by 5 per cent, from just under 23 million to just over 24 million. From

mid-1959 to mid-1962 it increased very sharply, by more than 750,000, owing to the larger number of school leavers and considerable immigration. Since June 1962, however, the growth has been relatively slight. The Ministry of Labour estimated early in 1965 that the total labour force would have increased by nearly half a million between 1964 and 1975. Much of this increase is expected to be among married women. The planned raising of the minimum school leaving age to 16 will result in a fall in the working population between 1971 and 1972.

The broad changes in the manpower position in Great Britain between mid-1948 and mid-1965 are shown in Table 34.

TABLE 34
GENERAL MANPOWER POSITION IN GREAT BRITAIN

Thousands

	End-June 1948	End-June 1959	Mid-June 1965[a]
Number in Civil Employment[b]:			
Men	*14,584*	*15,366*	*15,887*
Women	*7,020*	*7,889*	*8,558*
TOTAL	21,604	23,255	24,445
Registered Wholly Unemployed	273	379	270
H.M. Forces (including Women's Services):			
Men	*807*	*550*	*407*
Women	*39*	*15*	*16*
TOTAL	846	565	423
Total Working Population[c]:			
Men	*15,692*	*16,195*	*16,501*
Women	*7,123*	*8,008*	*8,637*
TOTAL	22,815	24,203	25,138

Source : *Ministry of Labour.*

[a] Provisional.

[b] The civil employment figures include employers, those working on their own account and temporarily stopped workers. Part-time workers are counted as full units.

[c] The working population figures include ex-Service personnel on leave after completing their service and not included in the other figures in this table.

Deployment of Labour

About 40 per cent of those in civil employment are employed in the mining and manufacturing industries and only about 3·5 per cent in agriculture and fisheries, even during the harvest season. Over half of those in manufacturing are in the metal, engineering and chemicals groups of industries.

Most industries employ women as well as men, but there are jobs, such as underground work in coal mines, for which it is illegal to employ women. The industrial groups in which women are chiefly employed are in the metal-using industries, in the manufacture of textiles and clothing, in the food, drink and tobacco industries, and in the distributive trades and professional and miscellaneous services.

An analysis of the total number in civil employment by broad industrial groups is given in Table 35.

The numbers given in Table 35 as working in an industry or service include those engaged on administrative, technical and clerical work, so that the totals given for the production industries are greater than the numbers on

productive processes. According to an inquiry made in May 1964 by the Ministry of Labour into the occupations of employees in manufacturing industries in Great Britain (in firms with eleven or more employees) 24 per cent were administrative, technical and clerical workers and the proportion of apprentices was nearly 3 per cent. The group of industries employing the highest proportion of administrative, technical and clerical staff were chemicals and allied industries (over 37 per cent of their employees), followed by engineering and electrical goods (30·5 per cent) and printing and publishing (30 per cent). Groups with a low proportion were clothing and footwear (under 12 per cent).

TABLE 35
ANALYSIS OF CIVIL EMPLOYMENT IN GREAT BRITAIN

Thousands

Industry or Service	End-June 1948	End-June 1959[a]		Mid-June 1965[b]
		old basis	new basis	
Agriculture and fisheries	1,178	999	999	853
Mining and quarrying	876	823	826	625
Manufacturing industries:				
Chemical and allied industries	*441*	*544*	*520*	*507*
Metals, engineering and vehicles	*3,944*	*4,602*	*4,166*	*4,530*
Textiles	*931*	*851*	*851*	*770*
Clothing and footwear	*649*	*644*	*565*	*538*
Food, drink and tobacco	*750*	*939*	*818*	*812*
Other manufactures	*1,422*	*1,589*	*1,557*	*1,697*
Totals in manufacturing industries	8,137	9,169	8,477	8,854
Construction	1,450	1,509	1,523	1,747
Gas, electricity and water	321	374	374	408
Transport and communications	1,822	1,734	1,730	1,670
Distributive trades	2,484	3,000	3,209	3,437
Professional, financial and miscellaneous services	3,954	4,340	4,874	5,579
National Government Service	682	520	505	519
Local Government Service	700	787	738	756
TOTAL IN CIVIL EMPLOYMENT	21,604	23,255	23,255	24,445

Source : *Ministry of Labour.*

[a] A new standard industrial classification was introduced in 1958.
[b] Provisional.

Long-term Changes

At the beginning of the twentieth century the occupied male population of Great Britain still tended to be concentrated in five major groups of industries and services: commerce and finance, agriculture, coalmining, building and construction and engineering and shipbuilding. Women were also largely employed in commerce and finance, but otherwise tended to be concentrated in four other occupation groups: personal service (including domestic service), clothing, textiles and professional work. During the past sixty-five years this concentration and segregation of male and female labour has grown much less marked as the result of a number of changes in the industrial and occupational distribution of the population. The following appear to be among the more important of these changes:

(1) A general and large increase in the number of persons occupied in professional, administrative, technical and clerical work; the increase in the number of women in clerical work has been particularly large.

(2) A decline in the proportion of the working population engaged in manual labour.

(3) A decrease in the number of persons occupied in private domestic service; the number of women so occupied is now a tenth of what it was in 1901.

(4) A large increase in the proportion of the working population employed in professional, financial and scientific services and in personal services other than private domestic service.

(5) An increase in the proportion of the working population employed in the distributive trades.

(6) A large increase in the proportion employed by public authorities, as a result of the taking of certain industries and services into public ownership and also of increases in employment in national and local government service.

(7) A continuance of the decline in agricultural employment which started in the second half of the nineteenth century. Recent decreases are associated with rising productivity rather than declining production.

(8) A very large increase (approaching double since 1931) in the numbers employed in the metals, engineering and vehicles group of industries and the chemical group. Expansion has been most marked in those sections of the industries which are concerned with relatively new or technically advanced products.

(9) A decline in employment in certain large old-established industries, notably coalmining, cotton textiles, shipbuilding and railways.

A manpower research unit was set up in 1963 to study the future distribution of manpower and the probable changes in occupational structure, so as to provide a basis for implementing the Government's proposals for industrial training (see p. 455) and to supply information needed for economic planning (see p. 255).

Unemployment

Since the war the general unemployment rate in Britain has been among the lowest in the world—usually between 1 and 2 per cent. Unemployment in recent years has generally been a more serious problem in those parts of the country which have the greatest dependence on shipbuilding, coalmining, and certain branches of the heavy engineering and metal manufacturing industries. In consequence unemployment in parts of Scotland and Wales, and in north-east England and Merseyside, has tended to be higher than in the Midlands and south-east England. (For remedial action taken, see p. 270.) Between about June 1961 and the spring of 1963 the underlying trend of unemployment was rising. For a short period during the severe weather in the early months of 1963 unemployment reached a much higher level (3·9 per cent in February), particularly among construction workers. Subsequently the underlying trend was downward. By August 1965 unemployment had fallen to 1·5 per cent in Great Britain. Unemployment was at that time highest in Scotland (2·9 per cent of the region's working population).

Northern Ireland

The total working population of Northern Ireland—including employers and self-employed but excluding certain unpaid helpers—was about 549,000 in

June 1964 (368,000 males and 181,000 females). The number of insured employees was about 496,000. The largest productive industries are agriculture, engineering, textiles and clothing. Most of the agricultural work in Northern Ireland is done by small farmers and their families without hired help. The total manpower in agriculture, forestry and fisheries was 68,000 in mid-1964, according to the official estimates of the Ministry of Health and Social Services of the Northern Ireland Government, and was considerably larger according to other estimates, which include unpaid helpers. The engineering industry employs 51,000.

The unemployment rate in Northern Ireland has remained higher than in England, Wales or Scotland. In June 1965 it was 5·9 per cent of the insured employees. The Ministry of Commerce of the Northern Ireland Government has wide powers (similar to those of the Board of Trade in development districts in Great Britain) to assist the development and diversification of industry. It is using these powers vigorously in an attempt to improve the situation.

GOVERNMENT EMPLOYMENT AND TRAINING SERVICES

The provision of employment services in Great Britain has been one of the principal functions of the Ministry of Labour since its inception in 1916. Northern Ireland has its own legislation in these matters which embodies the main principles of the corresponding legislation in Great Britain, but owing to the much smaller area of administration and the less favourable employment situation, the facilities available are not so comprehensive in their scope as is the case in Great Britain, and administrative arrangements are in some respects on different lines. The responsible department is the Ministry of Health and Social Services.

The following account, therefore, of services in Great Britain applies in general to Northern Ireland except where otherwise stated. The scope of the services in Great Britain has gradually been extended to include the provision of advice on employment and, in suitable cases, of vocational training. The Employment and Training Act 1948 provided a permanent legislative basis for these wider services. The main services are provided through the country-wide network of some 1,000 local offices, which act as employment exchanges. Local employment committees, composed of representatives of employers, workers and other local interests, are attached to certain employment exchanges as advisory bodies to secure for the department the full benefit of local knowledge and the close co-operation of employers and workers. There is an additional service designed to meet the needs of men and women who are qualified for professional, administrative, managerial, executive and technical and scientific posts at home and overseas and for those likely to qualify, i.e. ex-regular officers of the armed forces and young men and women suitable for training. This service is operated in Great Britain through the Professional and Executive Register, held at 38 of the larger exchanges.

General Employment Services for Adults

All the offices referred to above accept on their registers both employed and unemployed persons seeking employment. Their primary function is to introduce suitable persons seeking employment to employers requiring employees, thus providing an efficient service to employers and job-seekers and meeting the needs of the national economy.

The employment exchanges holding the Professional and Executive Register are also ready to give information about the professions and allied occupations

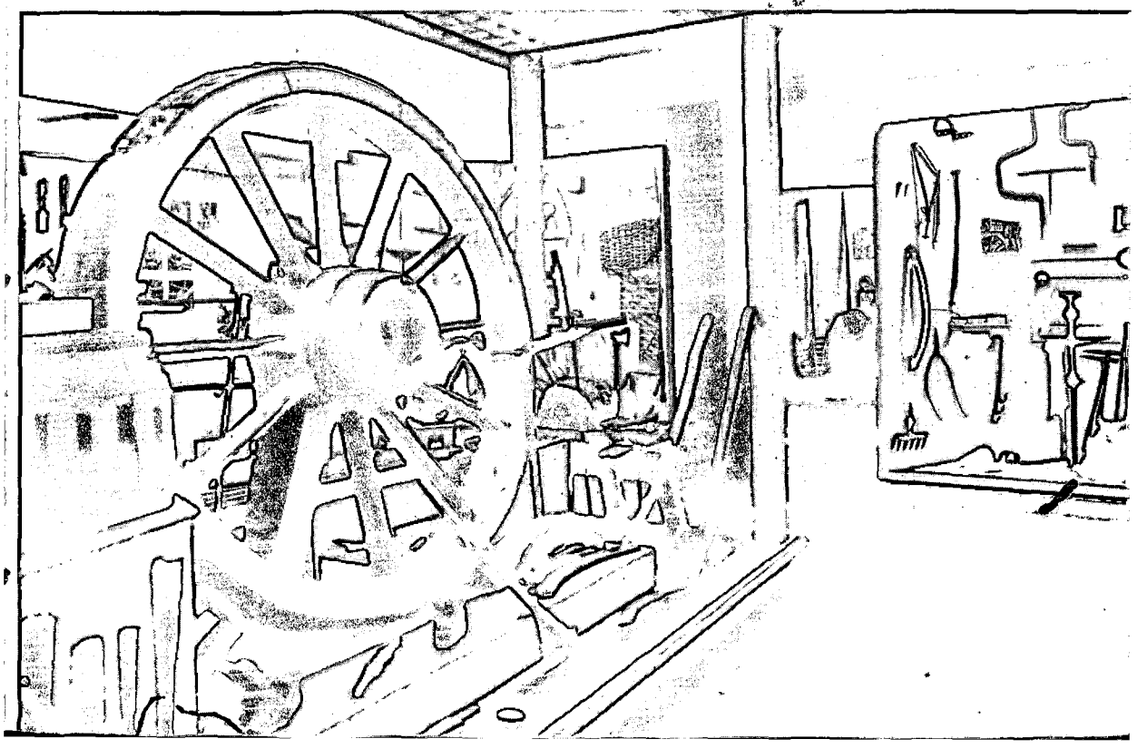


Alan Collins, sculptor, working on a figure for Guildford Cathedral.

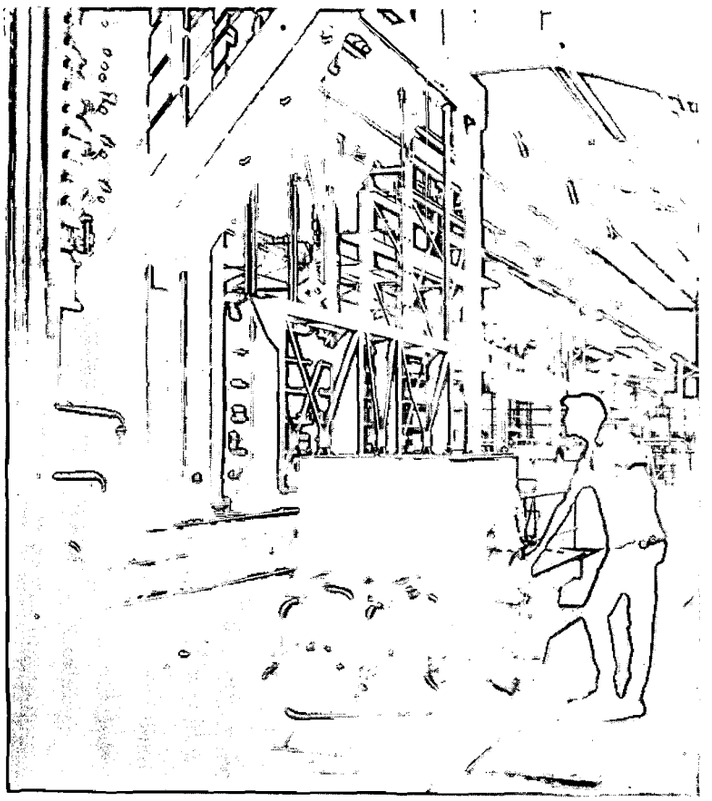


Celtic Studios, Swansea, are one of the major producers and exporters of stained glass windows.

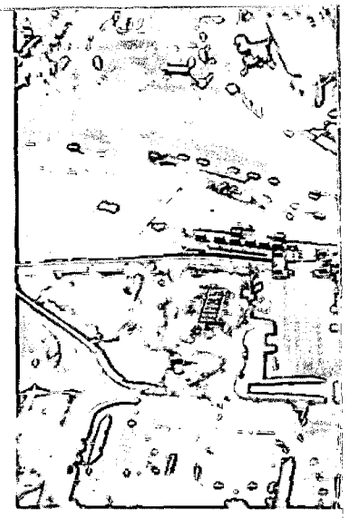
Museum of Rural Life, University of Reading.



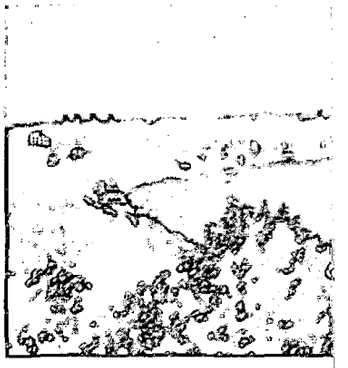
THE NORTH-EAST REGION



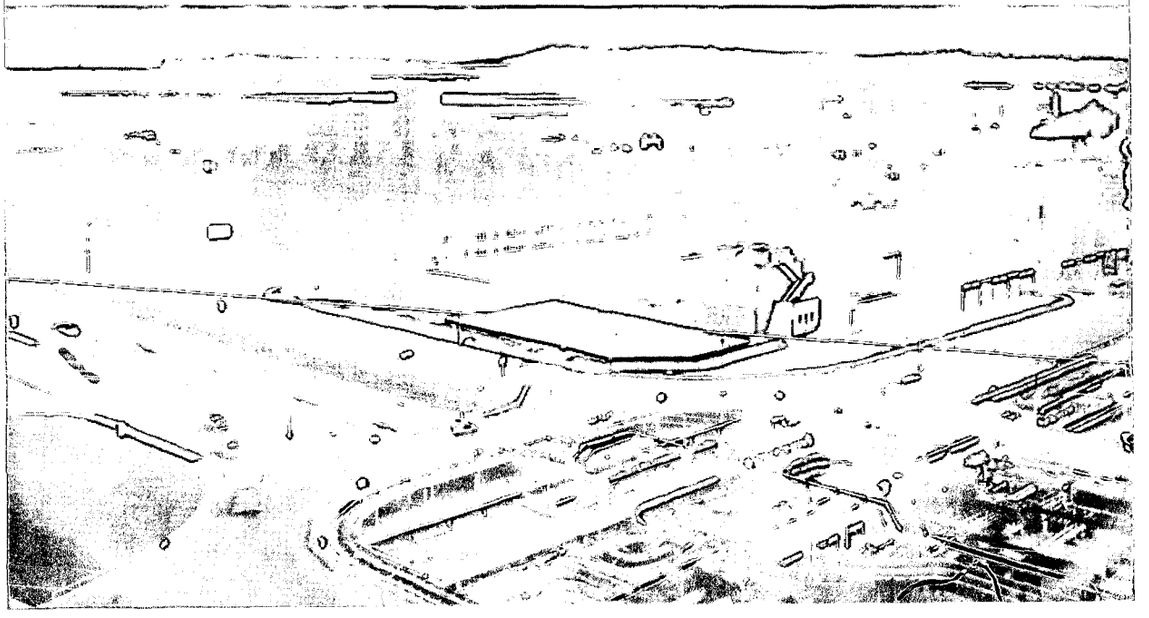
Fully automated chipboard factory at Hexham.

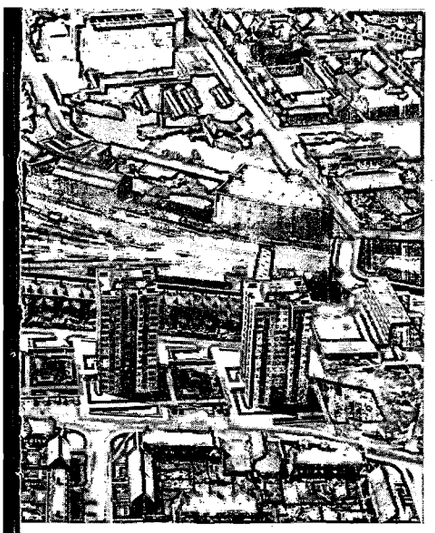


Redevelopment at Newcastle upon Tyne.

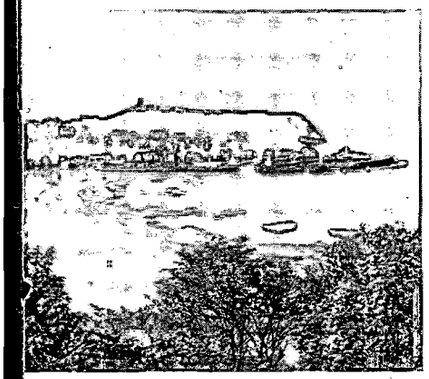


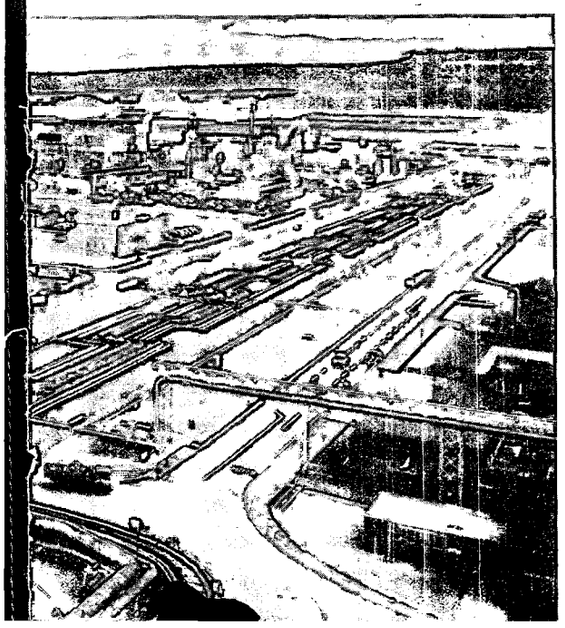
ICI works at Wilton.

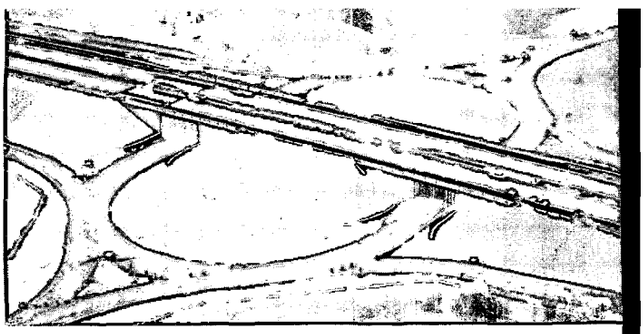




Scarborough, a Yorkshire seaside resort.

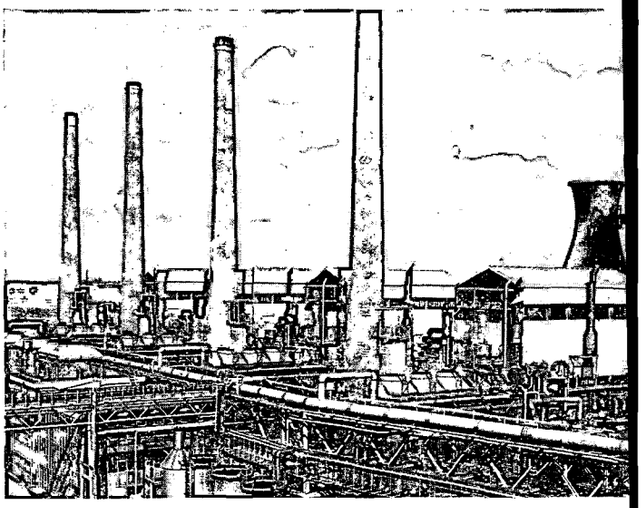


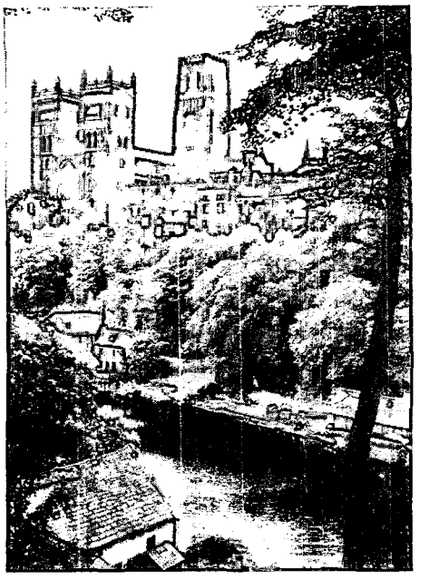




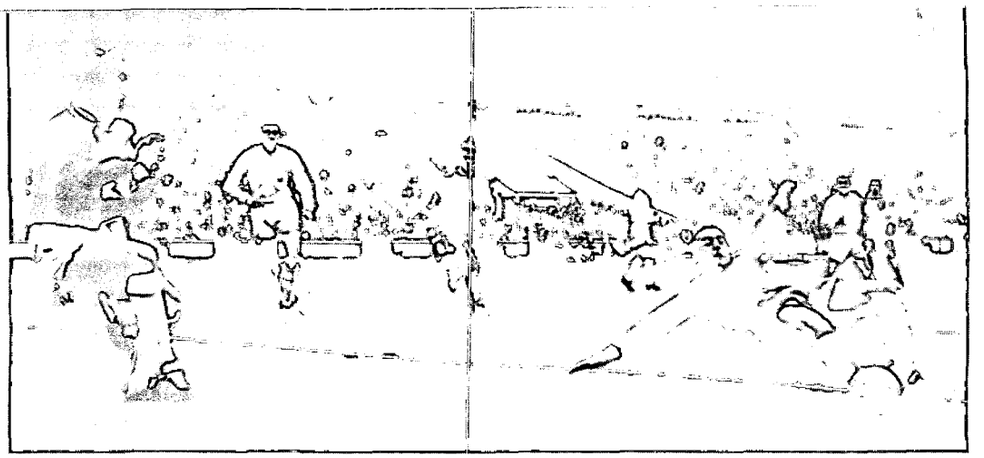
The Darlington by-pass, keystone of a new road system.

Ammonia gas plant at Billingham.

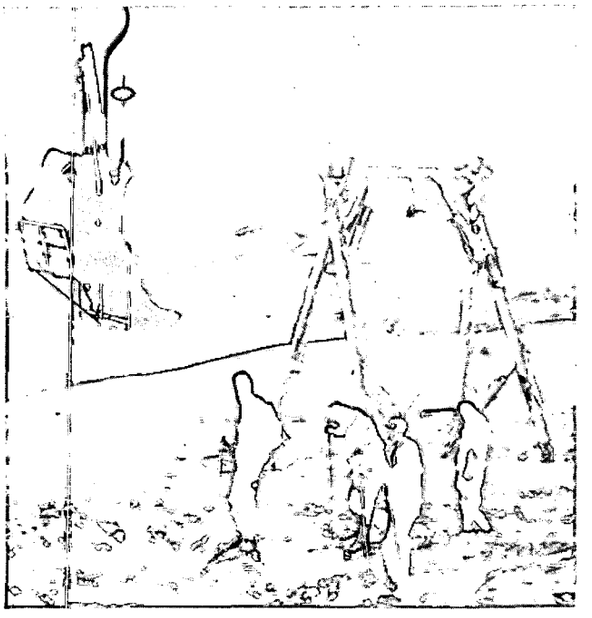




Durham Cathedral.



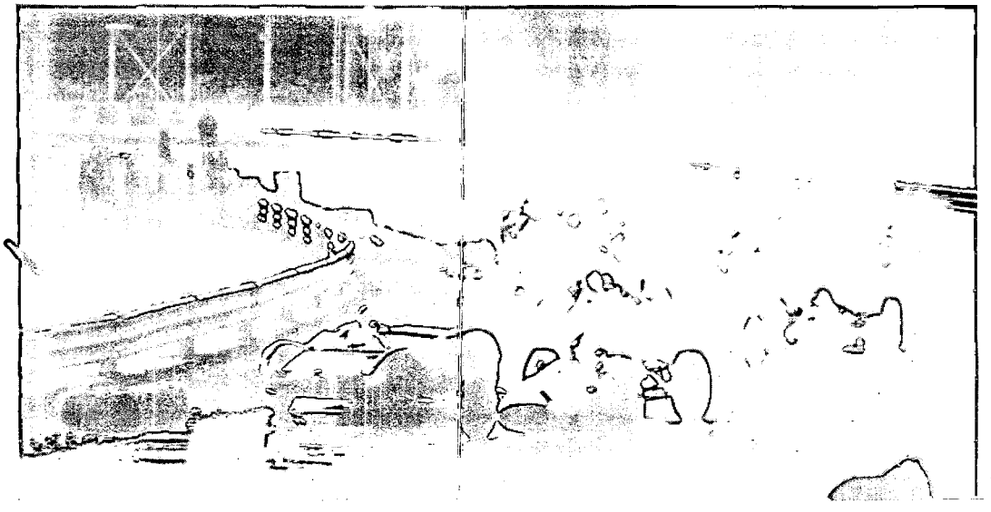
Cup Final, at Wembley, May 1965. The World Cup Final in 1966 will be played here.



Ski-ing in the Cairngorms, Scotland.

UNIVERSITY OF NORTH BENGAL
RAJARAMMOHUNPUR

Racing at Ingliston motoring circuit, opened in April 1965.



to young men and women aged 18 years and over who have not already established themselves in a profession or in the business world, and to older people who wish to change their careers.

In certain densely populated areas where there are large groups of hospitals, there are employment exchanges with officers specially trained to deal with the employment problems of nurses, midwives and those in related occupations. There are 27 of these offices. Outside the larger areas, nurses and their employers are dealt with at the local employment exchange. Qualified nurses are available to give advice and conduct interviews where necessary.

In view of the increasing number of older persons in the population the Ministry recognises the need to promote the employment of older men and women and seeks to persuade employers to consider older workers on their merits without regard to their age; employment exchanges have instructions to make special efforts to find employment for older persons.

Industrial Training

As part of its plans for increasing productivity in industry the Government is fostering the expansion and improvement of industrial training. The whole framework of training in industry is being strengthened under the provisions of the Industrial Training Act 1964. Under this Act the Minister of Labour is empowered to set up industrial training boards which will be responsible for the quantity and quality of industrial training in the industry concerned. Each board can provide its own training courses or arrange for other organisations to provide training. It has power to raise a levy from employers and make grants to those whose training courses it approves. The Minister meets the initial administrative costs of each board and is making grants towards certain other expenditure: for example, training courses for trainers and research projects. By the middle of 1965 boards had been set up for nine major industries: engineering, construction, shipbuilding, iron and steel, wool textiles, gas, water and electricity supply and the ceramics, glass and

[redacted]

To advise the Minister of Labour on the administration of the Act and on industrial training questions generally, a Central Training Council (CTC) was appointed under the Act. It consists of employer and trade union members, representatives of the nationalised industries, educationists, the chairmen of a number of training boards and other members who have a special interest in industrial training.

In some of the industries for which training boards have not yet been set up, apprenticeship training is governed by agreements between employers' associations and trade unions. Practical training is provided mainly within the individual firm, and associated technical education is obtained by attending a technical college. Training of operatives is usually arranged by the individual firm but in a few industries there are agreed national or regional schemes.

The CTC also advises the Minister on the running of the Industrial Training Service (ITS), which is grant-aided by the Ministry of Labour. The work of the ITS, with its own board of directors and a regional organisation, includes the assessment of training needs both for industries and individual companies, the development of training schemes at all levels, and the promotion of group training schemes.

Other government measures to stimulate training activity include grants for the training of training officers on approved courses, for the appointment of training development officers and for the promotion of group training schemes. The number of the Government's own training centres is also being substantially increased (see below).

Government Vocational Training

A special responsibility of the local employment officer is the recruitment of suitable persons for training under the Government Vocational Training Scheme. In Britain the main responsibility for vocational training for employment below professional level, including apprenticeship training for the skilled crafts and the training of factory workers in semi-skilled processes, rests on the industries and trades concerned. The Government itself, however, provides training to augment what industry is doing to overcome shortages of skilled workers in industries of importance to the national economy, as well as helping persons in special need, such as the disabled, to fit themselves for suitable employment. Training is provided for suitable persons over 18 years of age who are unskilled or whose prospects of employment in their existing trade are poor. Employed persons as well as the unemployed are accepted for training in trades of importance to the national economy. Most of the training is provided at Government Training Centres, which are situated within easy reach of the main industrial centres of the country and between them offer courses in about 40 different trades, with emphasis on trades in which there is a shortage of skilled labour.

Under the expansion programme the number of centres is being increased from 13 to 32 and additional places at existing centres are being provided. When the programme is complete the centres will provide training for up to about 13,000 persons annually. Courses vary in length according to the trade; most of them last for six months. Schemes of training for particular trades have been drawn up in consultation with representatives of the employers and workers concerned who, in some cases, also assist in the selection of persons suitable for training.

For the disabled and for ex-Regular Service men and women and the unemployed with special resettlement problems, training in other trades is also available under the scheme at technical and commercial colleges and private training schools, or by means of individual courses at employers' establishments. For severely disabled persons training is provided at four residential training colleges run by voluntary organisations with government financial assistance.

During training, trainees are paid good allowances to maintain themselves and their dependants. During 1964, 6,286 people were trained under the scheme and about 90 per cent of them were subsequently employed in the trade for which they had been trained.

The Ministry of Labour's Regular Forces Resettlement Service helps Regular officers and other ranks returning to civilian life to find suitable employment. Nearly all those leaving the Services are successful in securing satisfactory resettlement. The Ministry arranges special six-week business training courses for Regulars and ex-Regulars (mainly ex-officers) at commercial and technical colleges; four-week courses in industrial supervision are provided at the Ministry of Labour, Ebury Bridge House, London, for non-technical warrant officers and senior NCOs (or other Service equivalent ranks). In addition to full courses for a civilian trade, refresher courses and conversion courses required for ex-Service men and women can be arranged under the Vocational Training Scheme.

Training of Apprentices

To demonstrate the value of systematic methods of practical and theoretical instruction, combined with day release for further education at technical colleges, and to encourage industry to increase its intake of young people into skilled occupations, the Ministry is providing, at Government Training Centres, full-time training for a limited number of first year apprentices. Instruction is now given in four trades: engineering, radio and electronics

servicing, electrical trades, and sheet and plate metal work. The employers continue to pay the apprentices' wages during the course and are responsible for completion of the remaining years of apprenticeship. In Northern Ireland the Ministry of Health and Social Services sponsors the training of additional apprentices by employers in the engineering industry, a condition being that the sponsored apprentices are available for recruitment to new industries.

Special Training Services

The Ministry of Labour provides a service to industry through its scheme of Training Within Industry for Supervisors. The four programmes of instruction which comprise the TWI scheme are: job relations, the fostering of good working relationships; job instruction, the technique of instructing or directing staff; job methods, the steps taken in planning the best way of doing a job; and job safety, which seeks to arouse safety consciousness and to train supervisors to detect dangers and deal with them.

The Ministry employs a staff of TWI officers, who train supervisors directly and also train firms' representatives to enable them to present TWI courses to supervisors in their own concerns. The Ministry is prepared to extend these services to overseas branches of British firms. It is prepared also to train suitable persons to develop the scheme in their own territories. The arrangements may be made by the government of the country concerned or (where appropriate) by the Ministry of Overseas Development and the International Labour Organisation (ILO).

In addition, the Ministry's Instructor Training Colleges at Letchworth, Hertfordshire, and Hillington, Glasgow, provide two-week courses in teaching methods for instructors responsible for the training of apprentices and other workers. These courses have been developed by the Ministry to meet its own requirements for the training of instructors engaged in training adults and apprentices at Government Training Centres, and the courses have been made available to employers.

Vocational training services at Government Training Centres, TWI courses, and courses at the Ministry's Instructor Training Colleges at Letchworth and Hillington are available to trainees from overseas under approved schemes (for instance, those of the ILO or the Colombo Plan).

Employment of Workers from Countries other than Commonwealth

Foreigners are admitted to the United Kingdom to take up employment with a particular employer, provided they are in possession of a permit issued to the prospective employer by the Ministry of Labour (the Ministry of Health and Social Services for Northern Ireland if the proposed employment is in Northern Ireland): nearly 60,000 such permits are issued each year. Of these, about one-quarter are for domestic workers in hospitals, schools, other institutions and private households, and nearly one-eighth for student employees. Employment is limited to a maximum of one year in the first instance but may be extended on application by the employer.

Before a permit is issued, the Ministry of Labour must be satisfied that there is a *bona fide* job, that no suitable British or foreign worker already resident in Britain for a long period is available, and that the wages and conditions of employment are not less favourable than those enjoyed by British workers. These conditions are waived for student employees who are admitted for limited periods in order to improve their English and to gain a wider knowledge of their occupations. A foreigner permitted to take employment in the United Kingdom may not change his employment, unless his prospective employer has obtained prior approval from the Ministry to employ the foreigner.

The permit system applies to individual foreigners, but the Ministry of Labour has an arrangement for the admission on a 'group' basis of selected Italian workers for employment in certain undermanned industries.

Britain, as a member of the Organisation for Economic Co-operation and Development, participates with 13 European countries in the arrangements for assisting nationals of the countries concerned to obtain employment in other member countries.

Commonwealth Citizens

Commonwealth citizens from overseas are subject to control under the Commonwealth Immigrants Act 1962, which came into force on 1st July, 1962. Except for those who were born in the United Kingdom or hold passports issued by the United Kingdom Government, the control applies, broadly, to all Commonwealth citizens. Such people, if they wish to come to Britain for full-time employment, must first obtain a voucher issued by the Ministry of Labour. Vouchers are issued subject to a numerical limit laid down from time to time by the Government; priority is given to applicants who have obtained jobs with named employers or who have certain special qualifications of skills. (Commonwealth citizens who wish to work in Northern Ireland, and who are not 'Northern Ireland workers',[1] need special Northern Ireland employment permits, which are issued only in respect of definite jobs.)

The Commonwealth Immigrants Act applies also to citizens of the Irish Republic; but no control is imposed on persons travelling between Ireland and Britain.

Youth Employment Service

The Ministry of Labour is also responsible in Great Britain for two specialised employment services: the Youth Employment Service and the Disablement Resettlement Service.

The purpose of the Youth Employment Service is to help young people at the stage of transition from school to work, up to the age of 18 years or until they leave school if they stay beyond that age.

The Service is under the general direction of the Central Youth Employment Executive, which is composed of senior officers of the Ministry of Labour, the Department of Education and Science and the Scottish Education Department. This joint executive is appointed by the Minister of Labour, who is responsible to Parliament for the Youth Employment Service as a whole. The Minister has appointed a National Youth Employment Council and separate advisory committees for Scotland and for Wales to advise him.

Locally the Service is operated in most areas through Youth Employment Offices established by local education authorities in accordance with the schemes submitted by them to the Minister of Labour and approved by him. In those areas where such schemes are not in operation, the Service is operated by the local office of the Ministry of Labour. The expenditure incurred by local education authorities in providing the Service is grant-aided to the extent of 75 per cent by the Ministry of Labour.

The main functions of the Service are to collect and disseminate information on careers, provide talks in schools, give vocational guidance, find suitable employment and keep contact with young workers to help them settle down. A further function is to help employers to fill vacancies for young people. Local Youth Employment Committees, made up of teachers, employers, workers and other appropriate interests, assist the service in an advisory capacity.

[1] People qualified by birth and residence to work in Northern Ireland.

In Northern Ireland the functions of the Youth Employment Service are similar to those in Great Britain but its organisation is different. A comprehensive service, for which the Minister of Education bears Parliamentary responsibility and meets four-fifths of the cost, is operated by a statutory board composed of representatives of local education authorities and other educational and industrial interests. The local authorities bear one-fifth of the cost. There are also local youth employment committees, as in Great Britain.

Disablement Resettlement Service

The purpose of the Disabled Persons (Employment) Acts 1944 and 1958, on which all the work of the Ministry of Labour for disabled persons is based, is 'to make further and better provision for enabling persons handicapped by disablement to secure employment or work on their own account', and the Disablement Resettlement Service is designed to help disabled persons to get and keep suitable work. The Service is available to all persons over school-leaving age who are substantially handicapped as a result of injury, disease or congenital deformity in obtaining or keeping employment.

The Ministry of Labour is responsible for the administration of the Service and is assisted by the National Advisory Council on the Employment of the Disabled, set up under the 1944 Act. At each of the Ministry's local offices there is a disablement resettlement officer, working under the direction of the manager and in co-operation with other officers. Besides his contacts with employers, this officer is in touch with all the hospitals in his area and visits any patient who wishes to discuss the question of future employment. His work involves close co-operation with doctors, local authorities and voluntary welfare agencies.

The help given by the Service falls under five main headings:

Vocational Guidance

Vocational guidance is given at local offices by disablement resettlement officers in consultation, as necessary, with the local disablement advisory committees, hospital resettlement clinics and medical interviewing committees, and also in the industrial rehabilitation units (see below).

Placing in Ordinary Employment

Having regard to a disabled person's qualifications and aptitude and to medical guidance, and concentrating on what the person can do rather than on what he cannot do, the disablement resettlement officer endeavours to find the work most suited to each person, either immediately, or in appropriate cases after a course of industrial rehabilitation or vocational training. To some extent this is facilitated by the main provision of the Disabled Persons (Employment) Act 1944, namely, that all employers of 20 or more persons are required to employ a quota (at present 3 per cent for all industries,except shipping, in respect of the manning of ships) of registered disabled persons. Registration is voluntary. The number of disabled persons registered on 19th April, 1965, was 658,925. On 10th May, 1965, 46,522 registered disabled were unemployed, 39,996 being considered capable of ordinary employment. The remaining 6,526 were so severely disabled as to be classed as unlikely to obtain ordinary employment, though in fact many so classed are found work in open industry by careful selective placement.

Industrial Rehabilitation

Industrial rehabilitation[1] is provided at seventeen units run by the Ministry of Labour. The aim of these units is to provide the final link between sickness and employment by enabling men and women to adjust themselves gradually to normal working conditions and to give vocational guidance based on

[1] For an account of medical rehabilitation of the disabled, see p. 147.

skilled assessment of their aptitudes. Attendance at the unit is voluntary and maintenance allowances are paid. Each man or woman is given an individually planned course (lasting from 10 to 12 weeks) supervised by specialist staff consisting of doctor, industrial psychologist, social worker, disablement resettlement officer, remedial gymnast and industrially experienced workshop supervisors, under the general leadership of a rehabilitation officer. Recommendations for courses are made to the disablement resettlement officer of an Employment Exchange by hospitals, doctors, employers and welfare organisations. This officer is responsible for putting into effect the unit's recommendation on future employment or training.

The Ministry gives financial assistance to two centres conducted by voluntary organisations which provide similar facilities for the blind. It has also approved, on an experimental basis, two schemes by voluntary organisations for the rehabilitation of patients from mental hospitals.

Vocational Training

There are vocational training facilities for the disabled at Government Training Centres, educational institutions and employers' establishments. For the more seriously disabled there are special residential training colleges run by voluntary organisations with the financial assistance and technical help of the Ministry of Labour. There are also arrangements for the training of special categories of disabled persons such as the blind, and for providing disabled persons (including the blind), who are of the appropriate educational standard, with grants to undertake study or training for the purpose of qualifying for professional or comparable employment.

Sheltered Employment

Remploy Ltd., a non-profit-making public company with no share capital, was set up in accordance with the provisions of the Disabled Persons (Employment) Act 1944. Its object is to provide employment facilities for registered disabled persons unlikely to obtain work except under special conditions. Its powers include the provision of special factories and workshops, hostel accommodation and facilities for homeworkers. The directors are appointed by the Minister of Labour; funds for capital development and to meet operational costs are provided by loans and grants under the Ministry of Labour Vote. At the end of 1964 Remploy Ltd. operated some 90 factories and employed 6,800 severely disabled men and women, including some 150 homeworkers.

TERMS OF EMPLOYMENT, CONDITIONS OF WORK AND LABOUR RELATIONS

At the beginning of the nineteenth century, industrial workers lacked legitimate means of defending their standards of living or of ameliorating their working conditions. The traditional methods of fixing wages had become obsolete, trade unions were regarded as criminal conspiracies, and there was no protective legislation setting minimum standards of safety, health and welfare in places of work.

The first attempt at protective legislation was the Health and Morals of Apprentices Act 1802, but the first effective Factory Act was that of 1833, which created an inspectorate employed and paid by the central Government to enforce its provisions. Since that date, legislation extending, strengthening, adapting and consolidating the statutory protection for employees has been passed at an accelerating rate. The progress in standards has owed much to the recommendations of strengthened inspectorates, much to the example of progressive employers and much to the persistent pressure of trade unions and disinterested reformers.

Trade unions ceased to be actionable conspiracies in 1824 but their status as legal entities was not properly established until 1871. This latter step had been made acceptable to public opinion by the leaders of certain craft unions, who had abandoned the revolutionary and financially unsound policies of earlier trade unions to pursue the limited practical objectives of securing for their members better wages and improved working conditions.

After 1880 the organisation of unskilled workers became more extensive and effective and the whole tone of trade unionism became more militant and political, while employers began to form associations in an increasing number of industries. Partly as a result of continuing antagonisms and of the changing and difficult economic situation, much of the first thirty years of the twentieth century was marked by widespread and prolonged strikes. Since 1932, however, the strike rate (in terms of man-days lost) has, in most years, been very much lower, and arrangements for the negotiation of terms of service and the peaceful settlement of disputes have become general and are on the whole satisfactory.

This improvement in industrial relations has been achieved mainly by voluntary action. Except in certain industries where wages and holiday pay are fixed by statutory order, there has been very little legal limitation on the right of an employer to hire an employee on any terms which the employee will accept. There is, in general, no legal obligation on an employer to recognise a trade union, or not to refuse to employ trade unionists; nor is a collective agreement with a trade union held to be in itself a legal contract of employment, though the terms of a collective agreement may be expressly or by implication incorporated in an individual contract of employment. The Terms and Conditions of Employment Act 1959 does, however, provide machinery for enforcing on an employer the observance of terms or conditions established by collective agreement in his industry (see p. 476). Two recent statutes have extended the legal rights of employees; under the Contracts of Employment Act 1963, employers are now required to give their employees written particulars of the main terms of employment, and employees are given rights to minimum periods of notice when their employment is to be terminated; under the Redundancy Payments Act 1965, employees with a minimum period of service of two years are entitled to lump sum payments if their jobs cease to exist (for example, because of technological improvements or because of a fall in demand) and their employers cannot offer suitable alternative work, the cost being partly met from a fund subscribed to by industry as a whole.

Nevertheless, in the majority of trades and industries minimum or standard wages, normal working hours and other terms of employment are effectively settled by collective agreements, whose negotiation and observance continue to depend primarily on the strength, integrity and representative character of the signatory organisations rather than on any legal sanction. The determination by statute of minimum wages, holidays and holiday pay is in principle confined to those trades and industries where the organisation of employers or workers, or both, is inadequate to negotiate collective agreements and to ensure their observance.

On the other hand, the conditions of work of employees—their safety, health and welfare—depend to a far greater extent on minimum standards established by statute and enforced by official inspectorates. Voluntary action is, however, of the greatest importance even in these matters. In some cases, additional health, safety or welfare requirements are the subject of collective agreements, while many employers provide higher standards on their own

initiative with help and advice from government departments and various voluntary bodies.

Management-employee relations depend not only on terms and conditions of employment, but on human relationships at the place of work; managements have in recent years become increasingly concerned with improving such relationships.

PAY, HOURS AND HOLIDAYS

Earnings

Minimum or standard time rates for most British manual workers, as determined by agreements or by statutory orders, vary between 4s. 3d. and 5s. 3d. an hour for men and between 2s. 11d. and 3s. 11d. for women. Actual earnings are usually higher. Higher rates are sometimes paid, and piece rates, shift rates and overtime rates raise the level of average earnings.

The Ministry of Labour conducts a six-monthly survey of earnings and hours of work of manual workers in manufacturing industries and in some of the principal non-manufacturing industries in Great Britain. Table 36, which is based on these surveys, shows how weekly and hourly earnings have risen over the last five years. The survey does not cover agriculture, coalmining, railways, dock work, shipping, distribution, catering or other services but average weekly earnings are separately compiled for the first four of these industries; they are somewhat above the average in coalmining and dock work, and below the average in railway work and agriculture.

TABLE 36
AVERAGE WEEKLY AND HOURLY EARNINGS OF MANUAL WORKERS 1961–65

Date	Men	Youths and Boys	Women (full-time)	Girls
Average Weekly Earnings	*s. d.*	*s. d.*	*s. d.*	*s. d.*
April 1961	301 4	135 9	152 7	99 11
April 1962	312 10	141 3	157 2	104 6
April 1963	323 1	144 9	163 9	105 2
April 1964	352 5	159 9	176 4	116 10
April 1965	378 2	175 6	184 2	126 4
Average Hourly Earnings	*s. d.*	*s. d.*	*s. d.*	*s. d.*
April 1961	6 3·5	3 0·9	3 9·9	2 5·4
April 1962	6 7·4	3 3·6	3 11·6	2 7
April 1963	6 10·7	3 4·1	4 1·7	2 7·3
April 1964	7 4·5	3 7·8	4 5	2 10·4
April 1965	7 11·5	4 0·5	4 8·5	3 1·9

Source : *Ministry of Labour.*

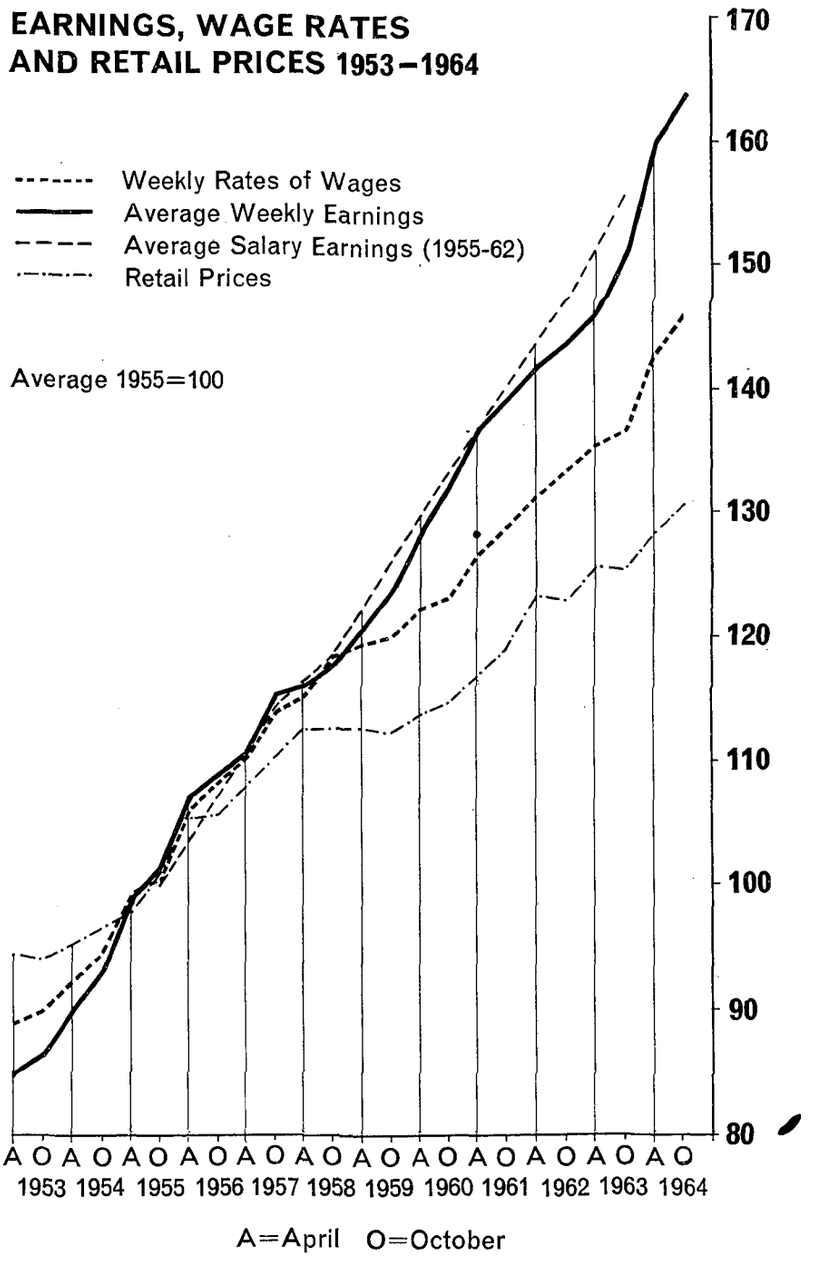
Between April 1955 and October 1964 average weekly wage rates increased by about 42 per cent and average weekly earnings by about 64 per cent. Part of the increase has been offset by a rise in the cost of living. The trends of manual workers' earnings, salaries, wage rates and retail prices from 1952 to 1964 are shown in the diagram on p. 463.

Women manual workers are for the most part engaged on different tasks from men. Their earnings are markedly lower than men's earnings, partly because a high proportion of the work is of an unskilled or semi-skilled nature and also because the average hours worked by women are shorter. Women's wage rates tend to be set at around 70–90 per cent of the male rate for similar work, though this gap is gradually closing. In the relatively few instances where men and women are employed on precisely the same type of manual

work, and under identical conditions, collective agreements frequently provide for equal rates of pay.

Professional and Technical

The starting salaries in many professional and technical careers are often in the range of £600 to £800 a year, though they may be lower for trainees starting work in their teens, and higher for some graduates entering industry



and the Civil Service. Such posts offer incremental progression to higher salaries and opportunities for promotion.

Most of the senior posts in business, the professions and the Civil Service are in the range of £2,750 to £7,000 a year. The posts with salaries of £5,000 to £15,000 a year include those of Cabinet Ministers, most chairmen and full-time members of boards of nationalised industries, judges of the High Court and Court of Appeal, and Lords of Appeal, the Permanent Secretaries of government departments, the clerks of the largest municipal authorities, editors of daily newspapers, some persons outstanding in their professions and in the higher managerial posts in industry, commerce and banking. A few persons in business draw still higher salaries, while the earnings of star entertainers and certain other very successful people exceed £25,000 a year.

Statistics published by the Inland Revenue Department indicate that in 1962–63 some 20·7 per cent of male employees received £1,000 a year or more by way of wages or salaries (or pension after retirement), 4·7 per cent £1,500 a year or more, 2·1 per cent £2,000 a year or more and 0·8 per cent £3,000 a year or more. Some 3 per cent of women employees received £1,000 a year or more.

Women have the same right of entry as men to nearly all public offices, administrative posts and professions. They are paid the same salary for doing the same work in journalism, broadcasting and architecture, and as Ministers of the Crown, members of Parliament, salaried magistrates and solicitors. Women in independent professions are not expected to charge lower fees than men. The principle of equal pay has been applied to non-manual work in the Civil Service, local government, the health service, teaching and the nationalised industries (coal, gas, electricity and transport). In many other non-manual occupations, however, women are still paid lower salaries than are men engaged on comparable work.

Hours of Work

In April 1965 the number of hours actually worked by manual workers averaged 47·5 for men and 39·1 for women on full-time work. Agreed weekly hours are mainly in the range 40 to 42 and may be worked as either a five-day or a five-and-a-half-day week according to the industry and the rule of the particular establishment. Hours actually worked by men are somewhat longer owing to overtime working.

While the hours of work of adult men are not, in general, restricted by statute, normal hours of work for both sexes and those of all ages are usually well within the legal limits on the hours of women and young persons.

National legislation in the United Kingdom embodies a general prohibition of employment of children under thirteen years of age; forbids the employment of older children and women in certain occupations; and limits and defines permissible hours of work for women and young persons in a number of industries or trades. Children aged thirteen to fifteen may not be employed during school hours or before 7 a.m. or after 7 p.m. on any day, or for more than two hours on school days or on Sundays. This part-time employment is further regulated in various ways by statute and by by-laws made by local authorities.

The Shops Act 1950 makes local authorities responsible for ensuring that the shops in their area observe its requirements. With certain exceptions, shops must be closed on weekdays by 8 p.m. (9 p.m. on one late day) except on the early closing day when they must be closed by 1 p.m., and all day on Sunday; but local authorities may make orders modifying these and other provisions of the Act within their own area. The hours of work of shop

employees under sixteen years of age are normally restricted to 44 a week, and those of employees between sixteen and eighteen years of age to 48 a week, with limited provision for overtime. Broadly speaking, all shop assistants must be given a half-holiday (half a day) every week and, in addition, every Sunday off or another day off instead.

In premises to which the Factories Act applies the working hours of women and young persons between the ages of sixteen and eighteen are, subject to certain exceptions, limited to 48 a week and nine a day, although some overtime is allowed (up to six hours a week but not more than 100 hours a year or in more than 25 weeks in a year). Young persons who have not yet attained the age of sixteen are limited to 44 hours a week. The maximum spell of work and the intervals which must be allowed for meals are also specified. With limited exceptions in certain continuous processes, the employment of women and young persons at night is prohibited.

In mines and quarries, women and young persons under eighteen may not normally start work before 6 a.m. and must never start before 5 a.m. Their work must normally end before 9 p.m., in the case of young persons under sixteen, and before 10 p.m., in the case of women and young persons aged sixteen to eighteen; and never in any case after 11 p.m.

The Young Persons (Employment) Act 1938 imposes restrictions on the hours of work of young persons (48 a week at the age of sixteen years and over and 44 for those under sixteen years) in certain occupations not covered by the Factories Act, the Mines and Quarries Act 1954, or the Shops Act 1950.

Holidays with Pay and Bank Holidays

With a few exceptions, manual workers (including shop assistants) in industries covered by agreements or statutory orders are entitled to paid holidays of at least twelve days or two weeks. Moreover, payment is made for bank or statutory public holidays, which are as follows: in addition to Good Friday and Christmas Day, there are Bank Holidays in most parts of England, Wales and the Channel Islands on Easter Monday, Whit-Monday, the last Monday in August[1] and the first weekday after Christmas (Boxing Day), and in Scotland on New Year's Day, the first Monday in May, and the last Monday in August.[2] Northern Ireland observes all the English holidays and, in addition, has a holiday on St. Patrick's Day, 17th March, and on 12th July (commemorating the Battle of the Boyne, 1690); Easter Tuesday is also a customary holiday for industry and trade. Many agreements provide that payments should also be made for specially proclaimed holidays.

In some industries agreements provide for extended holidays related to length of service with the same employer, whilst in others there is a progressive increase so that at some date in the future the basic period becomes three weeks instead of two weeks. In addition, numerous firms have long-service extended holiday schemes which apply to both staff and manual workers.

SAFETY

Employers have a duty at common law to take reasonable care of their employees and provide a safe system of working, while employees have a duty of care towards each other. In addition, minimum required standards of safety in certain kinds of workplaces or work are laid down under a number

[1] The August Bank Holiday in 1965 was for the first time on the last Monday, not the first, in the month. This is an experiment, to be repeated in 1966, which the Government hopes will give a lead in extending the summer holiday season over a longer period.

[2] In most towns in Scotland two locally determined days are observed more widely than the Bank Holiday (outside the banking community) as the spring or autumn holiday.

of statutes, some of which also deal with health and welfare. The statutes include: the Mines and Quarries Act 1954, the Agriculture (Safety, Health and Welfare Provisions) Act 1956, the Factories Act 1961 (which consolidates earlier Acts), and the Offices, Shops and Railway Premises Act 1963, which closely follows the Factories Act 1961. Fatal and serious industrial accidents have tended to diminish during the twentieth century and the British rates for fatal and serious accidents are among the lowest in the world.

Factories, Offices, Shops and Railway Premises

Over 200,000 industrial premises (factories, workshops, slaughterhouses, shipyards and docks) and about 25,000 building and civil engineering sites come under the Factories Act, which is administered by the Ministry of Labour and enforced by H.M. Inspectorate of Factories, which forms part of the Ministry. The actual strength of the Factory Inspectorate, including medical and other specialists, was 473 in 1964, its authorised strength being 517. Over a million premises come under the Offices, Shops and Railway Premises Act, which is also administered by the Ministry of Labour; enforcement is shared by H.M. Inspectorate of Factories and local authorities. Under these Acts, anyone intending to employ other people in industrial or commercial premises to which they apply has to notify the enforcing authority of his intention before he begins to employ people and every fatal accident and every accident causing more than three days' incapacity must be reported; under the Factories Act provision is also made for compulsory notification and for investigation of certain dangerous occurrences.

In addition, a number of general and specific safety requirements are laid down. The general requirements of the Factories Act include provisions concerning the fencing of prime movers, transmission machinery and dangerous parts of other machinery; the sale, hire or use of power-driven machinery without effective guards of certain parts; the cleaning of machinery in motion; the training and supervision of young persons employed at certain machines; the safety and examination of hoists and lifting equipment, steam boilers and steam and air receivers; the construction of floors; precautions against falls, against gassing, and against explosions of flammable dust or gas; fire prevention, fire-fighting, fire alarms and means of escape in case of fire; the protection of the eyes; precautions where dangerous substances are present; and the lifting of heavy weights. These general requirements are supplemented or modified by regulations providing for safeguards against special risks in particular industries, processes, and types of machinery. There are corresponding provisions in the Offices, Shops and Railway Premises Act to deal with the hazards arising in these premises, with power to make regulations.

Safety depends, in fact, at least as much on the education and voluntary efforts of the employers and of the workers as upon safety regulations. In addition to regulatory functions, the Ministry of Labour since 1959 has had the duty of promoting safety, health and welfare in factories by the collection and dissemination of information and by investigating safety, health and welfare problems—activities which had, in fact, long been an important part of the Ministry's work. The voluntary Accident Prevention Movement is strongly supported by the Factory Inspectorate. Inspectors inquire into safety aspects of machine design and specification, circulate expert advice by personal exhortation, lectures and literature, and encourage the appointment of safety officers and the formation of works safety committees. The Factory Inspectorate maintains an industrial health and safety centre in London, at which various types of machinery demonstrating the effectiveness of guards are displayed, as well as a wide range of protective clothing and equipment. The

Ministry also actively encourages the development of voluntary central organisation within each industry at national level for the consideration of safety matters and the formulation of policy on accident prevention.

The concern of both trade unions and employers' associations with safety helps to maintain safety standards; and the requirements about accident notification help inspectors to examine the means of prevention with employers, machinery manufacturers and interested organisations. But the voluntary co-operation of managements and employees in individual workplaces is essential to the safety drive. Many firms have works safety committees and, in many areas, safety groups have been organised, whose members meet monthly for the exchange of information, discussions, lectures and films on safety measures.

Training for Safety

Training for safety is an important facet of the safety drive and, to help in this work, the Ministry of Labour has incorporated a safety course in the Training Within Industry for Supervisors (TWI) scheme (see p. 457). An industrial safety training centre in Birmingham is run by the Birmingham and District Industrial Safety Group, and there are safety training centres for the construction industries which have been set up, with the assistance of the Ministry of Labour, by local accident prevention groups at Enfield (London), Aintree (Liverpool), Granton (Edinburgh), Norwich and Leeds and by the Federation of Civil Engineering Contractors at Cardiff. The Royal Society for the Prevention of Accidents helps the accident prevention movement by providing publicity and organising conferences and courses for safety officers; it has recently organised a course for the training of safety instructors. The British Safety Council offers a similar service.

Advisory Bodies

Organisations in industry are now concerning themselves to an increasing extent with the promotion of safety at work and the provision of information and advisory services to their members. They participate also in joint standing and advisory committees appointed by the Minister of Labour. Representatives of the Trades Union Congress, the Confederation of British Industry, the nationalised industries and the Ministry of Labour meet on the Industrial Safety Sub-committee of the National Joint Advisory Council. The Minister of Labour has also established a joint advisory committee, representative of employers and workers in the building and civil engineering industries, to examine safety and health problems in these industries.

Mines and Quarries

The safety of workers in mines and quarries is the subject of comprehensive legislation which also deals with health and welfare at work and a number of related matters. Protective legislation in mines began with an Act of 1842, which forbade the employment of women underground; successive measures laid down detailed requirements for the safe conduct of operations and dealt with such matters as ventilation, dust suppression, support of workings, the safe use of electricity, rescue and first aid. The latest stage was reached when the Mines and Quarries Act was passed in 1954. This Act established the basic modern principles of safety, health and welfare, leaving the details to be dealt with in statutory regulations; it both consolidates the previous law and brings it up to date. Apart from technical matters, it also covers such subjects as the general responsibilities of owners and managements, the appointment and duties of officials, training, welfare, the powers of official inspectors, statutory qualifications of managers and under-managers, employment of women and young persons, and inspections on behalf of workmen.

The Ministry of Power is responsible for the administration of these

enactments, while the Mines and Quarries Inspectorate, which is part of the Ministry of Power, is responsible for their enforcement.

The National Coal Board is expressly charged with the statutory duty of securing the safety, health and welfare of its employees and has set itself to accomplish this in all practicable ways. The Board has its own safety organisation—a Standing Committee on Safety, a chief safety engineer, and safety engineers at divisions, areas and the largest collieries. It conducts courses of safety training for workmen and officials and is constantly on the alert for new methods of reducing risks. Its research programme includes a number of projects with a direct bearing on safety. Examples of voluntary action by the Board to reduce risks include the use of fire-resistant conveyor belting, and the withdrawal of light alloy equipment from the coal face pending the development of an alloy unlikely to cause dangerous sparks.

The Minister of Power has a statutory responsibility for research concerning the safety and health of coal miners. This responsibility is largely exercised through its Safety in Mines Research Establishment with laboratories at Sheffield and Buxton.

Agriculture

Two Acts provide for the protection of agricultural workers by means of regulations made by the Ministers concerned with agriculture in Britain. The risks involved in the use of chemicals are dealt with in the Agriculture (Poisonous Substances) Act 1952; other risks are covered by the Agriculture (Safety, Health and Welfare Provisions) Act 1956. Regulations have been made dealing with the safe use of dangerous chemicals, the provision of first-aid equipment, safety standards for workplaces and ladders, the safeguarding and safe operation of farm machinery, the lifting of heavy weights and the avoidance of accidents to children arising out of the use of farm vehicles and machines. Regulations are enforced by inspectors of the Agricultural Departments. To safeguard the many interests which might be adversely affected by the use of chemicals in agriculture and food storage, a voluntary scheme is operated by the Government with the help of an advisory committee and with the full co-operation of the chemical industry.

Transport

The general safety legislation covering the main forms of transport protects transport workers as well as members of the public against accidents involving moving vehicles.

In the interests of road safety, the hours of driving and the rest periods of drivers of buses and goods vehicles are regulated by the Road Traffic Acts. In certain cases, the driver must be accompanied by a second person.

The Merchant Shipping Acts, for the administration of which the Board of Trade is responsible, cover in great detail the question of marine safety, including navigational procedures, the strength and design of hulls, the safety of machinery, the safety and design of living quarters, life-saving appliances, measures for protection against fire, and the carriage of special cargoes and dangerous goods.

The Air Navigation Order and Regulations provide for the registration of aircraft and for the issue of certificates of airworthiness and of competency certificates and licences for aircrew, lay down requirements for safety equipment and for safety procedures during take-off, flight and landing, and prescribe maintenance schedules for public transport aircraft. The Minister of Aviation delegates most of his powers in respect of airworthiness to the Air Registration Board (see p. 389).

The Ministry of Transport exercises supervision of railways safety through

an inspectorate whose main functions are statutory approval of new works on railways carrying passenger traffic; accident investigation, including the holding of formal inquiries; and technical advice to the Minister.

In addition to general safety legislation, there are certain statutory provisions concerned entirely, or mainly, with the safety of employees; for example, railway employees are protected by the Railway Employment (Prevention of Accidents) Act 1900, and the statutory rules and orders made under it which enable the Ministry of Transport to require the use of safe plant and appliances, to forbid what is unsafe, and to make rules for safe railway operation. This Act also sanctioned the appointment of inspectors, now known as Railway Employment Inspectors, who inquire into the more serious accidents to railway employees.

Both transport operators and the Ministries of Transport and of Aviation give high priority to safety measures affecting crews and passengers. Every endeavour is made to counter the higher risks resulting from rising traffic densities, by improving the design of vehicles, transport plant and equipment, by traffic regulation and control of standards of maintenance and by training crews in competency and safety awareness. The detailed regulations and instructions issued by the ministries and their agents form the basis of elaborate safety procedures laid down by the operators themselves and by the makers of vehicles and aircraft, equipment and works. The radio industry and the transport services co-operate in the development and application of radar systems and other safety devices.

Other Work Premises

There are at present no specific statutory safety requirements in hotels and restaurants, places of entertainment or educational establishments, except in so far as they are covered by fire regulations applicable under local authority by-laws to all large buildings or (in respect of their offices and shops) by the Offices, Shops and Railway Premises Act. The Ministry of Labour has no statutory responsibility in regard to safety in workshops or laboratories in education establishments, though it keeps in touch with university authorities and the education departments. Employers, however, are bound by their common law obligation to provide a safe system of work, and employers and educational authorities may voluntarily seek the advice and help of the Factory Inspectorate, which is given freely on request.

HEALTH AND WELFARE

Local authorities, under the Public Health Acts, have power to regulate the provision of suitable sanitary accommodation in houses and at places of work and to treat workplaces which are dirty or badly ventilated or overcrowded as nuisances the abatement of which can be enforced.

Industrial and Commercial Premises

Factories, other industrial premises, offices, shops and railway premises must comply with the health and welfare requirements of the Factories Act or the Offices, Shops and Railway Premises Act. These include: the cleanliness of workrooms, adequate ventilation and suitable temperature and lighting, the avoidance of overcrowding and the provision of sanitary accommodation, and the protection of workers against inhaling harmful dust or fumes; the provision of washing facilities, lockers or other accommodation for outdoor clothing, drinking water, first aid, and seats. On entry into employment in factories and docks or on building operations all young persons under eighteen years of age must be medically examined by doctors appointed by the Chief Inspector of Factories and known as Appointed Factory Doctors, and they must be re-examined annually until they reach the age of eighteen. Boys employed in jobs involving night work are examined more frequently.

The general requirements of the Factories Act in regard to health and welfare are supplemented by regulations, some of general application, others providing for the needs of particular industries or processes. They may include provision for compulsory periodic medical examinations. The Offices, Shops and Railway Premises Act is similarly supplemented by regulations.

Merchant Seamen

The far-reaching and detailed requirements of the Merchant Shipping Acts and the regulations made thereunder include specific provisions for the protection of merchant seamen, covering such matters as the engagement and discharge of seamen, limitations on the employment of young persons at sea, standards of crew accommodation, scales of provisions, medicines and medical stores, and the care and repatriation of seamen left behind at ports abroad.

Women and Children

The laws restricting the employment of children, young persons and women form an important part of legislation to protect the health and welfare of employees. National legislation, besides forbidding any employment of children under thirteen years of age, forbids the employment of children who have not reached the statutory minimum school-leaving age (see p. 156) in any industrial undertaking; of women and young persons underground in mines and in certain other dangerous occupations (for example, those involving work with lead compounds); and of women in factories and workshops within one month of childbirth. It also limits and defines the permissible hours for children aged thirteen to fifteen and for young persons under eighteen and women in a number of industries and occupations. Local authorities, moreover, have wide powers under the Children and Young Persons Acts 1933–63 as well as by the Education Acts 1944–48, which regulate hours and conditions of employment of children under fifteen years within their areas within the limits of national legislation.

The above are the main legislative provisions relating to health and welfare at work, but it is essential to note that employers frequently achieve health and welfare standards considerably higher than those prescribed by law. They are helped to do this by the inspectorates, by government departments and agencies, by employers' associations and trade unions and by expert voluntary bodies.

Industrial Health Services

In addition to the statutory requirements of the Factories Act 1961, and the Offices, Shops and Railway Premises Act 1963, and regulations under both Acts a number of employers voluntarily maintain medical services for their employees. It is estimated that there are about 340 factories with full-time and about 4,700 factories with part-time doctors employed. In addition several thousand nurses are employed in industry. Compulsory medical examinations under the Factories Act and regulations are carried out by 2,300 part-time Appointed Factory Doctors.

The big employers, including the State and the boards of nationalised industries, have naturally taken the lead in this matter. A number of smaller factories also provide medical services and in a few cases have joined together in group medical services. In 1955 the Minister of Labour appointed a Standing Industrial Health Advisory Committee, of which he is the chairman, to advise him on measures to further the development of industrial health services. This committee includes persons nominated by the Confederation of British Industry, the Trades Union Congress, the nationalised industries, the British Medical Association, the Royal College of Nursing and other organisations closely concerned with the promotion of industrial health. Two

booklets, *Health at Work* and *Organisation of Industrial Health Services*, have been published. The former describes the medical services of 14 British factories, while the latter provides guidance for employers considering the establishment of an industrial health service.

Industrial hygiene services can give valuable assistance in securing healthy working conditions in industry; there are at present two centres in Great Britain which undertake studies of factory conditions and increasing use is being made of their facilities. They are staffed and equipped to make comprehensive investigations of particular problems or health risks and also carry out routine physical, chemical and biological tests for industry.

Prompt and effective action in industrial health depends, among other things, on adequate and properly co-ordinated arrangements for investigation and research. Field investigations are carried out by the Factory Inspectorate, which has specialised medical and technical branches. Research facilities are provided by government agencies such as the Medical Research Council; by the faculties of industrial health and social medicine of the universities; and by the research departments of various industries and large industrial concerns.

Welfare

Welfare standards vary considerably from one firm to another. The amenities provided by large factories or offices depend partly on the employees' needs and wishes. The requirements of a factory, or office or shop where the work is light, and where many employees are women or young persons, are different from those of an iron foundry or steelworks, where much of the work is arduous and is undertaken by men. Progressive firms are careful to find out what their employees want, and welfare policy is often decided in consultation with the workers, through regular consultative machinery or by other means. An increasing number of firms in Britain pay part or all of the cost of clubs and sports grounds, operate retirement and sickness insurance schemes supplementing the State schemes, and afford training and educational facilities. Some have their own rehabilitation centres or support convalescent homes.

Canteens

The provision of low-priced meals at the place of employment has become usual in large undertakings and quite common in smaller ones. There are also colliery canteens providing meals for about 98 per cent of coalminers. It is customary for any surplus earned by canteens to be used to improve the canteen or to finance some other welfare services, while any losses are usually borne by the firm. Many offices and shops which are unable to provide canteen facilities for their staff have adopted luncheon voucher schemes. There are now over 15,500 firms using this service and more than 72 million vouchers are issued annually and are accepted by all principal catering establishments.

SAFETY, HEALTH AND WELFARE IN NORTHERN IRELAND

The safety, health and welfare of employees in Northern Ireland have been the subject of legislation which, with certain exceptions, is similar to that in Great Britain and is embodied in separate statutes to meet the special requirements of Northern Ireland. Provision for the safety, health and welfare of workers in factories with and without power, shipyards, electrical stations, certain institutions and at docks, warehouses, building operations and civil engineering works is embodied in the Northern Ireland Factories Acts. Many firms voluntarily employ safety officers, and an Industrial Safety Group for the area, supported by representatives of industry, trade unions, insurance companies and public authorities, is very active and makes a valuable contri-

bution in the field of industrial accident prevention on similar lines to what is done in Great Britain.

INDUSTRIAL RELATIONS

The structure of labour relations in Britain is established mainly on a voluntary basis, and rests on the organisation of employers and workers into employers' associations and trade unions. These organisations[1] discuss and negotiate terms and conditions of employment and other matters affecting the work-people at their work. In some industries these negotiations are conducted simply by *ad hoc* meetings, which are held when necessary; in others, voluntary joint machinery has been established on a permanent basis. Normally these arrangements for collective bargaining suffice to settle all questions which are raised, but provision is often made for matters not so settled to be referred for settlement to independent arbitration. In certain trades where wages cannot be effectively controlled by voluntary agreement owing to the inadequate organisation of employers or workers, provision has also been made by the State for statutory regulation under the Wages Councils Act 1959, the Agricultural Wages Act 1948, and the Agricultural Wages (Scotland) Act 1949.

Employers' Associations

Many employers in Great Britain are members of employers' organisations, which are wholly or partly concerned with labour questions.

The primary aims of such organisations are to help to establish suitable terms and conditions of employment, including a sound wage structure and proper standards of safety, health and welfare; to promote good relations with employees and the efficient use of manpower; and to provide means of settling any disputes which may arise. Different employers' organisations vary in the emphasis which they put upon these different aims and in the means by which they try to achieve them. Some concentrate on defensive action, trying by negotiation and representations to modify proposals of trade unions and Government in their members' interests. Others also try to give their members practical help and advice in developing positive employment policies. A number of them, for example, have developed training schemes for their industries and some provide advisory services on recruitment, training and further education and general or specialised training courses.

There is diversity in regard to structure as well as function. Generally, however, employers' organisations are organised on an industry basis rather than a product basis. Some are purely local in character and deal with a section of an industry; others are national in scope and are concerned with the whole of a particular industry. In some of the chief industries there are local or regional organisations combined into national federations, while in others, within which different firms are engaged on making different principal products, there is a very complex structure with national and regional federations for these different sections of the industry as well as for the industry as a whole. Altogether there are some 1,500 employers' organisations dealing with labour matters and about 80 are national employers' federations.

The final authority of a local or small national organisation may be a meeting, where all member firms are directly represented; but in larger organisations some form of indirect representation is necessary, either through local organisations or through the regions or sections into which these are grouped.

The representatives thus chosen, together with a number of office holders, form a general council, central committee or general committee, which meets

[1] Some employers, including the central Government and the public corporations operating the nationalised industries, negotiate directly with the trades unions representing their different types of employees.

perhaps once a quarter, mainly to take major policy decisions, to elect committees and to ratify their work. The committees usually include a general purposes committee and a negotiating committee. A small paid staff under a director or secretary carries out the day-to-day work of the organisation. There is usually a small working group, consisting of senior officials and committee chairmen, which meets to deal with urgent questions and co-ordinate the work of the committees.

The Confederation of British Industry

The central organ of employers' organisations is the Confederation of British Industry (CBI), incorporating the former British Employers' Confederation (BEC), which until August 1965 represented employers' interests (see p. 267) in questions of labour and industrial relations. The CBI deals with all matters affecting the interests of organised employers and represents them nationally to the Government and the public and also internationally, for instance, in the International Labour Organisation. CBI representatives sit on various government advisory committees, on other statutory bodies and on a number of voluntary bodies concerned with labour matters.

Trade Unions

In nearly all industries and occupations some workers—and in some industries nearly all workers—are organised into trade unions. These have grown up gradually and independently over a great many years, and consequently their form and organisation vary considerably. Trade unions started more than two hundred years ago among the skilled craftsmen and spread later to the general labouring and unskilled classes. More recently trade unionism has increased among clerical, supervisory, technical and administrative workers. A number of associations of professional workers, formed primarily for the preservation and improvement of professional standards, have also come to exercise many of the functions of trade unions, including negotiations on salary and fee scales, and are legally trade unions.

The qualification for membership of some unions is occupational: for instance, they may recruit clerks or fitters wherever employed; while in other the qualification is industrial, i.e. they seek to recruit all persons in an industry, whatever their occupation. In a number of unions recruitment is based on a combination of these principles. A few large unions recruit members in a number of different occupations and industries.

At the end of 1963 the total membership of British trade unions was about 9,917,000. There were 596 unions but about two-thirds of all trade unionists were in the 18 largest unions, while just over a half were in the eight unions with a membership of over 250,000, namely: the Transport and General Workers' Union, the Amalgamated Engineering Union, the National Union of General and Municipal Workers, the National Union of Mineworkers, the Union of Shop, Distributive and Allied Workers, the National Union of Railwaymen, the National and Local Government Officers' Association and the Electrical Trades Union.

The basic unit of organisation in most British trade unions is the local branch (called a lodge in some trade unions). Every member of the union belongs to a branch or lodge. He may attend its meetings, put forward suggestions about terms and conditions of employment, discuss the work and policy of the union, and take part in the election of branch officers. The branch takes action on certain matters considered to be entirely, or mainly, of local interest but refers wider issues to the union's national or regional bodies.

Many unions also have shop stewards or other representatives at the place of work to enrol members and collect dues, to report any encroachment on

agreed or customary conditions of work, and in some cases to act as representatives of members at their place of work for the settlement of grievances. In a few trade unions, mainly in the printing and allied trades, organisation is based primarily on the place of work.

In most large unions the central organisation is along the following lines: elected officials, including a general secretary assisted by clerical and specialist staff, are in charge of the work of the head office and are responsible to a national executive council or committee which may be part-time or full-time, and which is usually elected by, and responsible to, annual or biennial conferences of delegates from the branches.

Executive committees or councils play an important part in the government of the unions; between conferences they are the highest authorities and carry out policy decisions made by delegates. Most unions also have some regional, district or area organisation, while in large unions there are usually regional, district or area committees or councils.

Trade unions may affiliate to one or more federations or confederations whose main purpose in most cases is to represent all or most of the trade unions in an industry in negotiations with employers. The scope and authority of these federations and confederations vary greatly in different circumstances.

Trades Union Congress

In Britain the national centre of the trade union movement is the Trades Union Congress (TUC). Most trade unions of any size and importance are affiliated to it: the main exceptions are the National Union of Teachers (NUT) and certain Civil Service staff associations. The TUC's objects are to promote the interests of its affiliated organisations and to improve the economic and social conditions of the workers. Its membership comprises 174 organisations, of which about a dozen are federations of some 150 separate unions; approximately 350 unions in all are affiliated directly or indirectly. These represent about 8·5 million workpeople. The TUC deals with all general questions which concern trade unions both nationally and internationally and gives assistance on questions relating to particular trades or industries at the request of the trade union concerned. It is recognised by the Government as the channel of consultation between government departments and representatives of organised workers on matters affecting the interests of employees generally.

The congress of delegates, which constitutes the TUC proper, meets for a week every year to discuss matters of general interest to trade unionists and to employees generally. It elects annually a General Council which represents it during the remaining 51 weeks of the year. The General Council is responsible for carrying out congress decisions, for watching economic and social developments, and for providing educational and advisory services. It is also empowered in certain circumstances to mediate in inter-union disputes.

One of the main tasks upon which the TUC is at present engaged is a re-examination of the aims and structure of the British trade union movement. Previous inquiries dealt principally with structure but on this occasion the purposes of the movement also are being reviewed in the light of modern conditions.

The TUC and a number of affiliated unions have in recent years substantially developed their educational services to members. At the training college in TUC headquarters, Congress House, London, one-week and two-week courses are provided for about 700 students each year in general trade union subjects, management techniques, industrial relations, collective bargaining (including special courses for office workers and for workshop representatives),

occupational health and safety, and social security. The TUC Educational Trust also provides summer schools, regional week-end schools, and special week-end schools for women and for young workers. A unified scheme providing educational facilities (including postal courses) to members of all affiliated unions has been operated directly by the TUC from the beginning of 1965. It is financed mainly out of increased affiliation fees and replaces the facilities previously afforded by the National Council of Labour Colleges and the Workers' Educational Trade Union Committee (WETUC). The Workers' Educational Association (partner with the TUC in the WETUC) continues to co-operate in such matters as the supply of tutors. A regional advisory committee system helps to keep the scheme in touch with local requirements.

Certain unions organise one-week and other short residential courses, and these and other unions provide week-end schools for the education and training of officers and members in the principles and practice of trade unionism. Scholarships for longer-term studies (usually one academic year) at Ruskin College, Oxford, other adult residential colleges, or the London School of Economics, are offered by the TUC Educational Trust and by certain unions.

The TUC is a non-political body but under the Trade Union Act 1913 individual trade unions can, by a ballot vote of members, decide to set up a political fund, financed by a separate levy, which any member can refuse to pay without loss of his normal union rights and benefits. About 100 separate trade union organisations, including most of the largest trade unions, have such a fund and, in most cases, it is used to support the Labour Party (or the Co-operative Party, which is associated with the Labour Party and has substantially the same platform).

Branches of various trade unions in a locality generally affiliate to a local trades council, which acts as a forum for the discussion of matters of common interest and as a local agent of the TUC, by which it is registered each year. There are 500 trades councils in England and Wales alone, grouped together in 22 federations.

There is also a separate Scottish Trades Union Congress, to which trade unions may affiliate in respect of their membership in Scotland.

Voluntary Joint Negotiating Machinery

At National Level

While in some industries all matters affecting terms and conditions of employment are discussed on an *ad hoc* basis between the employers' organisations and the trade unions concerned, in other industries there are standard procedures for dealing with such matters by joint discussion at national level. In many industries there are, for this purpose, bodies composed of representatives of both sides of the industry with, in some cases, an independent chairman. There are about 200 of these bodies, most of which are called Joint Industrial Councils. Their functions vary considerably, some being simply negotiating bodies, while others deal with a wide range of subjects affecting the interests of the industry concerned. Provision is sometimes made in their constitution that a dispute on which it is not found possible to reach agreement should be referred to some form of conciliation or arbitration by independent persons, including the means provided under the Conciliation Act 1896, or the Industrial Courts Act 1919.

Collective agreements between employers' associations and trade unions are not civil contracts between particular employers and employees, and are not, therefore, in themselves enforceable at law. Observance of agreed terms and conditions is based mainly on the good faith of employers and the mutual respect and vigilance of trade unions and employers' organisations, but can

be secured in particular instances through reference to the Industrial Court (see below).

At District and Factory Level

Arrangements for negotiation and joint consultation also exist at district and factory level in many industries, where matters are discussed either between the appropriate representatives of the two sides on an *ad hoc* basis, or through regular machinery provided by District Joint Industrial Councils or similar bodies and Works Councils. Such bodies discuss how agreements reached at a national level may be applied to their district or factory, but as a rule have no power to alter the terms of such national agreements. They also discuss new problems which may arise, and if no solution can be found at factory or district level, refer them to the national body. In many of the larger industries national agreements recommend such consultation, and in some they even prescribe model rules for its conduct.

Statutory Wage-Regulating Machinery

In certain industries in which, owing to the lack of organisation among employers and workers, voluntary negotiating arrangements do not exist for the effective settlement of terms and conditions of employment or are inadequate to secure their observance by voluntary methods throughout the industry, statutory bodies known as Wages Councils and Agricultural Wages Boards have been set up. These are composed of equal numbers of representatives of employers and workers in the respective industries, with the addition of certain independent members. Wages Councils may submit proposals for fixing minimum remuneration and holidays with pay to the Minister of Labour, who must then make orders giving statutory force to such proposals, subject only to his right to return them as a whole to the councils for further consideration.

Orders relating to employment in agriculture are made by the appropriate Agricultural Wages Board (England and Wales or Scotland). Such orders are effective only in the county agricultural wages committee area in respect of which they have been made, but there is a national minimum enforceable in England and Wales and also one for Scotland.

State Provision for Conciliation Arbitration and Investigation

Matters which prove difficult to settle by negotiation are sometimes referred by agreement to independent conciliators or arbitrators, and one way in which the parties can find such persons is by invoking the help of the Minister of Labour. Under authority derived from the Conciliation Act 1896, and the Industrial Courts Act 1919, the Minister has certain powers to assist industry to settle disputes which it is not found possible to resolve through an industry's own machinery and procedure. These powers are all intended to supplement and not to supersede the industry's own machinery. There is no legal obligation on the parties to a dispute to notify the dispute to the Minister, nor to place the question before a conciliator.

To assist conciliation in industry the Ministry of Labour has an industrial relations service (see p. 275) which is staffed by specially trained industrial relations officers who keep in touch with the course of relations between employers and workers at national, district and, in some cases, factory level and assists them, if requested, to settle their problems by joint discussion and negotiation. Conciliators have no legal powers.

Disputes which cannot be settled in this way may, at the request of both parties, be referred to voluntary arbitration, either by a single arbitrator, or an *ad hoc* Board of Arbitration, or by the Industrial Court, a permanent tribunal established under the Industrial Courts Act. The court normally consists of three members—the president, one member experienced in representing employers and one in representing workpeople.

Like collective agreements, arbitration awards are not in themselves enforceable at law but, under the Terms and Conditions of Employment Act 1959, reports that a particular employer is not observing the recognised (i.e. agreed or awarded) terms or conditions of employment in his trade or industry may be made to the Minister of Labour by organisations which are parties to the agreement or award. If the matter is not otherwise settled, the Minister must refer it to the Industrial Court which, after hearing the case, may issue an award requiring the employer to observe the recognised terms or conditions. Such an award becomes an implied term of the contract of employment. This procedure, established under the 1959 Act, replaced an earlier one of similar intention and effect.

The Minister of Labour is also empowered to appoint a Court of Inquiry or Committee of Investigation into a dispute, whether existing or apprehended. These procedures are primarily means of informing public opinion of the facts of a dispute and are not means of arbitration. The report of a Court of Inquiry has to be laid before Parliament. Although the recommendations contained in the reports of such bodies are not binding on the parties, they often provide the basis for further negotiations which lead to a settlement.

Strikes and Lockouts

Over the past 30 years the number of working days lost each year through stoppages of work arising from industrial disputes, i.e. through strikes and lockouts, has been on an average about 2½ million which, taking the working population as a whole, works out at approximately one hour per worker per year. These figures, however, only record the time lost at establishments where strikes actually take place; they take no account of the effect in other establishments or industries. Nevertheless, the time lost through strikes is very much less than that lost on account of sickness, accidents and absenteeism and the United Kingdom's record over the past 10 years or so compares favourably with that of most other industrial countries.

Strikes in Britain are not in general caused by a breakdown in the collective bargaining machinery. This on the whole works smoothly and well. For example, in 1964 some 210 important claims for higher wages or shorter hours covering practically all industries were settled peacefully; less than ten resulted in disputes that led to stoppage of work. In fact it is estimated that over 90 per cent of all strikes and about 70 per cent of the time lost through strikes are the result of the unofficial and usually unconstitutional action of the comparatively small groups of workers in single firms.

These unofficial strikes are therefore symptoms of a breakdown in relations between management and workers at the place of work itself. The Government's approach to the problem presented by these strikes is that the best way to tackle them is to attack their causes. This means in other words securing a fundamental improvement in relations between employers and workers and the loyal observance of agreements and constitutional procedures freely negotiated. To this purpose the Minister of Labour has been getting the leaders of both sides of industry, through his National Joint Advisory Council, to work out agreed policies on labour/management relations.

Liaison between the Government and Industry

The Government is in contact with representatives of employers and workers at all levels on matters affecting their common interests. At local and district level the industrial relations officers of the Ministry of Labour keep in touch with the representatives of both sides of industry, while, at national level, officers of the department are requested by many Joint Industrial Councils to attend their meetings as liaison officers. Standing arrangements also exist

for consultation between the Government, the CBI and the TUC through the National Joint Advisory Council, which was set up in 1939 to advise the Government on matters in which employers and workers have a common interest. It meets quarterly under the chairmanship of the Minister of Labour. Its membership consists of representatives of the CBI and the TUC, together with representatives of the managements of nationalised industries. In recent years it has been turning its attention to a number of subjects that are of importance to relations between management and workers generally throughout industry. These subjects include redundancy arrangements, provision for sick pay and guaranteed earnings, the selection and training of supervisors, the training of shop stewards and communication and consultation within the firm.

Labour Relations of Public Authorities

While labour relations in government service and in the nationalised industries are, in general, organised on the same principles as in private industry, there are some special features.

Central and Local Government

Non-industrial employees in central government service, where salaries and conditions of service are under the direct control of the Treasury, are permitted and encouraged to join the appropriate Civil Service staff associations (trade unions) and there is a highly developed system of negotiation and joint consultation by means of the National and Departmental Whitley Councils (see p. 67), corresponding to the Joint Industrial Councils in industry. The two sides of the National Whitley Council are parties to a Civil Service Arbitration Agreement which, subject to certain limitations, provides that if there is failure to reach agreement by negotiation a department or association may report the dispute to the Minister of Labour for reference to the Civil Service Arbitration Tribunal. The tribunal is an independent one appointed by the Minister by virtue of his powers under the Industrial Courts Act 1919. Industrial employees of the central Government, however, are organised by trades and not by departments; negotiations regarding their wages and conditions of employment take place on Trade Joint Councils and unresolved matters are referred for arbitration by the Industrial Court. In the major employing departments, Departmental Joint Councils also exist for the discussion of matters other than trade questions which are of mutual concern to the department and its industrial employees (and which are domestic to the department).

In local government services there are separate National Joint Councils for the main grades of employees (such as manual, clerical and technical employees, and road-menders) which deal with wages and conditions of service as well as other matters. There are corresponding regional and district councils.

Nationalised Industries

In the nationalised industries, the main corporations, though not subject to detailed governmental control, have a statutory duty to establish satisfactory arrangements for collective bargaining in their industries and for joint consultation with their employees; but in carrying out these duties they are free to choose the arrangements that suit them. In nearly every case a complex system which already existed before nationalisation, has been taken over and modified. The arrangements, therefore, as in industry generally, vary substantially. The main difference from private industry is that the corporations are not usually members of employers' associations although they are eligible to apply for a form of association with the CBI (see p. 267). In some industries they are sole or main employers, but even where part of the industry is in

private hands, as for example in air or road transport, the corporations are separately and directly represented on wage-negotiating bodies.

Wages and conditions of service in the nationalised industries are generally settled by negotiation between representatives of managements and trade unions at the national level; in most cases there are also regional and local bodies, similarly representative, charged with the duty of applying these agreements and dealing with any difficulties or differences which may arise. Most of the industries use the facilities for arbitration offered to industry generally by the Ministry of Labour, but coalmining and rail transport have their own special arrangements.

The machinery for negotiation and conciliation in the United Kingdom is usually agreed by and based on the industry as a whole and not on the individual establishment or firm. Accordingly, those industries, such as electricity or gas supply, where there are several corporations which act as employers, are covered by a single set of arrangements for each industry, and the duty of seeing that the arrangements are made falls on the central authorities, e.g., the Gas Council or the Electricity Council. In civil aviation, there is a single joint council at national level on which both the nationalised air corporations and the private operators are represented. Where a single public corporation engages in various activities, these may be treated as separate industries and organised separately. For example, the National Coal Board's coke and by-products plants have arrangements quite distinct from the coal mines. Throughout the various organisational changes in the transport industries, rail, road and water transport have kept their different methods, based on individual traditions which existed before nationalisation.

Some of the nationalised industries have felt that joint consultation was best carried out by their negotiating bodies; others have established separate and specially constituted joint committees at all levels. In general, where consultation and negotiation are conducted through the same machinery, separate committees exist for different groups or grades of employees; where the consultative and negotiating arrangements are kept apart, a single consultative committee serves all grades.

Northern Ireland

The system of labour relations in Northern Ireland is based on the same principles as that of Great Britain and, in these matters, the Minister of Health and Social Services has powers and duties broadly similar to those of the Minister of Labour in Great Britain. About 90 per cent of trade unionists in Northern Ireland are members of trade unions whose headquarters are in Great Britain.

HUMAN RELATIONS AT THE WORKPLACE

The establishment of good working conditions is assisted by the organisation of employers and workpeople, by arrangements for negotiation and settlement of differences, and by protective legislation and its enforcement. This institutional framework, however, cannot by itself create satisfaction with work and working conditions, nor the mutual trust and co-operation of management and workers, nor the sense of shared effort and achievement known as 'team spirit'. Nor will good wages and hours, high standards of safety and health and lavish employee services necessarily bring about these attitudes and responses; their achievement depends rather on building up good relations between individuals and interacting groups within the organisation.

Personnel Management

In recent years, therefore, there has been a marked increase of interest in 'human relations' in industry, i.e. relations between managements and their

workers as individuals, as distinct from relations between organisations of employers and organisations of workers. This has led to more widespread attention being given to all aspects of personnel management and to the establishment of more personnel departments.

Practically all large industrial firms and many small ones now have a personnel department staffed by one or more specialist officers. While the form of organisation of personnel departments varies, the personnel officer is generally responsible for advising all levels of management on every aspect of labour relations. This officer also has particular duties with regard to recruitment, selection, education and training, transfer of labour, the application of wage agreements, the promotion of good communication and consultation and the supervision of working conditions and employee services.

Both voluntary and official organisations are concerned with promoting better human relationships in industry. Voluntary organisations include bodies which deal with management problems and provide a service to subscribing firms, professional associations, linking individuals with a common interest in particular functions of management, and bodies providing specialist services, usually on a fee-paying basis.

In addition to its work in the settlement of disputes (see p. 476), the Ministry of Labour's industrial relations service helps to promote high standards of personnel management and assists firms by advising on problems of personnel policy.

Recruitment and promotion policies are matters which each undertaking decides for itself, although in some industries the decisions may be limited by collective agreements or by trade practices. Great importance has recently been attached to selection; and courses for training personnel officers in modern interviewing techniques, including the use of test procedures, are now well attended. Selection of applicants for jobs is assisted by the Government Employment Services.

Communication and Joint Consultation

The realisation that the co-operation of workpeople depends largely on their proper understanding of management's aims and plans has focused attention on the means of conveying information to workers. Methods used include posters, wall information sheets, production charts, displays of photographs, the production of news-sheets and house journals, discussions and lectures, film shows and exhibitions. It is increasingly held, however, that, although these media have their use, it is more important to improve communication down the normal chain of responsibility to workshop level (a matter which depends on personal relations and on the adequacy of supervisor training) and to establish means for joint consultation, such as those provided by a works council.

In the nationalised industries the various Acts placing them under public ownership impose obligations on the management, except where adequate machinery already exists, to consult with the appropriate trade unions to establish such machinery for promoting measures affecting the safety, health and welfare of employees and for discussing matters of mutual interest, including efficiency. Arrangements for consultation at all levels, including the workplace level, have been made in all the nationalised industries according to the traditions and needs of each industry.

The range of subjects which works councils can fruitfully discuss is wide and includes hours of work (within the framework of agreements), safety, health, efficiency of production, absenteeism, labour turnover, training, education, recreation and employees' services generally. Works councils are

usually kept informed about the state of trade and production and the firm's prospects, and frequently consider problems resulting from decisions to change production methods. It is the general practice, however, to exclude all questions relating to wages and conditions of employment, and other matters covered by negotiation between organisations of employers and workers.

The Government has assisted these developments by advice on techniques, by the supply of posters, pamphlets, films and other publicity material, and by encouraging and promoting joint consultation. Industrial relations officers of the Ministry of Labour are often approached by firms seeking advice on the establishment of works councils or on ways in which their activities can be made more effective.

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SOUND AND TELEVISION BROADCASTING

Broadcasting of sound and of television in the United Kingdom is regulated under powers conferred on the Postmaster General by the Wireless Telegraphy Acts 1949–1955, which prohibit the sending or receiving of radio communications, except under licence. Users of sound and television receiving sets must obtain an annual licence, which can be purchased from most post offices.

Sound broadcasting services are provided solely by the British Broadcasting Corporation (BBC), which was established as a public corporation by Royal Charter in 1927. Two television services are provided by the British Broadcasting Corporation (BBC 1 and BBC 2) and one by the Independent Television Authority (ITA), which was established by the Television Act 1954 and is continued by the Television Act 1964.

There were 16,124,870 receiving licences current in the United Kingdom in June 1965, of which 13,358,000 were for sound and television combined and 2,766,870 (including 638,640 for sets fitted in cars) for sound only. A combined sound and television licence costs £5; a licence for sound only costs £1 5s. Registered blind people are entitled to free sound licences or to combined licences for £3 15s. One licence covers all receiving sets in a household, but a separate licence is required for a set fitted in a car.

Development of the Services

When sound broadcasting began in the United Kingdom in 1922, it was decided in Parliament that the Postmaster General should grant only one licence for that purpose at any one time, and the first licence was granted exclusively to a limited company (the British Broadcasting Company). The decision to grant only one licence for broadcasting was maintained when the British Broadcasting Corporation (BBC) was formed to take over the functions of the limited company in 1927; it was reaffirmed in 1937 when the BBC's second charter was granted to cover the sound services and the television service which the BBC had inaugurated during the previous year; and it was upheld throughout the second world war and during the post-war period until 1952.

During the second world war television broadcasting was suspended and transmissions were not resumed until 1946. After resumption the television service gained rapidly both in technical efficiency and in popularity; and between 1949 and 1952 the Government instituted a major review of sound and television broadcasting. After prolonged parliamentary and general discussion it was decided by the Government that the potential power of television was so great that it would be undesirable to leave transmission services in this medium in the hands of a single authority, however excellent. The ITA was therefore established in 1954, as a public body, to provide services additional to those of the BBC for an initial period of ten years. Independent television (ITV) transmissions began in September 1955—the BBC's monopoly in the provision of sound broadcasting services remaining undisturbed.

The services provided by both broadcasting authorities were reviewed by the Committee on Broadcasting, 1960, and subsequently the powers of the ITA were renewed, till 1976, by the Television Act 1963 (which was incorporated in the Television Act 1964). This Act also strengthened the Authority's controlling and regulatory powers in relation to the independent programme companies under contract to it to produce the actual programmes. The BBC was confirmed as the sole provider of sound broadcasting services and authorised to introduce a second television service (BBC 2); this opened in April 1964.

The present Government has also decided to continue with the pay television experiment announced by its predecessor. Of the three companies originally licensed to take part, two have withdrawn, but one company, Pay-TV Limited, has announced its intention to proceed with its part in the experiment. The service will be subject to the same code of conduct as applies to existing television services.

Broadcasting Authorities

The BBC and the ITA are independent authorities in the day-to-day operations of broadcasting, including programmes and administration. The Government, however, retains ultimate control, and the Postmaster General, as the responsible minister, is answerable to Parliament on broad questions of policy and may issue directions to the BBC and the ITA on a number of technical and other subjects. The Postmaster General also has powers to prohibit the broadcasting of any particular matter or class of matter, or to revoke the licences of the BBC or ITA at any time; these powers, however, are treated as major reserve powers, and no formal veto has ever been placed on the broadcasting of a particular item. Both the BBC and the ITA are required to prepare annual reports and accounts, which are presented by the Postmaster General to Parliament.

The BBC and the ITA both consult with the Postmaster General as to the hours of television broadcasting, and he has approved an arrangement which permits any one service a maximum of 50 hours a week (30 hours a week for BBC 2), together with extensions (averaging ten hours a week) for certain stated purposes, such as religious broadcasts, ministerial and party political broadcasts, schools broadcasts, programmes of adult education and outside broadcasts. The authorities may broadcast television programmes, within the prescribed maxima, during any periods best suited to the needs of their audiences. In April 1965 the BBC was broadcasting about 53 hours of programmes from London in its domestic sound services during a normal weekday.

Organisation and Finance

The BBC operates under the provisions of two documents, each granted for a limited period at the end of which they may be renewed or amended: the Charter, which sets out the constitution, objects and organisation of the BBC and contains certain financial provisions; and the Licence and Agreement between the BBC and the Postmaster General, which deals with technical matters, certain non-technical conditions such as the prohibition of sponsored programmes, and details of the financial arrangements in force. The current Charter, and Licence and Agreement, cover the period 30th July, 1964, to 31st July, 1976. The operations of the ITA are governed by the provisions of the Television Act 1964, which formulates its constitution, its functions, its purpose and the framework of its finances; and by the Licence (which contains technical provisions) issued to it by the Postmaster General in 1964.

The British Broadcasting Corporation

Under the current Charter the corporation consists of nine governors (including a chairman, a vice-chairman and separate national governors for Scotland, Wales and Northern Ireland), each appointed for a period of not more than five years by the Sovereign in Council. As a corporate body, the governors are responsible for the conduct of the whole broadcasting operation, including the content and presentation of the programmes in sound and television, and the provision and working of the necessary installations and equipment.

In discharging its responsibilities the BBC is required to ensure that its services are used, as stated in the preamble to the Charter, 'as a means of disseminating information, education and entertainment', and to pay heed to the requirements of the Licence (for instance, it must allow the broadcasting of any announcement at the request of a minister, and must not broadcast sponsored programmes). It must refrain from expressing editorial opinion on current affairs and on matters of public policy, and it is relied on to treat controversial subjects with due impartiality.

The chief executive officer of the BBC—the Director-General—is appointed by the governors at their discretion and with him they discuss all major matters of policy and finance. Under the Director-General are six directors (the Chief Assistant to the Director-General, and the Directors of Sound Broadcasting, Television, External Broadcasting, Engineering, and Administration) who, between them, cover the whole work of the BBC, and who, with the Director-General, constitute its Board of Management. The number of staff employed is about 22,000.

The governors are advised on all aspects of their work by a number of councils, established in accordance with the terms of the Charter: for example, the General Advisory Council, which has been in existence, except for a break during the war years, since 1934; the National Broadcasting Councils for Scotland and Wales, which, under the chairmanship of the national governors for Scotland and Wales, are responsible for domestic services in those countries; and the Regional Advisory Councils for the English regions and for Northern Ireland. There are also a number of other councils and committees, not specifically required by the Charter, but established by the BBC to advise on such matters as religious broadcasting, schools broadcasting, science programmes, music, adult and further education and agriculture.

The services of the BBC are financed from (1) an annual sum, voted by Parliament, which is related to revenue derived from the sale by the Post Office of broadcast receiving licences; (2) an annual grant-in-aid, voted by Parliament, for the External Services, i.e. the European Services, the Overseas Services, and the Monitoring Service; and (3) profits from BBC publications, mainly the *Radio Times*, which has a weekly sale of nearly 5 million copies and attracts a large advertising revenue. The gross revenue from the sale of licences for the year which ended on 31st March, 1965, amounted to £56,180,940 from which the Post Office deducted £3,482,500 for the expenses it incurred in collecting the licence fees, investigating complaints of electrical interference, and administration, so that the net amount the BBC received was £52,698,440. In the same year, the net revenue from publications was £1,226,915 and grant-in-aid receipts for the external services amounted to £9,434,000.

The Independent Television Authority

The Independent Television Authority consists of a chairman, a deputy chairman and, at present, eleven other members (three of whom have special responsibility for Scotland, Wales and Monmouthshire, and Northern Ireland severally) appointed by the Postmaster General. It is responsible,

under the Television Act 1964, for television broadcasting services 'as a public service for disseminating information, education and entertainment'. The ITA owns and operates the transmitting stations, but the production studios and equipment are owned, and the actual programmes are provided, by programme companies under contract to the ITA. Fourteen programme companies are under contract for the period July 1964 to July 1967: Rediffusion Limited; Associated TeleVision Limited; ABC Television Limited; Granada TV Network Limited; Scottish Television Limited; Independent Television for South Wales and the West of England Limited (TWW); Southern Television Limited; Tyne-Tees Television Limited; Anglia Television Limited; Ulster Television Limited; Westward Television Limited; Border Television Limited; Grampian Television Limited; and Channel Television Limited. A common news service is provided by Independent Television News Limited.

The Authority has controlling and regulatory powers of a wide and important character in regard to programmes: for example the Television Act requires it to ensure that they do not offend against good taste or decency, that they are balanced in their subject matter, that they preserve due impartiality in presenting matters of industrial or political controversy, and that the news is reported accurately; it also provides for the submission by the programme contractors of programme schedules for the approval of the Authority; and lays on it the duty to produce and keep under review a code of programme standards governing the rules to be observed about the showing of violence, particularly when large numbers of children and young people may be expected to be watching. In the choice of programme companies the ITA is guided by their potential ability to provide an efficient service and, in the case of regional companies, by their associations with the local communities concerned.

The chief executive officer of the ITA is the Director-General. There are also two Deputy Directors-General, and a headquarters and regional office staff covering all technical, administrative, clerical, typing and office services, which numbered 630 in 1965. Engineering staff serving at the transmitting stations number 231.

In the discharge of its duties the ITA is advised by a General Advisory Council, three statutory committees and a statutory panel: the Advertising Advisory Committee; the Educational Advisory Committee; the Central Religious Advisory Committee to the BBC, which by arrangement also advises the ITA; and the Medical Advisory Panel. Programme schedules are discussed by the Programmes Policy Committee. The ITA also has a panel of six consultants to assist it in the exercise of its day-to-day responsibilities for religious services and programmes. A standing consultative committee, composed of two representatives of the ITA and a representative of each of the programme companies, provides consultative machinery between the ITA and the companies on matters, other than programmes, affecting the companies as a whole. There is also an Independent Television Companies Association, designed to further the collective interests of the companies with such outside bodies as trade unions and sporting organisations, and generally to ensure that they speak as far as possible with one voice on public issues connected with television broadcasting policy.

The ITA receives no payments from licence revenue; its finance is drawn from annual rental payments made to it by the programme companies. In the year which ended on 31st March, 1964, these payments amounted to about £5·6 million, while the running costs of the ITA were £4·3 million.

Sound Broadcasting

The BBC operates its domestic sound broadcasting services from 57 long-wave and medium-wave transmitters at 43 transmitting stations, and from 46 very high frequency (VHF) transmitting stations. The VHF service is available to 98·5 per cent of the population of the United Kingdom. This will rise to 99·7 per cent on completion of the present programme of relay stations, about the middle of 1966. The external broadcasting services are at present transmitted from 50 high power, high frequency transmitters: 40 in the United Kingdom, two (used for relay purposes) at Tebrau, near Singapore, and eight (also for relay purposes) in Cyprus. Construction of a short-wave relay station on Ascension Island is well under way and the modernisation of the transmitter facilities in the United Kingdom is continuing.

There are 126 studios for the domestic sound programmes, of which 56 are in London and 70 at various centres in the regional areas. The external services use 38 London studios. There are also 31 semi-automatic studios which can be operated by programme officials without an engineering staff.

Domestic Services

The domestic sound services consist of the Home Service, the Light Programme and the Third Wavelength which carries the Music Programme and Third Programme with Study Session (Mondays to Fridays) and Sports Service (Saturday afternoons). These separate, but inter-related, services give the BBC reasonable scope in providing programmes that fall within a very wide range of what can be effectively broadcast in sound only.

Each of the services has its own characteristics: the Home Service is planned as a general service, and in addition to a wide range of musical programmes and plays provides the principal news and information services, discussions on domestic and foreign affairs, political broadcasts (ministerial broadcasts and controversial broadcasts by party spokesmen) and special programmes of various kinds, including broadcasts for schools. It is also the vehicle for regional broadcasting (i.e. programmes specially compiled for listeners in Scotland, Northern Ireland, Wales, the Midlands, north and west of England). The main purpose of the Light Programme is to provide a service of entertainment and relaxation for the majority. The Third Programme is intended for those who take pleasure in close and responsive listening to broadcasts of artistic and intellectual distinction, and the Music Programme provides good music during the day.

External Services

The external broadcasting services of the BBC are intended to provide a link of culture, information and entertainment between the peoples of the United Kingdom and those in other parts of the world; to present events of world-wide importance with speed and accuracy; and generally to reflect British opinion and the British way of life. These services are broadcast in English and in 40 other languages for over 600 hours a week, which is longer than the output of all the BBC's domestic sound and television services added together, and involves the transmission of over 1,100 news programmes and 1,200 talks a week.

The services, under the Director of External Broadcasting, are divided into the European Services and the Overseas Services, each in charge of a Controller. Within these two groups are the regional divisions. Common to both groups are the External Services News Department, which prepares all the news broadcasts for audiences outside the United Kingdom, and the External Services Production Department, which supplies feature programmes.

The *European Services* broadcast over 230 programme hours a week and are subdivided into four regional groupings: South European (Spain, Portugal, Italy, Greece, Turkey, Israel), Central European (Czechoslovakia,

Hungary, Poland, Finland), East European (Soviet Union, Rumania, Bulgaria, Yugoslavia, Albania), and German. A French language service provides programmes for both European and African listeners. There is also an English service directed to the whole of Europe, and a European Talks Department.

The *Overseas Services*, which are directed to countries outside Europe, broadcast about 390 programme hours a week. They comprise the BBC World Service with its world-wide audience of English-speaking listeners, and a number of regional services in English and 22 other languages. The BBC World Service, which includes among its audience peoples of the Commonwealth, British Forces and British communities overseas, gives a complete programme service for nearly 23 hours every day. The regional services consist of the African Service with programmes in English, Hausa, Swahili and Somali; the Arabic Service; the Asian Service with programmes in 14 oriental languages; the Latin American Service with programmes in Spanish and Portuguese; and other special programmes in English for North America, Australia, the Pacific, the Caribbean and the Falkland Islands, in Maltese for Malta, in French for Canada and in French and English for Mauritius.

The external broadcasting services include the Transcription, English by Radio and Television, and Monitoring Services. The *Transcription Service* records 1,000 BBC sound programmes annually, distributing them to broadcasting organisations in all parts of the world. The BBC *English by Radio and Television* service broadcasts over 200 English by Radio lessons from London every week with commentaries in 27 languages, reaching an audience of several millions by direct transmission from London and from the BBC's Far Eastern station. In addition, some 250 local radio stations in 90 countries also broadcast BBC *English by Radio* recorded series. The BBC's first *English by Television* series has been shown in some 30 countries and a second series for intermediate learners was scheduled for showing in the autumn of 1965 in seven European countries and in Iran. Two television courses designed for teachers of English are also available and have been produced in collaboration with the British Council. BBC English courses on gramophone records and tape, with companion textbooks, are on sale in almost all parts of the world. The *Monitoring Service* reports foreign broadcasts from some 50 countries in 35 languages and works under a reciprocal agreement with its American counterpart for monitored material from the Far East and other areas inaudible in the United Kingdom.

In the external services the Corporation works in consultation with the government departments concerned with overseas relations which prescribe the languages and hours of broadcasting, but the day-to-day content of the programmes remains the responsibility of the BBC.

The BBC maintains offices in New York, Paris, Ottawa, Toronto, Sydney, New Delhi and Beirut (as well as offices in Berlin and Singapore dealing with BBC programmes) to encourage local interest in the BBC, to promote the use of BBC television and radio material and to provide the BBC with advice and help concerning programmes, whether for home listeners about that area or for listeners in the area itself. The offices (which are concerned with the whole field of sound radio and, where appropriate, television) are also responsible for promoting good relations with the local broadcasting organisations, and for keeping the BBC informed about local broadcasting and other developments of interest; in these matters, they work closely with the BBC's

Overseas and Foreign Relations Department. Audience research is undertaken by sampling surveys and other research methods to assess the size, nature and tastes of various audiences.

Television Broadcasting

BBC

In 1936 the BBC launched the world's first regular public service by high definition television. Two programmes are now being transmitted: BBC 1, which is available to over 99 per cent of the population of the United Kingdom from 59 transmitting stations, and BBC 2, at present from three stations. BBC 2 is transmitted on 625 lines on ultra high frequency (UHF) and is expected to reach some two-thirds of the population by the end of 1966.

In the course of a year, the BBC television service broadcasts on a national network for 7,450 hours, including studio productions, outside broadcasts, films, and relays from other countries. BBC Television Enterprises undertakes the world-wide sale of BBC television programmes (films, tele-recordings and video-taped material); it also purchases material for the use of the BBC television service and conducts business relations with other television organisations throughout the world.

BBC studio productions in London come from five main studios at the Television Centre, four at Lime Grove, two at Riverside Studios, Hammersmith, and the Television Theatre, Shepherds Bush. With one exception all London studios are now capable of operation on 405 lines for BBC 1, and on 625 lines for BBC 2. In addition, the BBC's largest studio, Studio 1 at the Television Centre, can operate on the American 525 line standard. The BBC also has fully equipped regional studio centres at Manchester, Birmingham, Cardiff, Glasgow, Bristol and Belfast; these centres contribute programmes to the national network as well as producing others of only local interest. Work has started on a new Midland regional headquarters near Birmingham, which will become the first combined television and sound radio centre in the world. In addition to the main studios a number of small interview studios (used mainly for short insertions into news bulletins) have been established throughout the country. The Television Film Department of the BBC uses two studios at Ealing as well as mobile film units. Television news and newsreel programmes originate from specially equipped studios at Alexandra Palace, London. Two further main studios are now being equipped at the Television Centre, where a start has also been made on the first part of the extension to the main block.

Outside broadcasting, which provides about 1,200 programmes annually, covers most parts of the United Kingdom with its mobile units, presenting programmes both of national and of specifically regional interest. Live programmes and news items from other parts of the world are brought to viewers in the United Kingdom over the Eurovision network and by means of communications satellites (see p. 491).

ITV

The first regular independent television (ITV) service was inaugurated in September 1955 by a programme transmission from the ITA London station at Beulah Heights, Croydon. By 1965 programmes were being transmitted from 27 stations in all parts of the United Kingdom, and 14·2 million homes in the United Kingdom were able to receive independent television.

ITV programmes are produced at studio centres in London, Birmingham, Manchester, Glasgow, Cardiff, Southampton, Newcastle, Norwich, Belfast, Dover, Plymouth, Carlisle, Aberdeen, Bristol, Leeds and St. Helier. The establishment of these studios is the direct result of the ITA's policy of encouraging the development of regional television, and the programmes are either for local broadcasting or for transmission to one or more of the other

regions through the link system operated by the ITA. This consists of some 6,000 miles of vision links, about 60 per cent of which are two-way circuits.

Programmes

Both the BBC and the ITV services include programmes of music, drama, light entertainment, variety, films, news reports covering international, national, and local events, political programmes, and outside broadcasts, particularly of national and state occasions and sport. Religious broadcasts and broadcasts for schools and adult students also feature regularly as do programmes designed to stimulate thought and widen people's horizons, such as interviews with outstanding personalities, investigations into matters of public interest, and programmes on the arts; and there are programmes of specialised interest, such as children's and family programmes, programmes for women, regional programmes, and programmes on agriculture. In addition, there are special series of party political broadcasts under arrangements agreed between the broadcasting authorities and the leading political parties. The addition of a second BBC channel has made longer programmes possible, allowing subjects to be examined in greater depth.

Advertising

The BBC seeks to avoid giving publicity to any individual firm or organised interest except in so far as is necessary in providing effective and informative programmes under the terms of the Charter. The ITA broadcasts advertisements (on which the programme companies depend for their revenue) subject to the relevant provisions in the Television Act, namely, that there should be no sponsoring of programmes by advertisers, that all advertisements should be clearly distinguishable as such and recognisably separate from the programme, and that the amount of time given to advertising should not be so great as to detract from the value of the programmes as a medium of information, education and entertainment. Certain types of advertising are prohibited, notably the advertising of cigarettes, betting, and 'cures' for alcoholism. The ITA also has rules agreed with the Postmaster General about certain classes of broadcasts (including, in particular, religious services) in which advertisements may not be inserted and, on the advice of the Advertising Advisory Committee and the Medical Advisory Panel drew up certain 'principles for television advertising' with a view to the exclusion of misleading or unsuitable advertisements from the programmes. These principles formed the basis of the 'Code of Advertising Standards and Practice' which, under the Act, the ITA keeps under review. The cost of inserting advertisements in the ITA service is borne by the advertisers, who pay the programme companies for advertising time.

Pay Television

An experiment in pay television by wire, a service whereby subscribers pay for programmes they choose to view, will be taking place shortly in a few selected areas, starting in the London Boroughs of Westminster and Southwark. The Postmaster General has licensed Pay-TV Limited to operate the service, subject to certain conditions and safeguards, for a period of three years from the date of commencement of service.

The company is to operate in conjunction with British Relay Limited, which will make available its television wire broadcasting system (see below) for distributing the pay television service.

Wire Broadcasting

Wire broadcasting—a system whereby programmes are received at a central point, whence they are distributed by wire to listeners and viewers—began in the United Kingdom in 1925 as a private venture and remains in the hands of private enterprise. Wire broadcasting companies operate under

licence from the Postmaster General. They are not allowed to originate programmes of their own, and their function is to distribute programmes put out by general broadcasting stations. A specified minimum of their programme material must be taken from BBC sources. Subscribers to wire broadcasting services must have ordinary broadcast receiving licences. At the beginning of 1965 there were 722 wire broadcasting services, of which 585 gave television service and the remainder sound-only service. The number of subscribers at that date was 1,217,241, including 866,712 who were receiving television services.

Audience Research

Audience research, as conducted by the BBC, is carried on by means of (*a*) a Survey of Listening and Viewing, during the course of which a representative sample of the population is interviewed each day about its listening and viewing on the previous day, (*b*) a continuous system of gathering information about the way programmes are received by those who happen to see or hear them, through panels of representative listeners and viewers, and (*c*) *ad hoc* investigations. The ITA co-ordinates research programmes carried out for it by outside experts.

Technical Developments

The Postmaster General is advised on the technical aspects of television (and VHF sound broadcasting) by the Television Advisory Committee, which consists of an independent chairman, the Director-General of the BBC, the Director-General of the ITA, representatives from the radio industry, independent members, and representatives of interested government departments.

Research into technical problems is carried out by the scientific and engineering staffs of the BBC, the Post Office and the radio industry. In the BBC a comparison has been made and work is continuing on three systems of colour transmission, based on the NTSC (National Television Systems Committee (USA)), SECAM (Séquentiel Couleur avec Mémoire) and PAL (Phase Alternation Line) systems. Other recent studies include: investigations into various systems of stereophonic sound transmissions; methods of improving studio acoustics, microphones and loudspeakers; long-distance propagation studies in the short-wave, VHF and ultra high frequency bands; and methods of increasing national coverage both in sound and television by such means as the sharing of frequencies between stations, the construction of transmitting aerials having special horizontal radiation patterns, and the development of unattended relay transmitters of low power for providing a television and VHF sound service to small and isolated communities. The BBC has also developed equipment for converting television programmes from European standards to those of North America, and the world's first electronic standards converter which operates unattended and gives converted pictures of far higher quality than those of earlier converters.

International Relations

The BBC and the ITA (together with the Independent Television Companies Association) are active members of the European Broadcasting Union. The union, which now has 29 full members among the broadcasting organisations in the European zone and 40 associate members (mostly from outside Europe, including the United States of America and many of the nations of the Commonwealth), meets every year to exchange views and information, and to study common problems. It also maintains a Technical Monitoring Station, where frequency measurements and other observations on broadcasting stations can be carried out.

Within the Commonwealth, the BBC is closely associated with the broadcasting organisations of the other member countries and of the dependent territories. The BBC, the Australian Broadcasting Commission, the Canadian Broadcasting Corporation, and the Rank Organisation have jointly set up a British Commonwealth International Newsfilm News Agency Trust. Through an associated non-profit-making company (the British Commonwealth International Newsfilm News Agency Limited), this joint enterprise provides a reliable service of international news on film for subscribers who operate television services, produce cinematograph newsreels or acquire newsfilm for any other purposes, including education, anywhere in the world.

Both the BBC and the independent television companies are associated with the Centre for Educational Television Overseas, which began work in 1962 and concentrates particularly on the needs of the service in developing countries. The centre receives a government grant totalling £100,000 over five years, but most of its funds come from private sources, including the independent television companies. The BBC provides free technical and other facilities, including film library resources and some use of lecture studios. Training in television work is also provided for overseas trainees at the Thomson Centre, in Glasgow, run by the Thomson Foundation, a charitable trust.

The BBC and the ITA also participate in the work of the International Telecommunication Union (ITU)—the United Nations specialised agency responsible for the regulation and control of all international telecommunication services (including sound and television), for the allocation and registration of all radio frequencies and (through its International Consultative Committees) for the promotion and co-ordination of the international study of technical problems in broadcasting. In addition, the BBC has long-established relations with the United Nations Radio Division, with the United Nations Educational, Scientific and Cultural Organisation (UNESCO), and with the Council of Europe.

Eurovision

As well as taking part in the exchange of sound radio programmes arranged between the member countries of the European Broadcasting Union (EBU), the BBC is a regular contributor to the network of European television (Eurovision). This network now includes 23 Western European member countries; the exchange of television programmes between them is arranged by the EBU, which maintains an International Television Co-ordination Centre (Eurovision) in Brussels. The range of Eurovision is steadily increasing as countries expand their networks and facilities, and new countries participate. Successful programme exchanges have also been made between Moscow and London by both the BBC and the independent television companies.

Inter-continental Television

The first television relay across the Atlantic by means of *Telstar*, the communication satellite, was seen in Britain in the early hours of 11th July, 1962. The first programme exchanges between America and Europe via *Telstar* were televised on 23rd July, 1962. Further exchanges have been achieved by means of the subsequent satellite *Relay* and successful transmissions have been effected between Japan and Europe. On 2nd May, 1965, a further significant advance in inter-continental television was marked by the first transatlantic exchange of programmes using the *Early Bird* synchronous satellite. Simultaneous two-way live television was achieved for the first time between Europe and America. *Early Bird* is stationary over the South Atlantic, and thus permits continuous contact between ground stations on opposite sides of the Atlantic.

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THE PRESS

The British press caters for all political views, different levels of education and a wide range of interests. It is not subject to state control or censorship.

The British public buys more newspapers per person than any other in the world. It has been estimated (*World Communications, 1964*, UNESCO) that for every 100 inhabitants of Britain 50 copies of daily papers are sold every day. (Next comes Sweden with 46 per 100 inhabitants.) Circulation figures of individual newspapers are proportionately high: five of the daily morning newspapers and five of the Sunday papers have circulations in the millions. These high figures are largely explained by the fact that the London morning and Sunday papers have national circulations, i.e. they are distributed throughout the United Kingdom, being available almost everywhere on the day of publication.

Britain imports just over half its newsprint requirements, while the rest is made from imported raw materials. In 1964, 1·41 million tons of newsprint were used in the United Kingdom. The average size of national morning papers varies between 16 and 32 pages. Prices of daily newspapers vary from 4d. to 6d. (for *The Times*). Sunday papers are considerably larger and prices run up to 8d. In addition to their normal paging some newspapers carry occasional supplements and a number are providing regular weekly colour supplements.

According to *The Newspaper Press Directory*[1] there are 131 daily and Sunday newspapers and well over 1,200 weekly papers published in Greater London and almost every sizeable town in the rest of the country. These papers deal mainly with news of interest to the region where they are sold. There are also the sporting papers, papers in foreign languages for groups of nationals of other lands resident in Britain, and religious papers.

Ownership

Ownership of the newspaper press is varied: it includes individual owners, two or more partner proprietors, local printing and publishing firms, newspaper companies owning between one and half a dozen papers, or press groups controlling a chain of newspapers in different parts of the country. The largest press groups are: International Publishing Corporation Limited; Associated Newspapers Limited; Beaverbrook Newspapers Limited; and, for the provincial newspapers, the Thomson Organisation Limited, Westminster Press Provincial Newspapers Limited and Provincial Newspapers Limited.

Some newspaper groups also have holdings in independent television contracting companies[2] and extensive interests in periodicals. The International Publishing Corporation is the largest publisher of periodicals in the world and the largest, by far, in England and Wales. In Scotland the largest publishers of magazines are the D. C. Thomson Group.

[1] Changes in the number of newspapers occur constantly; figures are based on the 1965 edition of *The Newspaper Press Directory*.

[2] The Television Act 1963 stipulates that, if it appears to the Independent Television Authority at any time that newspaper shareholdings in television programme companies have led or are leading to results which are contrary to the public interest, the Authority may, with the consent of the Postmaster General, notify the companies that their programmes may cease to be transmitted.

Although pronounced views may be expressed in newspapers and their political leanings may be obvious, they are financially independent of any political party. In order to preserve their character and traditions, certain newspapers and periodicals are governed by arrangements which vest the ownership of the undertaking in trustees, or operate it in accordance with a deed of trust, or provide that the transfer of shares be in the hands of trustees. Such arrangements govern the direction of *The Guardian*, *The Observer*, *The Economist*, *Spectator* and *New Statesman*. Much public concern has been caused, especially since the second world war, because some newspapers have ceased publication and the ownership of the remainder has become concentrated in fewer hands. This trend was studied by two Royal Commissions on the Press, one of which reported in 1949 and the other in 1962. The recommendation of the latter, that the danger of concentration of ownership should be lessened by the establishment of a Press Amalgamations Court to examine transactions involving changes in ownership, was covered by the part of the Monopolies and Mergers Act 1965 which refers to newspapers being dealt with through a specially appointed panel. However, the Act directs that the Monopolies Commission and not a court of law should be the investigating body.

Recent Developments

In the autumn of 1964 the first newspaper in Britain to be printed by code type and webfed litho offset was published (*The Shropshire Star*); a British made computer-typesetter is being used for a new evening paper at Reading by the Thomson Organisation; and the *Daily Mirror* is to transmit whole pages by facsimile for the printing of an Irish edition in Belfast.

The 'National' Press

Eleven morning papers are 'national' in the sense of circulating throughout the British Isles, and there are eight 'national' Sunday papers (see Table 37). Most papers with big circulations have northern editions published in Manchester which, after London, is the largest press centre in England. Certain specialised daily papers published in London have a circulation limited by interest and not by region, for example, *Lloyd's List and Shipping Gazette* and *Sporting Life*. The leading Scottish papers (*The Scotsman* and *The Glasgow Herald*) have a considerable circulation outside Scotland. The two London evening papers each have affiliations with a national daily, but draw their readership very largely from people living within fifty miles of London.

Provincial Newspapers

The provincial newspapers of England and Wales numbering over 80 morning or evening daily and Sunday papers and about 870 weeklies, provide the general and local news expected by readers whose daily life and interests are known to, and shared by, the newspaper staff. Only a few reflect a definite political tendency, most of them considering themselves independent. The total circulation of the provincial morning and evening papers is over 6½ million. *The Journal*, the *Yorkshire Post*, the *Sporting Chronicle*, the *Northern Echo* and the *Western Mail* (of the mornings) have circulations of over 100,000, two provincial Sunday papers—the *Sunday Sun* and the *Sunday Mercury*—have circulations of over 200,000; while, among evening papers, the circulations of the *Birmingham Evening Mail and Despatch*, the *Liverpool Echo and Evening Express* and the *Manchester Evening News and Chronicle* exceed 400,000. The *Yorkshire Evening Post* has a circulation of over 300,000, the Newcastle *Evening Chronicle* and the Wolverhampton *Express and Star* exceed 200,000, and ten other evening papers have between 100,000 and

200,000. The provincial newspaper, often read far more thoroughly than the national daily, is a valuable medium for national and local advertising.

There are over 90 London suburban weeklies.

TABLE 37
'NATIONAL' NEWSPAPERS AND LONDON EVENINGS

Title	General Political Tendency	Controlled by[a]	Circulation average Jan.–June (inc.) 1965
DAILIES			
The Times (1785)	Independent	Times Publishing Co. Ltd.	257,922
The Daily Telegraph (1855)	Conservative	Daily Telegraph Ltd.	1,350,529
The Guardian (1821)	Independent	Manchester Guardian and Evening News Ltd.	275,900
Daily Express (1900)	Independent; stresses importance of British Commonwealth	Beaverbrook Newspapers Ltd.	4,041,883
Daily Mail (1896)	Independent	Daily Mail and General Trust Ltd.	2,424,810
The Sun (1964)	Left of centre	International Publishing Corporation Ltd.	1,361,090
Daily Worker (1930)	Communist	People's Press Printing Society.	60,246
Daily Mirror (1903)	Left of centre	International Publishing Corporation Ltd.	4,956,997
Daily Sketch (1909)	Conservative	Daily Mail and General Trust Ltd.	826,440
Financial Times (1888)	Independent	Financial Times Ltd.	152,149
The New Daily (1960)	Right of centre	New Daily Ltd.	c. 5,000
LONDON EVENINGS			
Evening News (1881)	As for *Daily Mail*	Daily Mail and General Trust Ltd.	1,278,423
Evening Standard (1827)	As for *Daily Express*	Beaverbrook Newspapers Ltd.	680,446

[a] The company named is, for each newspaper, the one in ultimate control of the undertaking and is not necessarily the company which publishes the newspaper.

TABLE 37 (*contd.*)

Title	General Political Tendency	Controlled by[a]	Circulation average Jan.–June (inc.) 1965
SUNDAYS			
The Observer (1791)	Independent	The Observer Ltd. All shares owned by The Observer Trust.	829,284
The Sunday Times (1822)	Conservative	The Thomson Organisation Ltd.	1,275,177
The Sunday Telegraph (1961)	As for *The Daily Telegraph*	Daily Telegraph Ltd.	662,030
News of the World (1843)	Independent	News of the World Organisation Ltd.	6,174,640
The People (1881)	Independent	International Publishing Corporation Ltd.	5,509,221
Sunday Express (1918)	As for *Daily Express*	Beaverbrook Newspapers Ltd.	4,186,525
Sunday Citizen (1850)	Supports the Co-operative Movement and the Labour Party	Co-operative Press Ltd.	236,483
Sunday Mirror (1963)	As for *Daily Mirror*	International Publishing Corporation Ltd.	5,022,214

[a] The company named is, for each newspaper, the one in ultimate control of the undertaking and is not necessarily the company which publishes the newspaper.

Scotland

Scotland has six morning, seven evening and two Sunday newspapers, excluding the Scottish editions of the *Daily Express*, *Daily Mail* and *Sunday Express*. The leading morning papers are *The Glasgow Herald* (circulation 83,052) and *The Scotsman*, published in Edinburgh (circulation 69,514). Others are: the *Daily Record* and the *Noon Record*, published in Glasgow; the *Courier and Advertiser*, published in Dundee; and the *Press and Journal* of Aberdeen. Evening papers include the *Edinburgh Evening News and Dispatch*, Glasgow's *Evening Times* and *Evening Citizen*, Dundee's *Evening Telegraph and Post*, Aberdeen's *Evening Express*, the *Paisley Daily Express* and the *Greenock Telegraph* and *Clyde Shipping Gazette*. The Sunday papers are the *Sunday Mail* and the *Sunday Post*.

Weekly newspapers published in Scotland number about 150. The most widely known are the *Weekly Scotsman* and the *People's Journal*.

Northern Ireland

Northern Ireland has two morning papers, one evening paper and one Sunday paper, all published in Belfast: they are *The News-Letter* (Unionist)

and the *Irish News* (Nationalist), the evening *Belfast Telegraph* (Unionist) which has a circulation of 210,262, and the *Sunday News* (Independent), first published in March 1965. There are 42 weekly newspapers in Northern Ireland, with circulations ranging from under 4,000 to over 20,000. The majority are published by individual companies.

Wales

One daily morning newspaper, the *Western Mail*, published in Cardiff, has a circulation of 102,602 mainly in southern Wales. In North Wales the *Liverpool Daily Post* gives wide coverage to events in the area. Evening papers published in Wales are the *South Wales Echo*, Cardiff, the *South Wales Argus*, Newport, and the *South Wales Evening Post*, Swansea. North Wales is served by the *Liverpool Echo* and to a smaller extent by the *Manchester Evening News and Chronicle*.

The weekly press includes 47 weekly papers in English, many of them carrying articles in Welsh; 3 bilingual papers; and 11 papers in Welsh, of which 3 are denominational.

Channel Islands and Isle of Man

The Channel Islands have three daily papers (two in Guernsey and one in Jersey), three evenings and two weeklies. The *Isle of Man Times* is issued from Mondays to Wednesdays with a special weekly edition which is published on Friday: there are also five weeklies.

Periodicals

Weekly, monthly and quarterly journals cover an enormous field. Salient features of the last thirty years have been the development, on the one hand, of periodicals with a mass appeal, particularly those for women and adolescent girls; and, on the other hand, the growth of the trade and technical press. There are over 4,500 periodical publications: general magazines with circulations of up to a million; women's magazines, some of which have even larger circulations; numerous publications for children; religious periodicals for all denominations; fiction magazines; magazines dealing with sport, gardening and other hobbies, and humour; journals specialising in various subjects such as politics, finance and economics, science, the professions, and the arts; trade and technical publications, many of which have circulations throughout the world, some being published solely for export, with little or no circulation in Britain; and the publications of learned societies, trade unions, regiments, universities, colleges, schools, and other associations. There has also been a large increase in recent years in the number and circulation of 'house journals', produced by industrial organisations mainly for their staffs.

The weekly periodicals with the highest sales are: *Woman* (3,007,790); *Woman's Own* (2,170,565); *Woman's Weekly* (1,489,427); *Woman's Realm* (1,319,601); *Weekend* (1,205,583); *Reveille* (1,128,820); *Woman's Mirror* (904,827); together with the *Radio Times* (4,438,406) and *TV Times* (2,479,406).

The leading weekly journals of opinion are *The Economist* (circulation 76,651), a politically independent publication covering a wider range of interests and attitudes than its title implies; the *New Statesman* (circulation 89,197), which is a review of politics, literature and the arts with an independent socialist political tendency; the *Spectator* (36,834), which covers much the same subjects from an independent conservative standpoint; and *Tribune*, which has a strongly left-wing but anti-communist bias. *The Statist*, independent, specialises in the financial and industrial aspects of world affairs. *Punch* (120,436), traditionally the leading humorous periodical, has in recent years devoted increasing attention to public affairs. *New Society* (35,000), which

covers the sociological aspects of current affairs, has rapidly established its reputation, as has *New Scientist* (52,500), which reports on the progress of science and technology in terms which the non-specialist can understand. Other papers whose circulations are in the tens of thousands are the illustrated weeklies such as the *Illustrated London News*, the *Field*, *Country Life*, and *The Listener*, which includes the texts of outstanding BBC broadcasts. All these weeklies are read in libraries, clubs and other institutions, and readership is far wider than the circulation figures suggest.

Monthly and quarterly journals, particularly the literary and political journals and those specialising in international and Commonwealth affairs, generally speaking appeal to the more serious type of reader.

In addition to the circulation of periodicals published in England, Wales has its own farming weekly, the *Welsh Farm News*, and several monthly and quarterly journals, published both in Welsh and English.

Four monthly illustrated periodicals are published in Scotland: *Scottish Field*, *Scotland's Magazine*, the *Scots Magazine* and *Scotland;* and two weeklies devoted to farming interests, *Farming News* and the *Scottish Farmer*. Among literary journals, probably the most famous is *Blackwood's*, published in Edinburgh. Numerous popular magazines are also published in Scotland.

In Northern Ireland, weekly, monthly and quarterly publications cover farming, the linen industry, building, motoring and politics.

News Agencies

There are three principal British news agencies:

Reuters Ltd., which is a world news agency owned by the newspapers of the United Kingdom, Australia and New Zealand and operated by them on a non-profit-making basis under the terms of a deed of trust which guarantees the independence and integrity of the news service and ensures that all profits are used to develop it. Founded in London in 1850, Reuters has offices in many countries and maintains several hundred correspondents throughout the world, supplying a continuous report of foreign news to the London newsroom. This is then distributed to the national newspapers, to the radio and television news services and, through an extensive private network of communications, to news media in almost every part of the world.

Press Association Ltd., which is owned collectively by British provincial newspapers. The Association distributes home news within the British Isles, supplies the same home news to Reuters and its associated agencies for distribution abroad and distributes to newspapers of the British Isles outside London the overseas news of Reuters and the Associated Press. All profits are used to develop the service.

Exchange Telegraph Company Ltd. (*Extel*), which distributes mainly home news to the national and provincial press, broadcasting organisations, overseas news agencies, and private subscribers.

Two other agencies supply a general service of overseas news:

Associated Press, which is a branch of the Associated Press of America.

British United Press, which is a Canadian subsidiary of United Press International, an American agency.

A number of other United Kingdom, Commonwealth and foreign agencies and news services have offices in London, and there are agencies in other cities, specialising in various aspects of newspaper and periodical requirements. Syndication of features is not as common in the United Kingdom as in some countries, but a few agencies specialise in this type of work.

Training for Journalism

Two experimental courses of pre-entry training for journalism have been inaugurated with the approval of the newspaper industry but they are restricted to sponsored students from newspaper enterprises. Other entrants to provincial newspapers in the United Kingdom (and most national newspaper reporters start work in the provinces and go to London after gaining experience) take part in a training scheme administered by the National Council for the Training of Journalists, which represents all the principal press organisations. The scheme, which is based on training in newspaper offices, and local colleges of further education, consists of a six-month probationary period, followed by three years of basic training and a proficiency test. A National Diploma Course of eighteen months may be undertaken later. Between 30 and 40 university graduates are taken on by newspapers each year and the number is steadily increasing. The National Council for the Training of Journalists also introduced (in 1965) the first nationally organised training courses for senior journalists; they were in science, financial and industrial reporting and in sub-editing.

Under the Commonwealth Press Union travelling fellowship scheme for the training and education of young journalists throughout the Commonwealth, each year about ten journalists from overseas spend six months in the United Kingdom: two or three months in the offices of newspapers or periodicals and the remaining time acquiring a general idea of life in Britain.

The Thomson Foundation provides scholarships and organises training courses in Britain for journalists from newly developing countries.

Press Institutions

Both employers and employees in the industry are well organised. On the employers' side the most important organisations are the Newspaper Proprietors Association, whose members are proprietors of the national daily and Sunday newspapers; the Newspaper Society, whose members are proprietors of provincial daily and weekly newspapers in England and Wales; the Scottish Daily Newspaper Society which represents the interests of daily and Sunday newspapers in Scotland; the Scottish Newspaper Proprietors' Association which represents the owners of weekly newspapers in Scotland; the Belfast Newspaper Society whose members are the proprietors of Northern Ireland's daily newspapers; Associated Northern Ireland Newspapers, whose members are the proprietors of weekly newspapers in Northern Ireland; and the Periodical Proprietors Association, whose membership embraces the independent publishers of trade and technical publications and general magazines. On the employees' side there are the Institute of Journalists (IoJ), founded in 1884 as the National Association of Journalists; and the National Union of Journalists (NUJ), founded in 1907. The National Union of Journalists has a membership of over 18,500 (December 1964) working journalists and is the largest trade union confined to journalists (including those working in radio and television and in public relations) in the world; editors who have powers of dismissal are excluded from full membership but may be associate members. The Institute of Journalists, as it admits all qualified journalists on equal terms of membership, may claim to be representative of the profession as a whole. Free-lance journalists (who are not on the staff of any one paper or group of papers, but send contributions to any journal) may belong to the NUJ or IoJ. The aims of these organisations are the improvement of the economic status of journalists, the promotion of their professional welfare, and the safeguarding of the status of the press and its editorial staffs.

The main aims of the Guild of British Newspaper Editors are to sustain the dignity of editorship, to raise and safeguard the professional status of editors, to protect the rights and freedom of the press, and to improve the education and training of journalists: the Guild has about 330 members. The British Association of Industrial Editors is the professional organisation to which most editors of house journals belong.

The Printing and Kindred Trades Federation is made up of trade unions concerned with printing and publishing. The principal craft unions are the National Graphical Association and the Scottish Typographical Association which organise such workers as compositors and machine minders. The National Society of Operative Printers and Assistants (NATSOPA) has a varied membership (850 categories), which includes machine room assistants, clerical and administrative staff, and general assistants in printing works.

The Press Council

The Press Council, established in 1953 and reconstituted in 1963, has a lay chairman and 25 members. Its aims are: to preserve the established freedom of the British press; to maintain the character of the British press in accordance with the highest professional and commercial standards; to keep under review any developments likely to restrict the supply of information of public interest and importance; to deal with complaints about the conduct of the press or the conduct of persons and organisations towards the press; to report on developments in the British press which may tend towards greater concentration or monopoly; to make representation on appropriate occasions to the Government, to organs of the United Nations and to press organisations abroad; to publish its adjudications and periodical reports recording its work and to review from time to time developments in the British press and the factors affecting them. Reports are published annually.

The Press and the Law

The press in Britain has the same freedom as the individual to do and say what it likes provided it does not transgress the law and, in general, is at liberty to comment on matters of public interest. Apart from enactments relating directly to such matters as the registration of newspapers, there are no specific press laws but certain statutes include clauses which apply, in particular or incidentally, to the press. These relate to such matters as the right of press representatives to be admitted to meetings of local authorities; restrictions on the publication of (*a*) advertisement and investment circulars, which are governed by Acts dealing with fraud and (*b*) advertisements of remedies for certain diseases, which are covered by public health legislation; agreements between the Post Office and newspaper proprietors on telegraphic communications, which must comply with telegraphs legislation; restrictions on certain types of prize competition; and copyrights, which come under copyright laws.

Some of the main aspects of the law which have particular relevance to the work of the press are: contempt of court—a newspaper may not publish comments on judges, magistrates or court proceedings which are likely to prejudice their reputation for fairness, nor may it publish before or during a trial anything which might tend to influence the result; seditious libel, incitement to disaffection and revealing official secrets; offences against public morality—laws covering blasphemous and obscene libel, forbidding publication of advertisements of lotteries, and imposing restrictions on reports of certain court proceedings; the Children and Young Persons Acts empower the courts to forbid matter being published by which a child or young person involved in proceedings can be identified; defamation; and criminal libel.

One section of the Monopolies and Mergers Act 1965 deals specifically with newspaper ownership (see p. 493).

Legal proceedings against the press are comparatively infrequent; the majority of actions that do take place are libel actions brought by private individuals. In such cases, the editor, proprietor, publisher, printer and distributor of the newspaper, as well as the author of the article, may all be held responsible.

In 1964 a working party was set up, consisting of representatives of Justice (British Section of the International Commission of Jurists) and of the British Committee of the International Press Institute, 'to inquire into the extent to which the Law and the practices of the Courts as at present existing in respect of Contempt of Court, Libel and Official Secrets, hamper the press in publishing facts of public interest, and in editorially commenting thereon within the limits of what is necessary for the protection of the liberty of the subject and the security of the State'. The recommendations of the working party were published in 1965 (The Law and the Press, *Stevens*, 17s. 6d.).

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SPORT

In Britain, the word 'sport' is used generally to describe such activities as organised outdoor games, athletics, field or country sports, indoor games, aquatic sports, and such popular pursuits as horse-racing, dog-racing, show jumping, riding, boxing, rock climbing, motor racing, cycling and rifle shooting as well as those (for instance, archery, fencing, gliding and ice-skating) which, although less popular judged by the number of participants and spectators, all have their own devotees. Those who engage in sport may be professionals (i.e. paid players) or amateurs.[1] Professionals keep up the technical standards of the sports in which they take part and spectators make a vital contribution by their enthusiasm and their financial support; but the sporting life of Britain derives its character principally from the amateur element—people who devote time and energy to organising sport and to teaching and training, as well as the many thousands of all ages who engage in sport for pleasure alone.

Central and Local Government Participation

The Government is not directly concerned with the organisation or promotion of sport in Britain but it has assumed responsibility for providing encouragement, guidance and help; it gives grant-aid to voluntary bodies towards approved expenditure on playing fields, swimming baths and other facilities for physical recreation, and to national voluntary organisations in Great Britain for various purposes, including the holding of world championships and events of similar importance in Britain. The Government is advised on matters relating to the development of amateur sport and physical recreation by the Sports Council, which also fosters co-operation between the statutory authorities in Great Britain (the Department of Education and Science and the Scottish Education Department) and the voluntary organisations concerned. The chairman of the Council is the Joint Under-Secretary for Education and Science, who is the minister responsible for sport. In Northern Ireland the Ministry of Education is advised by the Youth and Sports Council.

The Council works in close co-operation with the Central Council of Physical Recreation, the National Playing Fields Association, the Scottish equivalents of these bodies, and the British Olympic Association.

Direct Exchequer assistance to sport and physical recreation (other than in educational establishments) in Great Britain amounted to £915,000 in 1964–65. This amount is to be increased to £1,571,000 in 1965–66, representing a rise of over 70 per cent. In Northern Ireland in 1964–65 over £138,000 in grants was given to public authorities and voluntary organisations for sports facilities and coaching schemes.

Facilities for Sport

The Secretary of State for Education and Science, the Secretary of State for Scotland and the Ministry of Education for Northern Ireland require that all publicly maintained schools shall provide for the physical education (gymnastics, games, athletics, dancing and swimming) of their pupils. Schools

[1] Some sports, for example athletics, Rugby Union football, hockey and rowing, are entirely amateur, but in other sports the distinction between professional and amateur status is becoming less strictly defined.

in the national systems (excepting those solely for infants) must have their own playing field, or the use of one, and most secondary schools have a gymnasium. Facilities for, and instruction in, many kinds of sport are also provided at the independent preparatory and public schools and at the universities (some of which have departments of physical education). Local authorities are empowered under the Public Health Acts and the Physical Training and Recreation Acts to provide playing fields. They also provide gymnasia, tennis courts, golf courses and swimming baths on an increasing scale. Sports facilities for employees are also provided by industrial and commercial concerns.

Composite National Bodies

The national voluntary organisations most closely concerned with the general development of sport are the Central Council of Physical Recreation, the Scottish Council of Physical Recreation, and the National Playing Fields Association. The British Olympic Association, whose main functions are connected with the participation of British teams and competitors in the Olympic Games, is also interested in all matters likely to benefit sport or physical recreation in Britain as a whole.

The Central Council of Physical Recreation

The Central Council of Physical Recreation (CCPR) is an association of all national bodies in England, Wales and Northern Ireland concerned with the development of post-school physical recreation. Its funds are partly raised by voluntary contributions but it receives a grant from the Department of Education and Science, with which it is closely associated in much of its work.

The CCPR is composed of representatives of the British Olympic Association, the National Playing Fields Association, the governing bodies of 41 sports, 16 national outdoor activity associations, 16 bodies concerned with dancing and rhythmic movement, and 34 voluntary youth organisations, in addition to representatives of community centres, educational, physical education and health education organisations, local authorities and the Services' sports branches. Its headquarters are in London and it has nine regional offices in other parts of England. Its activities in Wales are controlled by a representative Welsh committee, and in Northern Ireland by a separate section with its own executive committee.

Broadly, the function of the CCPR is to promote all forms of physical recreation. Its activities include the organisation of some 2,400 courses for coaches and instructors, courses in personal performance, lectures, displays and other publicity events which are attended, on average, by about 52,000 young men and women each year. Its staff give advisory, technical and administrative help wherever required, but particularly to the headquarters, regional, county and local branches of the constituent organisations and to local education authorities and industrial concerns.

The Scottish Council of Physical Recreation

The Scottish Council of Physical Recreation (SCPR) is the counterpart in Scotland of the CCPR, and has 134 affiliated organisations, including the governing bodies of all the Scottish sports; it receives a grant-in-aid from the Scottish Education Department.

The National Playing Fields Association

The main aim of the National Playing Fields Association (NPFA) is to stimulate the provision of playing fields and playgrounds, especially for children, by publicity and financial assistance. Since its inception in 1925 it has distributed over £1·5 million in the form of grants for playing field and playground schemes and about £107,000 in the form of loans. It assists more than 400 schemes a year.

The NPFA council is composed of representatives of the governing bodies of various sports organisations, of the British Olympic Association and the CCPR, and of a number of educational bodies, voluntary youth organisations, physical education associations and local authorities. The national headquarters in London employs a small full-time staff, including a technical and research department which gives advice on all aspects of recreational planning including the provision and layout of indoor and outdoor sports facilities. It also advises on matters relating to children's playgrounds, play leadership schemes, and the play and recreational needs of children from their earliest years. The Association derives its funds mainly from voluntary contributions but has recently been in receipt of a small contribution towards administrative costs from the Department of Education and Science and the Ministry of Education for Northern Ireland.

The NPFA has branches in Scotland and Northern Ireland; there are also branches in nearly every English and Welsh county; administration is carried out, in the main, on a voluntary basis, in many cases in association with a local authority, Rural Community Council or Sports Development Council.

National Recreation Centres

There are five National Recreation Centres in Britain, outside London—two in England, one in Wales and two in Scotland—administered by the CCPR and the SCPR. The centres, all but one of which were established by voluntary funds, provide a wide range of courses for coaches, instructors and performers in many games, sports and other physical activities. A programme of improvements, the capital cost of which will be borne by the Department of Education and Science, is to be carried out during the next three or four years. There is also a sailing centre, likewise administered by the CCPR, which provides a range of activities, including courses on sailing, boat handling, cruising, navigation, racing, boat maintenance and boat building, for school and youth groups and adults.

The Crystal Palace National Recreation Centre in London, built at a cost of nearly £3 million, was opened in 1964. Covering 36 acres, the Centre has a main stadium with seating for 12,000 spectators; a sports hall with an arena divisible into three and seating for 2,000 spectators; a swimming hall with pools of Olympic dimensions, a teaching pool and a gallery for 2,000 spectators; an indoor cricket school and practice rooms suitable for all indoor activities; a lecture theatre, first-aid rooms and changing rooms; a hostel for 140 residents; and staff housing. The Centre, managed by the CCPR, is designed for international competitions as well as to provide training facilities for leaders, coaches and athletes.

A prototype local sports centre, to cost about £200,000, is to be provided in Glasgow by the SCPR and Glasgow Corporation, in co-operation with the Scottish Education Department, to demonstrate the possibilities of multi-purpose recreational buildings and to establish a pattern of facilities and management which might be adopted, with suitable adaptations, by other local authorities to meet their own needs.

Outdoor Games and Sports

Outdoor games played in Britain include team games such as football, cricket, and hockey, and games such as lawn tennis and golf, in which individuals or couples match their skill. Judged by the number of participants and spectators, the most popular of the team games are football and cricket, and the most popular of the individual games is lawn tennis.

Football

Although football of a kind was played in the Middle Ages or even earlier, as an organised game it dates from just over a century ago. One type of

football, in which only the feet are used, was adopted at Cambridge in 1855; the other type, in which the ball is handled as well as kicked, was first played at Rugby School, whence it derives its name, and was adopted by the Blackheath football club in 1859.

In England the controlling body of the non-handling game, *Association Football* ('soccer'), is the Football Association (FA) formed in 1863. Its chief function is to promote the interests of the game and to prevent infringement of the agreed rules; it also arranges for the instruction of promising young players (some £10,000 is spent annually on coaching); organises various matches and competitions, including the international matches played by England, the Amateur Cup competition, two national youth competitions, and the competition for its own leading trophy, the Football Association Challenge Cup; and chooses and manages English international teams. Over 350 clubs are registered with the FA, more than 200 as full members and between 130 and 140 as associate members. There are also some 25,000 clubs affiliated to county (i.e. district or regional) associations. The FA derives its main income from subscriptions and admission charges to international and cup matches, and ploughs back a large portion of the money into the game. Scotland, Northern Ireland and Wales have their own controlling bodies: the Scottish Football Association, the Irish Football Association and the Football Association of Wales.

The principal professional matches in England and Wales (played once or twice weekly) are controlled by the Football League, which comprises over 90 professional clubs in these countries. The funds of the League are derived largely from contributions paid by member clubs in the form of a levy of 4 per cent of the net gate receipts from league matches, after allowable expenses have been deducted, and from annual payments from the leading football pools promoters for the use of league fixture lists.

In Scotland the Scottish Football League comprises 37 clubs; Northern Ireland has its own league. Clubs belonging to the English and Scottish Leagues are organised in divisions, the members of which compete against one another for the respective league championships. Their positions in the divisional tables are decided at the end of the season by the number of points gained for wins or draws. During the season about 30 million people watch league football matches and gate receipts usually amount to between £5 million and £6 million.

Several million people stake small weekly sums on the results of the league matches by filling in what are known as 'pools' coupons. The odds against winning anything in the pools are very great, but the prizes are high and individual payments of £300,000 are occasionally made. The promoters of the pools deduct varying amounts from the stakes for commission and expenses.

The annual competition for the FA Cup is organised on a knock-out basis and the Cup Final is one of the most important football matches of the year in England; it is always played at Wembley Stadium, near London, which can accommodate some 100,000 spectators. The Scottish Cup Final is played at Hampden Park, Glasgow. The matches between England, Scotland, Wales and Ireland also excite great interest, as do other international matches.

For the World Cup games in 1966 the Government is making available a sum not exceeding £500,000 to the Football Association towards the cost of facilities necessary for the games to be suitably staged. Between 80 and 90 per cent will be spent on permanent improvements; four-fifths of the amount will be paid as a grant and the rest be provided as a loan.

There are many more amateur association football players than there are professionals (the comparative figures are about 650,000 amateurs, including schoolboys and members of the armed forces, to 7,000 or 8,000 professionals), but with one or two notable exceptions their teams cannot compete on equal terms, since professional teams are more systematically and intensively trained. Amateur teams compete against each other for the Football Association Amateur Challenge Cup.

Rugby Football ('rugger') is played under the auspices of the Rugby Football Union, established in 1871. The rules of the game are completely different from those that govern soccer, and there are 15 players, instead of 11, in a side. International matches between England, Scotland, Wales, Ireland, and France are played regularly at the leading rugby football grounds of each country, including Twickenham, London—the headquarters of the Rugby Football Union—and there are tours by international teams to and from New Zealand, Australia and South Africa. Other important rugger matches are the county championship competitions, the annual match between the universities of Oxford and Cambridge, the Hospitals' Cup final, and the Inter-Services tournament.

Seven-a-side football (a variant of Rugby football) is also played by clubs and schools to a limited extent. Membership of the Rugby Union is strictly confined to amateur clubs. In the north of England *Rugby League Football* is played. This is a thirteen-a-side game played by professionals as well as amateurs. The Rugby Football League (instituted in 1895) regularly sends touring teams to Australia and New Zealand and has annual international games, professional and amateur, against France. The major match of the season—the Rugby League Challenge Cup Final—has attracted crowds of 95,000 at Wembley Stadium in recent years.

Cricket

Cricket is often called the English national game. The exact date of its origin is not recorded, but it is known that the game was played at Guildford Grammar School during the sixteenth century, and by the beginning of the eighteenth century it was popular both in the villages of England and on the larger country estates. The game has been played more or less as it is played today since the adoption of a generally accepted set of laws in 1744. About 1750 a cricket club was formed in the Hampshire village of Hambledon; within 20 years it had made an outstanding name for itself and acquired a membership representative of patrons of cricket from all over England. In 1787 the Marylebone Cricket Club (MCC), now the governing body of cricket, was founded, with its headquarters in London on a site rented by a Yorkshireman called Thomas Lord. In the year 1810–11 the MCC moved its headquarters to a ground near Regent's Park, keeping the name *Lord's*; four years later *Lord's* transferred to another ground, at St. John's Wood, in the same neighbourhood, where it has remained ever since. Other clubs that sprang up all over England during the nineteenth century recognised the MCC's authority, and nowadays all cricket is played according to the 'laws of cricket' as laid down by the MCC in consultation with cricketing organisations in Britain and the overseas Commonwealth.

In England cricket is played in schools and universities, and almost all towns and villages have their cricket teams which play at least one match a week from May to September; in the London area a large number of pitches are provided by the local authorities besides many leased or owned by clubs.

Apart from the university match between Oxford and Cambridge and certain representative games, the greater part of first-class cricket is played in a county championship between seventeen 'first-class counties'. (The

other counties have a 'minor counties championship' of their own.) Famous grounds besides *Lord's* are the *Oval*, Kennington, London, headquarters of the Surrey Cricket Club; *Old Trafford*, Manchester; *Headingley*, Leeds; and *Trent Bridge*, Nottingham.

In the late nineteenth century more amateurs played cricket than economic conditions in the twentieth century allow: with first-class matches lasting three days and each county playing up to thirty matches in a season, the number of cricketers who can afford to play as true amateurs declined and the distinction between amateur and professional in the first-class game has now been abolished. League cricket, which is a feature of the game in the north of England, is played by teams mainly consisting of amateur Saturday afternoon players with one or more professionals, many of whom are distinguished players from other Commonwealth countries. The MCC is an entirely amateur body, although retired professional cricketers of 'the highest merit' are elected to honorary membership.

In addition to county championships, matches known as 'test matches' are played regularly between a number of Commonwealth countries. The first of these matches was played at Melbourne, Australia, in 1877, between England and Australia. Present-day test matches last 30 hours (spread over five or six days); they arouse great popular interest and are widely reported in the press and on radio and television.

Lawn Tennis

A form of tennis has been played out of doors from the earliest times; but modern lawn tennis dates from about 1873, when it began to take its place as one of the British national summer games. In 1877 the words 'and lawn tennis' were added to the title of the All England Croquet Club at Wimbledon, near London, and in the same year the first championships were played; the Lawn Tennis Association, the controlling body of the game in Britain, was founded in 1888. The governing body of the game in the world is the International Lawn Tennis Federation (founded in 1913), with headquarters in London and Paris.

The number of people who play lawn tennis has greatly increased during the present century, particularly since the game has spread to practically every country in the world. In Britain the game is played in almost all girls' schools and in very many boys' schools where the pupils are of secondary school age. It is also played on private courts, in parks and recreation grounds and at several thousand tennis clubs.

The annual championships held at Wimbledon for two weeks at the end of June and beginning of July are the main event of the lawn tennis season in Britain and, in fact, in the world. These championships, in which men and women of many nationalities compete, draw large crowds; there is accommodation for over 30,000 spectators in the grounds of the All England Club —14,000 can be accommodated round the centre court where the finals are played. Other tournaments which attract a good deal of attention are: the British Hardcourt Championships, the British Junior Championships, and the County Championships. There are also competitions for boys' and girls' schools on a national basis, and the Foundation Cup (for women). The most important international event is the Davis Cup (for men). Women players from Britain and the United States of America also compete annually for the Wightman Cup.

Golf

Golf originated in Scotland, where for centuries it has borne the title of the Royal and Ancient Game, but it did not become really well known in the other countries of the United Kingdom until towards the end of the nineteenth

century. Since then, however, it has gained steadily in popularity and nowadays there are golf courses in the vicinity of many towns and villages—some owned by local authorities, but the majority owned by golf clubs. The headquarters of the Royal and Ancient Golf Club is St. Andrews, Scotland.

The main event of the golfing year is the British Open Golf Championship, which was first played in 1860; other important matches include the Walker Cup (for amateurs) and the Ryder Cup (for professionals), both played between Britain and America; the Amateur Championship; and the Ladies Championship.

Hockey

Variants of hockey (as distinct from ice-hockey) have been played in Britain for at least five centuries. Modern hockey, however, dates from the formation (in 1886) of the Hockey Association, which standardised the rules relating to men's hockey. Nowadays there are some 1,100 hockey clubs affiliated to the Hockey Association. Although there are no professional county teams and no cup ties, a county championship was instituted in 1957. In addition, regular amateur international matches (inaugurated in 1894) are played. There are over 35,000 adult and some 50,000 schoolboy hockey players in Britain.

In Britain hockey is more commonly played by women than by men. The controlling bodies are: the All England Women's Hockey Association (founded 1895) to which are affiliated the Irish Ladies Hockey Union, the Scottish Women's Hockey Association, the Welsh Women's Hockey Association, some 1,900 girls' schools and about 900 clubs. The first international women's hockey match took place in 1896. Nowadays such a match is played annually at Wembley Stadium and attracts some 56,000 spectators.

Lacrosse

Lacrosse, adapted from the game played by the Iroquois Indians of North America, is played mainly by women—in girls' schools, at lacrosse clubs, and at universities. International matches are played, as well as regional matches, by women's teams representing the East, West, South, North and Midlands of England, under the auspices of the All England Ladies Lacrosse Association.

The men's game, of which the controlling body is the English Lacrosse Union, is played in seven universities, and by clubs and schools, mainly in and around London and Manchester. County matches are played and there is an annual fixture between the North of England and the South.

Netball

Netball is a popular game for girls and women. The controlling body is the All England Netball Association to which are affiliated the English county associations, the netball clubs of the three Women's Services and sections of the national youth organisations for girls and women. Inter-county and home international matches are played regularly and inter-Commonwealth tours are arranged.

Polo

Polo, of which the earliest records are Persian, was first played by the British in India, and brought to England in 1869. The governing body of British polo is the Hurlingham Polo Association to which all the Commonwealth polo associations and that of South Africa are affiliated. Polo players are a very small section of the community, for the cost of keeping polo ponies is high. However, many of the clubs now own trained ponies which are hired out to members at moderate cost. There are about 300 players handicapped by the Hurlingham Polo Association, but many less expert players take part in club games for which they may be locally handicapped.

Public interest in polo has increased in recent years and large numbers of spectators attend inter-club tournaments and matches between high-handicap teams composed of players from several countries.

Bowls

The game of bowls has been played in Britain since the thirteenth century. Nowadays the flat green game is regulated, as far as the English Bowling Association is concerned, by the International Bowling Board (IBB), founded in 1905. The Bowling Associations of Ireland, Scotland and Wales also come under and play to the laws laid down by the IBB, but there are other bowling associations in England—the English Bowling Federation, the Crown Green Association and the English Women's Bowling Association—which are not under the IBB's control.

During the summer bowls is played on bowling greens in the open; in winter it is played on indoor greens, which are increasing in number. At one time regarded as a pastime for the elderly, the game is now played by people of all ages. Over 2,550 bowling clubs in England are affiliated to the English Bowling Association alone, and international and inter-county matches are played.

Mountaineering

The popularity of mountaineering has greatly increased in recent years. The number of clubs in the British Mountaineering Council and the Association of Scottish Climbing Clubs, the representative bodies of the sport, has doubled to over 140 in the last six years, mainly by the addition of smaller town and district clubs to the older larger clubs such as the Alpine Club (founded in 1857, the oldest mountaineering club in the world), the Climbers' Club, the Scottish Mountaineering Club and the Fell and Rock Climbing Club. A number of local education authorities, as well as national bodies such as the YMCA, the Scouts and the Central Council of Physical Recreation, have established mountaineering training centres in the hills. Training courses are also run by the Mountaineering Association, the Youth Hostels Association and other bodies, while many schools now have mountaineering sections. Membership of the known clubs is about 15,000, but several times this number take part in climbing and mountaineering.

British mountaineers have taken a leading part in exploring most of the great ranges of the world and in climbing their peaks; for example, the first ascent of the Matterhorn in 1865, of Everest in 1953, and of Kangchenjunga in 1955. In recent years frequent expeditions have gone to far off mountains, to Greenland, Alaska, the Andes, Patagonia, the Caucasus and the Pamirs, as well as the Himalayas.

Ski-ing

Ski-ing in Scotland has become very popular, especially at the winter sports centres established in the Cairngorms, Deeside, Glencoe and Glenshee, where ski-lifts, ski-tows and professional instruction are now available.

Athletics

Amateur athletics, which include running (track, road and cross-country), relay racing, jumping, hurdling, throwing and race-walking, are governed by the Amateur Athletic Association (AAA), which was founded in 1880 to encourage amateur athletics, to improve the management of amateur athletic meetings by the establishment of uniform regulations, and to promote annual championship meetings. The Association, whose membership increased rapidly, is now organised from club to national level by honorary officers and managed by representative members appointed by the Northern, Midland, Southern and Welsh areas and by affiliated clubs and associations (amateur athletic clubs, schools and youth organisations), of which there are hundreds throughout England and Wales. The AAA administers a coaching scheme, with a constant expenditure of nearly £20,000 a year, under which seven full-time national coaches, working mainly in separate regions, lecture,

demonstrate and coach in schools, youth clubs, evening institutes, training colleges and universities and at special courses organised by the national associations, by regional associations or by the Central Council of Physical Recreation. The Crystal Palace National Recreation Centre is being used as a training centre and for athletics matches. Some of the work of the national coaches is directly concerned with coaching young athletes but their main duties are to instruct men who wish to qualify as honorary coaches, over 2,000 of whom give voluntary services in the counties and districts of England and Wales. Scotland and Northern Ireland have their own amateur athletic associations, with similar functions; there are also separate women's AAAs for each country.

International athletics and the selection of teams representing the United Kingdom are dealt with by the British Amateur Athletic Board, which is composed of representatives of the three national associations for men and of the Women's Council, and is affiliated to the International Amateur Athletic Federation.

Track meetings are held throughout Britain from April to October. The main events in England and Wales are: the AAA championships for men and international matches held at Crystal Palace, London; area and county championships; and the universities, Services, business houses and schools championship meetings. Clubs usually compete in cross-country running from October to March, and international county and area cross-country championships are held.

Teams representing Britain compete in the Olympic Games (held every four years), and separate teams representing England, Wales, Scotland, and Northern Ireland compete in the Commonwealth Games, held at four-yearly intervals between the Olympic Games. In the last Olympic Games, held at Tokyo, Japan, in October 1964, Britain won 18 medals (four gold, twelve silver and two bronze) her best performance since 1920. The next Commonwealth Games (1966) will be held in Jamaica.

Highland Games

The Highland games are traditional gatherings of local people in the Highlands of Scotland, at which sports (including tossing the caber, putting the weight, and throwing the hammer) and dancing and piping competitions take place. Among the better known Highland games are the Northern Meeting at Inverness, the Braemar Gathering on Deeside (traditionally attended by the royal family), the Argyllshire Gathering at Oban, and the meeting at Aboyne. The Highland games attract large numbers of spectators from all over the world.

Country Sports

The most popular country sports are hunting, shooting and fishing; these are old-established sports with a long history, and they still play a considerable part in the life of the countryside. The organisation which looks after their interests is the British Field Sports Society.

Hunting

In Britain hunting means primarily fox hunting on horseback with a pack of hounds; but it also includes stag hunting, which preceded fox hunting and still goes on, mainly in Devon and Somerset; hunting the hare, either on foot with beagles or with harriers when the followers are mounted; and otter hunting along the banks of rivers. Hunting depends not on right but on permission. Most landowners and farmers allow followers of recognised hunts to cross their property.

Fox hunting originated some 200 years ago. Originally a sport mainly for the landed gentry and local farmers, it has gradually widened its appeal, in

spite of the fact that it is an expensive pastime for those who ride to hounds. The sport is not without its critics, but a large number of people, including many townsmen, take a keen interest in it and follow the hunt in cars, on bicycles or on foot. The fox hunting season proper starts in early November and lasts until April; it is preceded by cub hunting, i.e. the hunting of young foxes, when young hounds are trained. At the end of the season most hunts organise steeplechases, known as point-to-points, which are patronised by large crowds.

There are between 190 and 200 packs of hounds in England and Wales, 13 in Northern Ireland, and 10 in Scotland. The packs range in size from the large establishments in the 'shires', i.e. the Midlands of England (for instance, the Belvoir, the Cottesmore, the Quorn, and the Fernie) where mounted followers may be two hundred or more, to small kennels in the west and north, where hunting is sometimes on foot.

Hunts are financed mainly by the subscriptions of their members and with the aid of the farmers, whose support enables fox hunting to continue to flourish; car-parking fees, at such events as point-to-points, also contribute and sometimes the Master of Fox-hounds (MFH), who is in charge of the hunt, bears a proportion of the cost.

Shooting

Game shooting as an organised country sport may be said to date from the early part of the nineteenth century; nowadays, game consists mainly of grouse, partridge, pheasant, snipe and woodcock.

There is virtually no free shooting in any part of the United Kingdom. In the first place, a gun licence or a game licence must be applied for and purchased annually, and secondly, nearly all game birds are to be found on privately owned land, shot over either by the owner and his friends or by syndicates which have leased the shooting. However, in some parts of the more remote countryside, rough shooting may be enjoyed in a less formal way. Much of the country's wildfowling is controlled by the Wildfowling Association of Great Britain and Northern Ireland, through its numerous clubs.

Grouse, partridge, pheasant and certain other birds are 'preserved': that is to say, there is a 'close season' during which they are protected by law and allowed to breed in security, often under the care of privately employed gamekeepers on numerous estates. The grouse, partridge and pheasant seasons open on 12th August, 1st September and 1st October, severally, and last for between four and five months. Grouse shooting takes place mostly in Scotland, northern England and North Wales; partridge and pheasant shooting in nearly every county in England, Wales and Scotland, the former mainly over farm land, and the latter in or near woodland; and wildfowling on the marshes and fenlands of the coastal areas.

The Game Research Association, formed by landowners, farmers and others interested in game conservation and research, collects and collates information on a national scale and makes a detailed study of factors controlling game population, including diseases to which game birds are subject, game ecology and density, survival rates and movements of game in changing environments.

Deer stalking, which derives its name from the fact that, in order to get an effective shot, a very cautious approach is needed (since red deer have a keen scent, are far-sighted, and take alarm at the slightest sound), is mainly a sport of the Highlands of Scotland. The deer are preserved in privately owned 'deer forests', ranging in size from 9,000 to over 30,000 acres. The close seasons are October to June, inclusive, for stags and February to October, inclusive, for hinds.

Fishing is the most popular of the country sports in that it is within the reach of everyone in some form or another (from the small boy with his hook and line to the experienced fly-fisherman), and that many more people fish in their leisure hours than hunt or shoot.

The outstanding forms of the sport in Britain are salmon and trout fishing. Trout streams are to be found in most parts of the country, and in Scotland there are also many hundreds of lochs which provide good sport. Salmon fishing may be enjoyed on many rivers in England, North Wales and Northern Ireland, but the best salmon rivers are to be found in Scotland. In England and Wales the most widely practised form of fishing is for coarse fish such as pike, perch, carp, roach, dace, tench, chub and bream, and the National Federation of Anglers (NFA) has some 390,000 members. Match angling—competitive fishing for coarse fish by weight—is a feature of the many angling clubs affiliated to the NFA, particularly in the midlands and north of England; a national angling championship, composed of 110 teams of 12 anglers, is organised annually by the NFA; and the NFA enters a team in the International Angling Competition.

Fishing around the coasts is another popular pastime, while deep-sea fishing for tuna and shark has gained many adherents during the past twenty years.

Coastal and deep-sea fishing is free to all (except for salmon and sea trout fishing in Scotland) but, as a rule, freshwater fishing has to be paid for and local inquiries made about any permit or licence required. Most coarse fishing is let to angling clubs; trout and salmon fishermen either rent a stretch of river, join a club, stay at an hotel with its own fishing rights, or pay for the right to fish by the day, week or month. The cost of salmon fishing is often high.

Aquatic Sports

Aquatic sports include rowing, sailing, swimming, canoeing, punting and water ski-ing. The first three are the most commonly practised in Britain and are included in the Olympic events and the Commonwealth Games.

Rowing

Rowing as a pastime is enjoyed by people from all sections of the community, and as a sport it arouses considerable public interest. The two most popular annual rowing events are the University Boat Race, which originated in 1820 and has been rowed annually on the Thames in the early spring since 1836; and Henley Regatta, founded in 1839, which takes place each July at Henley-on-Thames in Oxfordshire. The University Boat Race is between eight-oared crews from Oxford and Cambridge over a course of some $4\frac{1}{4}$ miles between Putney and Mortlake; it is watched by many thousands of rival supporters gathered on both sides of the river. Considerable interest is also shown in the Head of the River Race from Mortlake to Putney, in March, in which between 200 and 300 eights row in procession—the largest assembly of racing craft in the world.

Crews from all over the world compete at Henley Regatta, where various kinds of races are rowed over a straight course of 1 mile 550 yards; for instance, for the Grand Challenge Cup, open to eight-oared crews from any nation, the Silver Goblets for pair oars, the Diamond Sculls for single scullers, and the Ladies Challenge Plate open to crews from schools and colleges in the United Kingdom. Many other riverside resorts arrange regattas every summer.

The oldest annual event in the English racing calendar is *Doggett's Coat and Badge*, founded in 1716 and organised since by the Worshipful Company of Fishmongers. Originally for professional watermen and limited to six

entrants, the race is now open to amateurs (who must, however, still apprentice watermen); if necessary, it may be rowed in heats. The course is from London Bridge to Chelsea.

The art of oarsmanship is taught in many schools, universities and rowing clubs, including women's rowing clubs, throughout Britain; and women as well as men compete in the European rowing championships. The Amateur Rowing Association is the governing body of the sport.

Sailing

Enthusiasts have always devoted much of their leisure to yachting on the inland waters and round the coasts of Britain, but during the last fifteen years the sport, and in particular small boat sailing, has greatly widened its appeal. There are about 11,700 dinghies registered with the Royal Yachting Association, of which the most popular classes are the National Enterprise and National Firefly; but as by no means all classes attain national status, there is an even greater number of boats not included in this register.

Most British yacht racing is administered by the Royal Yachting Association, subject to the rules of the International Yacht Racing Union, founded in 1907. The main event of the inshore yachting season is the annual regatta at Cowes in the Isle of Wight, the headquarters of the Royal Yacht Squadron, founded in 1812. Other events include the Round the Isle of Wight race and the races arranged during the special yachting weeks (or fortnights) held at such sailing centres as Poole in Dorset, Bembridge in the Isle of Wight, Lowestoft in Suffolk, Harwich and Burnham-on-Crouch in Essex, Plymouth in Devon, Falmouth in Cornwall, and on the Scottish river Clyde.

Off-shore, or ocean, racing is based on rating and measurement rules drawn up by the Royal Ocean Racing Club, founded in 1925. Typical courses are: Cowes to Jersey (Channel Islands), Plymouth to La Rochelle (Charente Maritime, France) and Harwich to the Hook of Holland.

Swimming

Many children in Britain learn to swim at school, or during holidays at the seaside, and swimming as a summer pastime is enjoyed by millions of people. The existence of indoor swimming baths makes all-the-year swimming possible, and instruction and coaching is provided in some places by qualified teachers who hold certificates for elementary or advanced teaching and coaching awarded by the Amateur Swimming Association (ASA). (The Scottish counterpart is the Scottish Amateur Swimming Association.) The objects of the ASA are to promote the art of swimming and encourage its teaching to schoolchildren; to stimulate public opinion in favour of providing proper accommodation and facilities for learning to swim; to promote the game of water polo and the art of diving; and to draw up, publish and enforce uniform laws for the control and regulation of amateur swimming and water polo championships and competitions.

Racing

Racing is a term which, in Britain, is taken to mean, first and foremost, horse-racing. Other forms of racing include greyhound racing, coursing, pony-racing, trotting races, and pigeon flying.

Horse-racing

The history of the English turf proper began with the formation of the Jockey Club in 1750, although horse-racing was known in Tudor times and even earlier. The Jockey Club and the National Hunt Committee (founded in 1866) now exercise control over all horse-racing in England and indirectly in many other countries, and their rules are the basis of universal turf procedure.

There are two forms of racing: flat racing carried on from late March till November under the authority of the Jockey Club; and steeple-chasing, conducted under the rules of the National Hunt Committee.

The classic flat races are: the Two Thousand Guineas for colts and fillies, run on the Newmarket course, owned by the Jockey Club; the One Thousand Guineas for fillies only, also run at Newmarket; the Derby for colts and fillies, run at Epsom; the Oaks for fillies only, also run at Epsom; and the St. Leger for colts and fillies, run at Doncaster. The Derby is the outstanding event in the racing calendar; it takes place annually in early June and the scene on Epsom Downs on Derby Day is one of the most colourful and exciting of the sporting year. The most fashionable race-meeting of the flat racing season is held on the course at Ascot in Berkshire, in mid-June and is known as 'Royal Ascot', being traditionally attended by the Sovereign.

The best known steeple-chase is the Grand National, run annually since 1839 over the Aintree course near Liverpool. Most steeple-chase meetings are held during the period September to May, one of the most important being the National Hunt Festival Meeting at Cheltenham early in March.

In England and Wales there is racing on 64 racecourses (excluding point-to-point courses), at which there are about 820 days' racing annually; Scotland has seven racecourses, where racing takes place on an average of 50 days in the year. There are approximately 8,700 horses in training in Great Britain, at an average cost of about £12 a week each.

Horse racecourses must be licensed by the Jockey Club or the National Hunt Committee. On-course facilities for both cash and credit betting are provided by bookmakers who must have personal permits, and by totalisators operated by the Horserace Totalisator Board, which is empowered to deduct from money staked with the totalisator such percentage as it may determine. The practice is to deduct 15 per cent from the losing stakes in the win, place and forecast pools and 10 per cent of the double and treble pools; this provides an average yield of approximately 11 per cent of the total annual turnover. Facilities for off-the-course betting are provided in licensed betting offices, of which there are some 14,400 throughout Great Britain. People under 18 years old are forbidden by law to place bets.

A levy from both bookmakers and the Horserace Totalisator Board is collected by the Horserace Betting Levy Board, which distributes the revenue for purposes conducive to the improvement of horse breeding and racing, for the advancement and encouragement of veterinary science and education, and the welfare of those employed in racing.

Greyhound Racing

The racing of greyhounds after a mechanical hare started in Britain in 1926, when the first modern greyhound track was opened at Belle Vue, Manchester. There are now some 140 licensed tracks in operation, nearly all of which are situated in or on the outskirts of large towns, and meetings are generally held two or three times a week. The licensing authorities for greyhound racing tracks are the county and county borough councils. Some fourteen million people a year attend the tracks.

The main authority of the sport is the National Greyhound Racing Club, founded in 1928; its functions include drawing up the rules of greyhound racing and exercising strict discipline over all aspects of the sport. The National Greyhound Racing Society—an association of 62 of the leading tracks—accepts the rules of the National Greyhound Racing Club and controls the general policies of greyhound racing. Most of the classic greyhound races, including the Derby at the White City, the Laurels at Wimbledon, the St. Leger at Wembley, and the Cesarewitch at West Ham, take place in the London area, although many other large centres have their 'big' nights.

There is a considerable volume of betting at greyhound race-meetings, both with bookmakers and on the totalisator which may be operated by the

occupier of any licensed greyhound track on the 104 'betting days'. Ten per cent of the money staked on the totalisators must be paid to the Government; up to 6 per cent may be deducted for operational expenses before successful backers are paid. The 'copyright' in tote odds granted to the Horserace Totalisator Board in respect of horse-racing also applies to the occupiers of licensed greyhound tracks on which totalisators are operated.

Riding

Interest in the art of horsemanship continues to increase rapidly, and many more people have learned to enjoy riding as a pastime since the end of the second world war than at any time since the advent of the motor car. There are some 1,200 riding schools in Britain, many of a high standard, and about 50 new schools are opened each year; membership of the British Horse Society has risen to about 12,000; there are some 180 riding clubs with varied membership; and the Pony Club (open to young people up to the age of seventeen years) now has an overall membership of about 77,000 members. There are over 900 branches of the Pony Club throughout the world. of which 250 are attached to hunts in Britain, and the remainder are overseas.

The British Horse Society, as the national equestrian federation of Great Britain, is the authority on all matters relating to horses and ponies, including breeding, training, riding, show jumping and dressage, and is responsible for preparing equestrian teams for the Olympic Games and all international events. The Society is also the parent body of the Pony Club and the riding clubs, and organises and provides tests, lectures, demonstrations, courses and examinations to promote horsemanship and horsemastership.

Horse trials of all kinds are held throughout Britain during the spring and summer. The three-day trials held each year—in April at Badminton Park, Gloucestershire, and in September at Burghley House, Lincolnshire—are among the outstanding equestrian events of the year. These trials include dressage, cross-country riding, and show jumping; some 25 one-day trials on similar lines are held annually.

Show Jumping

Show jumping competitions are held each year at over 1,000 shows. The main events take place during the Royal International Horse Show (held at the White City, London, under the auspices of the British Horse Society towards the end of July)—the outstanding contest being the individual jumping championship for the King George V Gold Cup. Jumping competitions are also a feature of the Horse of the Year Show, which takes place in October at Wembley and is acknowledged to be one of the finest indoor horse shows in the world. The total membership of the British Show Jumping Association has risen to over 6,000. The number of horses and ponies registered is approximately 4,500 and over £140,000 is distributed annually in prize money.

The selection of British riders and horses taking part in international competitions (whose successes have materially contributed to the increased popularity of show jumping) is the responsibility of the executive committee of the Association.

Boxing

Boxing as an English sport probably originated in Saxon times. Its modern form, and the one that has been adopted in many overseas countries, dates from 1865 when the Marquess of Queensberry drew up a set of rules which eliminated much of the brutality that had hitherto characterised prize fighting, and made the basis of the sport a trial of strength and skill.

Nowadays, many boys learn to box at school and in boys' clubs, and there are various amateur boxing competitions carried out according to the rules

of the Amateur Boxing Association (ABA), which controls all amateur boxing, including schoolboy boxing, club and association boxing, and boxing in the three Services.

Professional boxing is covered by the British Boxing Board of Control, founded in 1929. The Board has strict medical regulations which provide for the examination of boxers before each contest, and the appointment of inspectors to ensure that the regulations are observed and that all contests are 'vetted' to safeguard against over-matching and exploitation.

Championships at fixed weights have been the rule in boxing contests since the presentation of the Championship Challenge Belts by the late Lord Lonsdale in 1909. Competitions organised by the ABA are decided at ten weights: flyweight, bantamweight, featherweight, lightweight, light welterweight, welterweight, light middleweight, middleweight, light heavyweight and heavyweight. In professional boxing there are no light welterweight or light middleweight classes.

Wrestling and Judo

Wrestling is one of the oldest sports in the world. The style most commonly used in Britain is the 'free' style, which evolved from the Catch-as-Catch-Can or Lancashire style, but Cumberland and Westmorland wrestling is still practised in the north of England and in Scotland, and Cornish style wrestling (in which the contestants wear rough canvas jackets by which all the holds must be taken) takes place in Cornwall. Wrestling in the free and Graeco-Roman styles are used at the Olympic Games; in the Commonwealth Games only free style is wrestled.

Amateur wrestling in Britain is governed by the British Amateur Wrestling Association, which is affiliated to the International Amateur Wrestling Federation, under the rules of which all wrestling is conducted. Professional wrestling is usually in the 'all-in' or 'free' style, which is not the same as the free style used in amateur wrestling. Judo, a Japanese form of wrestling, has a large following, and is governed by the British Judo Association which has coaching schemes assisted by the Department of Education and Science.

Fencing

Fencing, as a sport, has made considerable progress throughout Britain during the past 20 years. The Amateur Fencing Association (founded 1902) has some 450 clubs, and many classes are organised and financed by local authorities. Fencing is also practised in many schools and among the annual championships held under the auspices of the Association are the National Schoolboys' Championships, organised on a regional basis and attracting a large number of entrants.

Motor Racing

Motor racing is one of the most popular spectator sports in Britain; more racing and sports cars have been built in Britain than in any other country; and British drivers (including women drivers) have an international reputation second to none.

British cars and British drivers take part in the international rallies and world classic races which are the main features of the sport. They include the British classic races—the British Grand Prix and the Tourist Trophy for sports cars. There are also British national race meetings and British national rallies, as well as several thousand day and night rallies and trials, endurance tests, hill climbs and other events, arranged by various driving clubs, of which there are over 500 in Great Britain.

The best-known motor racing circuits are those at Goodwood, Sussex; Silverstone, Northamptonshire; Crystal Palace, London; Brands Hatch,

Kent; Snetterton, Norfolk; Mallory Park, Leicestershire; Oulton Park, Cheshire; Aintree, near Liverpool; and Charterhall, Berwickshire, in Scotland. The controlling body of motor racing in Britain is the Royal Automobile Club (RAC), founded in 1897; the RAC is represented on the Fédération Internationale de l'Automobile, which draws up the regulations for international motor racing.

In addition to motor car racing, there are motor cycle races—the most important contest of the year is for the Isle of Man Tourist Trophy—and motor cycle speedway racing, introduced into Britain in 1928, and governed by the Speedway Control Board. There is also go-kart racing.

Cycling

The internationally recognised body for cycle racing in the United Kingdom is the British Cycling Federation. It controls track and massed start road racing in Britain, and is concerned with the cycling events in the Olympic and Commonwealth Games and the annual world championship. Time trials are organised by the Road Time Trials Council.

Touring by bicycle is also a popular pastime, and both the British Cycling Federation and the Cyclists' Touring Club (CTC) cater for this. The CTC is the oldest touring club in the world and has a membership of some 25,000. Its representatives in all parts of the United Kingdom give advice and practical help to touring cyclists; its fifty district associations arrange holiday and week-end tours and competitions, rallies and rides of all kinds; and its travel department gives CTC members every facility, both at home and abroad, from the provision of itineraries to the supplying of tickets, maps and other essential requirements.

Rifle Shooting

Full-bore (·303) rifle shooting is organised by the National Rifle Association (NRA), founded in 1860. The Imperial Meeting held annually at Bisley Camp, Surrey, is open to subjects of the Queen, and, for certain competitions, to all-comers. The meeting, which is attended by some 2,500 competitors from Britain and other Commonwealth countries, including cadets from schools, lasts for just over a fortnight: the first week consists of team and individual competitions for members of the armed forces, and there are three days for schools only. The premier award of the meeting is the Queen's Prize, which attracts about 1,250 entries. The NRA also organises postal matches for British and overseas teams, and periodically sends rifle teams to shoot in overseas countries of the Commonwealth.

Small-bore (·22) rifle shooting—carried out either on indoor ranges of 15 to 25 yards in length or on open ranges up to 200 yards—is also widely practised in Britain. Some 4,000 clubs throughout the country are affiliated to county rifle associations and the National Small-Bore Rifle Association (NSRA), which arranges inter-club and inter-county competitions of various kinds for teams and individuals. The NSRA also organises a National Bisley Meeting (usually attended by about 1,500 competitors), a Scottish meeting (some 600 competitors), and a pistol shooting competition (some 400 competitors) at Bisley. International small-bore rifle matches are fired against teams from overseas countries, and British teams are entered for the world championships and the competitions in the Olympic Games.

Indoor Games

Indoor games played in Britain include *billiards*, *table tennis*, and *badminton*, which are enjoyed by large numbers of people, and for which facilities are provided in social clubs of every kind, including youth clubs; and games such as *real tennis* (a game which originated in thirteenth-century France),

squash rackets, *rackets* and *fives*, which are less national games than games of the schools, universities and specialised clubs. Annual championships are held in all these games the controlling bodies of which are: the Billiards Association and Control Council; the Badminton Association of England and the Scottish Badminton Union; the Tennis, Rackets and Fives Association and the Squash Rackets Association. *Basket-ball*, an indoor variant of netball which originated in the United States of America, is also played in Britain, primarily by men. Matches in the game are included among the Olympic events. The controlling body in Britain is the Amateur Basket Ball Association.

APPENDIX

NOTES FOR VISITORS TO THE UNITED KINGDOM

Currency

The unit of currency is the pound sterling (£), which is divided into 20 shillings (s.). The shilling is divided into 12 pennies or pence (d.). Prices are sometimes quoted in guineas, the guinea (an old coin no longer in circulation) being £1 1s.

Coins in common use are: halfpenny, penny, threepenny piece, sixpence, shilling, two shilling piece (florin) and half-crown (2s. 6d.). Silver and cupro-nickel coins (3d., 6d., 1s., 2s., 2s. 6d., 5s.) are legal tender for payments up to £2; nickel-brass threepenny pieces up to 2s.; and bronze (½d. and 1d.) up to 12d.

Bank of England notes are issued in denominations of 10s., £1, £5 and £10. Scottish banks issue £1, £5, £10, £20, £50 and £100 notes which are generally accepted in Scotland and in some other parts of the United Kingdom. Northern Ireland banks issue £1, £5, £10, £50 and £100 notes.

Postage

Minimum postage rates for letters are: 4d. (inland) and 6d. (overseas). Details of all postal rates are given in leaflets obtainable at any post office and are summarised in the books of stamps sold there.

Exchange Facilities and Control

Persons coming to the United Kingdom may bring in notes in any currency, travellers' cheques, letters of credit, etc., without limit; and although visitors leaving the United Kingdom may normally only take with them sterling notes to the value of £25, they can make arrangments for up to £100 to be changed into travellers' cheques available in their own country. Currency can be exchanged at banks and there are *bureaux de change* at all the main ports and at London and Prestwick airports, the main London air terminals and Victoria Station, London.

Regulations relating to exchange control in the United Kingdom are somewhat complex and are subject to modification from time to time. Accordingly, any person who is going to live in the United Kingdom or who desires information affecting his own particular circumstances is advised to consult his own or a United Kingdom bank; banks in Britain are experienced in all aspects of exchange control.

In general, persons visiting the country for a limited period are regarded as non-resident; any sterling account which they open with a United Kingdom bank will be designated an External Account and funds in it may be used without formality to make payments anywhere in the world. Persons intending to reside permanently in the United Kingdom are subject to the provisions of the Exchange Control Act 1947, and will require permission to make payments outside the Scheduled Territories.

Income Tax

The question of when a visitor to the United Kingdom *who is not domiciled there* is chargeable for income tax as a 'resident' is complicated. The main qualifications are:

1. A visitor is resident in the United Kingdom for any income tax year (beginning 6th April) in which he is in the United Kingdom for a period or periods equal, in the whole, to six months.

2. Even if a visitor does not stay six months in any one year he is regarded as being resident if he visits the United Kingdom regularly for substantial periods of time.

3. If a person maintains a place of abode in the United Kingdom available for his use, he is regarded as resident for any year in which he pays a visit of whatever length.

Double Taxation Agreements: A visitor who is regarded for tax purposes as resident in the United Kingdom, and who is liable to United Kingdom tax on

income arising in another country and taxed there, may be entitled to a reduction of liability to United Kingdom income tax.

Information on specific questions relating to income tax may be obtained from The Secretary, The Board of Inland Revenue, Somerset House, London, W.C.2 (or, for residents in Great Britain, from local offices).

Travel and Tourist Information

Information about travel to Britain can be obtained in the major cities of the world from travel agents, airline, shipping line and railway offices, and British Government offices abroad, or directly from the headquarters of the British Travel Association (BTA), 64–65 St. James's Street, London, S.W.1 (Telephone: Mayfair 9191). The Association has overseas offices in Argentina (Buenos Aires), Australia (Sydney), Belgium (Brussels), Canada (Toronto and Vancouver), France (Paris), Germany (Frankfurt-am-Main), Italy (Rome), the Netherlands (Amsterdam), Africa (Johannesburg, Cape Town, Durban and Salisbury), Sweden (Stockholm), the United States (Chicago, Los Angeles and New York), Brazil (São Paulo) and New Zealand (Wellington). Information available from the Association includes details of places of interest, lists of exhibitions, fairs, festivals, concerts and special events of interest to overseas visitors to Britain, with hours of opening, etc.; and advice on motoring and touring itineraries. The Association publishes an annual guide, *Hotels and Restaurants in Britain*, listing accommodation, services and charges, and booklets giving particulars of youth hostels, holiday camps, and camping and caravan sites.

For information about the principal events of the day in London, visitors may use the Teletourist Service (operated by the General Post Office in conjunction with the BTA and the BBC). The information can be obtained in four languages by dialling the following telephone numbers: ASK 9211 (English), ASK 9311 (French), ASK 9411 (German), and ASK 9511 (Spanish). If using a call box, the caller should refer to the instructions notice. The weather forecast for the London area is also given in the French, German, and Spanish services; in English it can be obtained by calling WEA 2211. The London Tourist Information Centre, 64–65 St. James's Street, London, S.W.1 (and with information centres at Victoria Station and the West London Air Terminal) gives publicity to London's attractions for the holiday and business visitor.

Demand for hotel space in London is heavy, especially in the summer; the London Hotels Information Service, 88 Brook Street, London, W.1 (Mayfair 5414), gives information free of charge to overseas visitors as to where accommodation is available.

Additional information on travel in Wales, Scotland and Northern Ireland is obtainable from: the Wales Tourist and Holidays Association, 7 Park Place, Cardiff; the Scottish Tourist Board, 2 Rutland Place, West End, Edinburgh, 1; the Northern Ireland Tourist Board, 10 Royal Avenue, Belfast, and 13 Lower Regent Street, London, S.W.1.

Passports, Visas, Registration

As a general rule travellers entering the United Kingdom must have a valid passport and a visa issued by British consular authorities abroad, but visas are not required for citizens of the following countries: all countries of the British Commonwealth, Andorra, Austria, Belgium, Denmark, Finland, France, German Federal Republic, Greece, Iceland, Italy, Japan, Kuwait, Liechtenstein, Luxembourg, Monaco, Morocco, Netherlands, Norway, Portugal, San Marino, Republic of South Africa, Spain, Sweden, Switzerland, Tunisia, Turkey, the United States of America, and all countries in Central and South America. Citizens of the Republic of Ireland do not require either passport or visa (but, with residents of Commonwealth countries, are subject to immigration control if seeking employment in Britain: see p. 458).

Nationals of the following countries who wish to visit the United Kingdom for social or holiday visits of up to three months may use instead of a passport their national identity card (in the Netherlands a 'toeristenkaart', obtainable

from town halls) in conjunction with a special Visitor's Card (obtainable from travel agents in the tourist's own country): Belgium, France, Germany (Federal Republic and West Berlin), Liechtenstein, Luxembourg, Monaco, Netherlands, and Switzerland. A passport must, however, still be used where the purpose of the visit is other than touristic, or where a stay of longer than three months is intended.

Foreign visitors who are sixteen years of age or over must register with the police three months after their arrival.

Customs Duties and Purchase Tax

The personal baggage of persons entering the United Kingdom is subject to Customs examination. Many articles are liable to customs duty and a number to purchase tax. Failure to make a complete declaration may result in penalties; but, although there is no legal entitlement to them, certain concessions are given to travellers who properly declare their belongings.

Used personal effects, including tools of trade and articles of professional use, which have been in the ownership and use of a traveller for a considerable period and are not intended for other persons or for sale, may be admitted free of duty and purchase tax, as may also used furniture and domestic articles belonging to persons transferring residence to the United Kingdom. Small quantities of dutiable goods, including tobacco, wine and spirits, and perfume, carried by travellers for their personal use are allowed to pass free of duty within fixed limits.

Inquiries on importing personal and household effects should be addressed to the Secretary, H.M. Customs and Excise, King's Beam House, London, E.C.3.

There are purchase tax concessions for overseas visitors shopping in Britain. Many of the principal stores are able to send goods to an address abroad free of purchase tax; and under the Personal Export scheme, if the tax-free value of goods bought at one time is £5 or more, a visitor may have them delivered free of tax to the seaport or airport by which he is leaving the country.

Imports of Domestic Animals and Birds

All cats and dogs brought into the United Kingdom have to undergo six months' quarantine; and the landing of the animals must be authorised by a licence issued by the appropriate Agricultural Department for England and Wales, Scotland or Northern Ireland (see Chapter 12). The department will provide a list of approved carrying agents and quarantine kennels. An annual licence (costing 7s. 6d. and obtainable at any post office) is needed for a household dog aged 6 months or more.

The import of birds of the parrot family, if they are personal pets, is allowed under licence, subject to certain conditions, by the Agricultural Departments. Imports of live poultry are permitted only from certain countries.

Motor Vehicles and Driving Licences

Regulations concerning the temporary import of motor vehicles by visitors to Britain are best obtained from the national motoring organisations in the visitor's country of residence. If a visitor is given a Temporary Importation Permit by the customs officer at the port of entry, exemption from the need to pay vehicle excise licence duty will be granted for the same period as stated on the permit (maximum, 365 days). Insurance against third party risks is compulsory; a visitor must produce evidence in the form of either an International Motor Insurance Card (*green card*) or a certificate of insurance issued by a British insurer.

A visitor holding a current International Driving Permit or a current domestic driving licence for his own country is entitled to drive without obtaining a British driving licence during the currency of his own permit or licence, subject to a maximum of 12 months. Any person taking up permanent residence must take a driving test to secure a British licence which costs 15s. and is valid for three years.

The rule of the road is to keep LEFT. Road signs are illustrated and explained in *The Highway Code* (published by H.M. Stationery Office).

Social Security Benefits

Eligibility for the main social security benefits is dependent on (*a*) sufficient National Insurance contributions having been paid under the United Kingdom schemes or (*b*) the existence of a reciprocal agreement between the United Kingdom and the previous country of residence of the claimant (see p. 132). Information on specific points may be obtained from the Ministry of Pensions and National Insurance, 10 John Adam Street, London, W.C.2.

To qualify for family allowances, a residence qualification must be fulfilled, varying in length according to the nationality and previous country of residence of the applicant.

Health Services

The services provided under the National Health Service are available to everyone in Britain without regard to residence, nationality or insurance qualification. Immigration authorities have been instructed, however, to refuse admission to the country to any person coming solely for the purpose of securing free treatment under the Health Service.

Employment Permits

Persons from countries other than members of the British Commonwealth and the Irish Republic are admitted to the United Kingdom to take up employment with a particular employer only if they have a permit issued by the Ministry of Labour (see p. 457). Until 1st July, 1962, citizens of the Commonwealth and of the Irish Republic had free entry into the United Kingdom, but since that date they have been subject to control under the Commonwealth Immigrants Act 1962 (see p. 458), and must obtain an employment voucher issued by the Ministry of Labour before entering Britain for full-time employment.

Visitors of foreign nationality wishing to set up in any business or profession in Britain must ask for permission from the Under-Secretary of State, Home Office, Aliens Department, Princeton House, 271 High Holborn, London, W.C.1.

BRITISH WEIGHTS AND MEASURES AND THEIR METRIC EQUIVALENTS

Adoption of Metric System

The Government announced in May 1965 that it was encouraging the adoption of the metric system of weights and measures and by 1975 the greater part of British industry should have effected the change. No decision has yet been reached on the recommendations of the Halsbury Committee (appointed in 1963) on a decimal currency.

Length

	1 inch	=	2·54 centimetres
12 inches	1 foot	=	30·48 centimetres
3 feet	1 yard	=	0·914 metre
1,760 yards	1 mile	=	1·609 kilometres

Area

	1 square inch	=	6·451 square centimetres
144 square inches	1 square foot	=	929·03 square centimetres
9 square feet	1 square yard	=	0·836 square metre
4,840 square yards	1 acre	=	0·405 hectare
640 acres	1 square mile	=	2·59 square kilometres

Capacity

	1 pint	=	0·568 litre
2 pints	1 quart	=	1·136 litres
4 quarts	1 gallon	=	4·546 litres
8 gallons	1 bushel	=	36·37 litres
8 bushels	1 quarter	=	2·909 hectolitres

Weight (Avoirdupois)

	1 ounce (oz.)	=	28·350 grams
16 oz.	1 pound (lb.)	=	0·454 kilogram
14 lb.	1 stone (st.)	=	6·35 kilograms
112 lb.	1 hundredweight (cwt.)	=	50·8 kilograms
20 cwt. (2,240 lb.)	1 long ton	=	1·016 metric tons
2,000 lb.	1 short ton	=	0·907 metric ton

Double Conversion Tables for Weights and Measures

(Note: the central figures represent either of the two columns beside them, as the case may be—e.g., 1 centimetre = 0·394 inch, and 1 inch = 2·540 centimetres.)

Centi-metres		Inches	Metres		Yards	Kilo-metres		Miles	Hec-tares		Acres
2·540	1	0·394	0·914	1	1·094	1·609	1	0·621	0·404	1	2·471
5·080	2	0·787	1·829	2	2·187	3·219	2	1·243	0·809	2	4·942
7·620	3	1·181	2·743	3	3·281	4·828	3	1·864	1·214	3	7·413
10·160	4	1·575	3·658	4	4·374	6·437	4	2·485	1·619	4	9·884
12·700	5	1·969	4·572	5	5·468	8·047	5	3·107	2·023	5	12·355
15·240	6	2·362	5·486	6	6·562	9·656	6	3·728	2·428	6	14·826
17·780	7	2·756	6·401	7	7·655	11·266	7	4·350	2·833	7	17·298
20·320	8	3·150	7·315	8	8·749	12·875	8	4·971	3·237	8	19·769
22·860	9	3·543	8·230	9	9·843	14·484	9	5·592	3·642	9	22·240
25·400	10	3·937	9·144	10	10·936	16·094	10	6·214	4·047	10	24·711

Kilo-grams		Av. Pounds	Litres		Pints	Litres		Gallons	Hecto-litres per Hectare		English Bushels per Acre
0·454	1	2·205	0·568	1	1·760	4·546	1	0·220	0·898	1	1·113
0·907	2	4·409	1·136	2	3·520	9·092	2	0·440	1·796	2	2·226
1·361	3	6·614	1·705	3	5·279	13·638	3	0·660	2·695	3	3·340
1·814	4	8·818	2·273	4	7·039	18·184	4	0·880	3·593	4	4·453
2·268	5	11·023	2·841	5	8·799	22·730	5	1·100	4·491	5	5·566
2·722	6	13·228	3·409	6	10·559	27·276	6	1·320	5·389	6	6·679
3·175	7	15·432	3·978	7	12·319	31·822	7	1·540	6·287	7	7·793
3·629	8	17·637	4·546	8	14·078	36·368	8	1·760	7·186	8	8·906
4·082	9	19·842	5·114	9	15·838	40·914	9	1·980	8·084	9	10·019
4·536	10	22·046	5·682	10	17·598	45·460	10	2·200	8·982	10	11·132

Thermometrical Table

0° Centigrade = 32° Fahrenheit.
100° Centigrade = 212° Fahrenheit.

To convert °Fahrenheit into °Centigrade: subtract 32, then multiply by $\frac{5}{9}$;
°Centigrade into °Fahrenheit: multiply by $\frac{9}{5}$, then add 32.

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Certain reference pamphlets produced by the Central Office of Information can be purchased from Her Majesty's Stationery Office and its agents overseas. These pamphlets are listed here with their respective prices (postage extra).

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	Statement on the Defence Estimates, 1965–66 Cmnd 2592 *HMSO*	1965	4	0
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	Manuals of Civil Defence. Vol. I.			
	Pamphlet No. 1. Nuclear Weapons *HMSO*	1959	2	6
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	National Assistance Board For 1964 Cmnd 2674 *HMSO*	1965		8	0
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	CENTRAL HEALTH SERVICES COUNCIL. Health Education (Report of the CHSC and Scottish HSC) *HMSO*	1963	5	6
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	Report Cmnd 2119 *HMSO*	1963		8
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	National Health Service Summarised Acounts *Annual* For 1963–64 *HMSO*	1965	4	6
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	The Needs of Young Children in Care *HMSO*	1964	2	0
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DOUGLAS, J. W. B. Home and School	*MacGibbon & Kee*	1964	36	0
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LESTER SMITH, W. O. Education: An Introductory Survey	*Penguin*	1962	3	6
MACLURE, J. STUART. Educational Documents, England and Wales 1816–1963	*Chapman & Hall*	1965	50	0
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TAYLOR, WILLIAM. The Secondary Modern School	*Faber*	1963	32	6
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Part I (1964)	*HMSO*	1965	15	0
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	The Health of the School Child. Report of the Chief Medical Officer of the Department of Education and Science *Biennial* For 1962 and 1963	*HMSO*	1964	12	6
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	Higher Education in Northern Ireland [Lockwood Report] Cmd 475	*Belfast, HMSO*	1965	20	0
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	Public Education in Scotland. Rev. edn	*HMSO*	1961	4	0
	Teacher Training in Britain Reference Paper R.5279	*COI*	1962	free*	
	Technical Education in Britain COI Reference Pamphlet RF.P.5169	*HMSO*	1962	3	0
	Universities in Britain Reference Paper R.5520/65	*COI*	1965	free*	
	University Grants Committee Annual Return from Universities and University Colleges For 1962–63 Cmnd 2456	*HMSO*	1964	5	6
	Annual Survey, Academic Year, 1963–64 Cmnd 2571	*HMSO*	1965	1	9
	University Development 1957–62 Cmnd 2267	*HMSO*	1964	15	0
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	Duke of Edinburgh's Award Scheme: Report for 1963	*Duke of Edinburgh's Award Office*	1964	2	6
	KING GEORGE'S JUBILEE TRUST. Opportunities for Service	*The Trust*	1964		6
	MORSE, MARY. The Unattached	*Penguin*	1965	3	6
	NATIONAL COUNCIL OF SOCIAL SERVICE. Young People and Voluntary Service	*NCSS*	1965	2	0
	STANDING CONFERENCE OF NATIONAL VOLUNTARY YOUTH ORGANISATIONS. Annual Report and Directory, 1963–64	*NCSS*	1964	2	6
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	Youth Service in England and Wales [Albemarle Report] Cmnd 929	*HMSO*	1960	8	6
	Youth Services in Britain Reference Paper R.5506	*COI*	1963	free*	

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	Annual Reports Ministry of Housing and Local Government For 1964 Cmnd 2668	*HMSO*	1965	6	6
	Scottish Development Department For 1964 Cmnd 2635	*HMSO*	1965	9	6
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Town and Country Planning	ABERCROMBIE, *Sir* PATRICK. Town and Country Planning. 3rd edn	*Oxford University Press*	1959	10	6
	ABRAHAMS, HAROLD M., *Editor*. Britain's National Parks	*Country Life*	1960	25	0

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CULLINGWORTH, J. B. Town and Country Planning in England and Wales	*Allen & Unwin*	1964	36	0
GIBBERD, FREDERICK. Town Design. 4th edn	*Architectural Press*	1963	73	6
HEAP, DESMOND. An Outline of Planning Law. 4th edn	*Sweet & Maxwell*	1963	32	6
KEEBLE, LEWIS. Principles and Practice of Town and Country Planning. 3rd edn	*Estates Gazette*	1964	55	0
LONDON COUNTY COUNCIL. London Plan, First Review	*LCC*	1960	50	0
NICHOLSON, E. M. Britain's Nature Reserves	*Country Life*	1958	30	0
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Nature Conservancy	For 1963–64 *HMSO*	1964	13	0
Administration of Town and Country Planning in Northern Ireland	Cmd 465 *Belfast, HMSO*	1964	1	0
Belfast Regional Survey and Plan: Recommendations and Conclusions	Cmd 451 *Belfast, HMSO*	1963	3	6
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The New Towns of Britain	COI Reference Pamphlet RF.P.4506/64 *HMSO*	1964	2	9
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South-East England	Cmnd 2308 *HMSO*	1964		9
The South-East Study, 1961–81	*HMSO*	1964	15	0
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Housing	Cmnd 2050 *HMSO*	1963	1	3
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Housing Return for Northern Ireland	*Quarterly Belfast HMSO*		2	6
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London. Employment: Housing: Land	Cmnd 1952 *HMSO*	1963	2	0
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PAYNE, G. L. Britain's Scientific and Technological Manpower	*Oxford University Press*	1960	45	0
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Advisory Council on Scientific Policy	For 1963–64 Cmnd 2538 *HMSO*	1964	4	0
Agricultural Research Council	For 1962–63 Cmnd 2519 *HMSO*	1964	6	6
Atomic Energy Authority Tenth Report	For 1963–64 *HMSO*	1964	6	6
Medical Research Council	For 1962–63 Cmnd 2382 *HMSO*	1964	16	6
National Research Development Corporation	For 1963–64 *HMSO*	1964	2	3
Nature Conservancy	For 1963–64 *HMSO*	1964	13	0
Research Council of the Department of Scientific and Industrial Research	For 1964 Cmnd 2705 *HMSO*	1965	5	6
Britain and International Co-operation in Nuclear Energy	Reference Paper R.5672 *COI*	1964	free*	
Britain and Space Research	Reference Paper R.5337/65 *COI*	1965	free*	
British Research and Developing Countries	Reference Pamphlet RF.P.5516 *COI*	1963	free*	
British Winners of Nobel Prizes for Science	Reference Paper R.8320 *COI*	1963	free*	
Committee of Enquiry into the Organisation of Civil Science [Trend Report]	Cmnd 2171 *HMSO*	1963	4	0
Medical Research in Britain	Reference Paper R.5578 *COI*	1963	free*	
Notes on Science and Technology in Britain	Reference Paper R.5476/Series *COI*	1962 to 1965	free*	
Nuclear Energy in Britain	Reference Pamphlet RF.P.5151/65 *COI*	1965	free*	
Register of Research in the Human Sciences 1960–63	*HMSO*	1963	20	0
Report of the Committee on Social Studies [Heyworth Report]	Cmnd 2660 *HMSO*	1965	7	6
Report of Radio Astronomy Planning Committee [Fleck Report]	*HMSO*	1965	4	6
Research Assistance for Developing Countries	Cmnd 2433 *HMSO*	1964	2	0
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Satellite Communications	Cmnd 2436 *HMSO*	1964	1	6
Science and Technology Act 1965	*HMSO*	1965	1	6
Scientific and Technological Manpower in Great Britain, 1962	Cmnd 2146 *HMSO*	1963	3	6
Scientific Research in British Universities and Colleges, 1964–65				
Vol. I Physical Sciences	*HMSO*	1965	37	6
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Some British Records and Achievements in Science, Industry and Technology	Reference Booklet RF.P.5446/65 *COI*	1965	free*	

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The Arts	ARTS COUNCIL OF GREAT BRITAIN. State of Play. Nineteenth Annual Report, 1963–64	*Arts Council*	1964	3	6
	A Policy for the Arts: The First Steps Cmnd 2601	*HMSO*	1965	1	6
Visual Arts	GAUNT, *Sir* WILLIAM. A Concise History of English Painting	*Thames & Hudson*	1964	18	0
	Historic Houses, Castles and Gardens in Great Britain and Northern Ireland, 1964–65	*Index Publishers*	1964	5	0
	HOAR, FRANK. An Introduction to English Architecture	*Evans*	1963	42	0
	Museums and Galleries in Great Britain and Northern Ireland, 1965–66	*Index Publishers*	1965	3	6
	Museums Calendar *Annual* For 1965	*Museums Association*	1965	15	0
	ROTHENSTEIN, *Sir* JOHN. British Art since 1900	*Phaidon Press*	1962	60	0
	Who's Who in Art. 12th edn	*Art Trade Press, Eastbourne*	1964	84	0
	Annual Reports				
	Ancient Monuments Boards for England, Scotland and Wales For 1964	*HMSO*	1965	2	6
	Export of Works of Art 1963–64 Cmnd 2502	*HMSO*	1964	2	6
	Historic Buildings Council for England For 1964	*HMSO*	1965	1	9
	Historic Buildings Council for Scotland For 1964	*HMSO*	1965	1	6
	Historic Buildings Council for Wales For 1964	*HMSO*	1965		9
	Royal Fine Art Commission For 1960–62 Cmnd 1927	*HMSO*	1963	1	6
	Government and the Arts 1958–64	*HMSO*	1964	3	0
	Royal Fine Art Commission for Scotland 1962–63 Cmnd 2395	*HMSO*	1964	1	6
	Standing Commission on Museums and Galleries Report for 1961–65	*HMSO*	1965	7	6
	Survey of Provincial Museums and Galleries	*HMSO*	1963	30	0
Literature	British National Bibliography *Annual* For 1964	*The Council of the British National Bibliography*	1965	220	0
	The Concise Cambridge History of English Literature, edited by George Sansom. 2nd edn	*Cambridge University Press*	1961	32	6
	The Oxford Companion to English Literature, edited by *Sir* Paul Harvey. 3rd edn	*Oxford University Press*	1946	38	0
	Inter-library Co-operation in England and Wales	*HMSO*	1962	3	0
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Drama	CLUNES, ALEC. The British Theatre	*Cassell*	1964	36	0
	The Oxford Companion to the Theatre, edited by Phyllis Hartnell. 2nd edn	*Oxford University Press*	1957	63	0
	The Stage Year Book, 1964 *Annual*	*Carson & Comerford*	1964	20	0
	TAYLOR, JOHN RUSSELL. Anger and After	*Penguin*	1963	5	0
	Who's Who in the Theatre, edited by Freda Gaye. 13th rev. edn	*Pitman*	1961	105	0
Films	BRITISH FILM INSTITUTE. Thirty-first Annual Report	*BFI*	1965	2	6
	MONTAGU, IVOR. Film World	*Penguin*	1964	6	0
	STORK, LEOPOLD. Industrial and Business Films	*Phoenix House*	1962	35	0
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	British Film Fund Agency For 1963–64	*HMSO*	1965		9
	Cinematograph Films Council For 1964–65	*HMSO*	1965		9
	National Film Finance Corporation (and Statement of Accounts) For 1963–64 Cmnd 2453	*HMSO*	1964	1	6

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	MONEY, KEITH. The Art of the Royal Ballet	*Harrap*	1964	63	0
	The Oxford Companion to Music, edited by Percy Scholes. 9th edn	*Oxford University Press*	1955	75	0

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The British Economy: Key Statistics 1900–1964	*Times Publishing Company*	1965	10	6
CLAPHAM, *Sir* JOHN. A Concise Economic History of Britain: From Earliest Times to 1750	*Cambridge University Press*	1949	30	0
——— An Economic History of Modern Britain. 3 vols	*Cambridge University Press*	1938	195	0
DEANE, PHYLLIS *and* COLE, W. A. British Economic Growth, 1688–1959	*Cambridge University Press*	1962	70	0
DEVONS, E. An Introduction to British Economic Statistics	*Cambridge University Press*	1956	25	0
DOW, J. C. R. The Management of the British Economy, 1945–60	*Cambridge University Press*	1964	60	0
MITCHELL, B. R. *and* DEANE, P. Abstract of British Economic Statistics	*Cambridge University Press*	1962	60	0
MORGAN, E. V. The Structure of Property Ownership in Great Britain	*Oxford University Press*	1960	35	0
POLITICAL AND ECONOMIC PLANNING. Growth in the British Economy	*Allen & Unwin*	1960	30	0
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STAMP, L. DUDLEY *and* BEAVER, S. H. The British Isles: a Geographic and Economic Survey	*Longmans*	1963	65	0
THOMAS, BRINLEY. The Welsh Economy	*University of Wales*	1962	30	0
WORSWICK, G. D. N. *and* ADY, P. H. The British Economy in the Nineteen Fifties	*Oxford University Press*	1962	50	0
YOUNGSON, A. J. The British Economy 1920–1957	*Allen & Unwin*	1964	18	0
Economic Review *Quarterly*	*National Institute of Economic and Social Research*		12	6
Official Histories of the Second World War: United Kingdom: Civil Series. British War Economy, by W. K. Hancock *and* M. M. Gowing	*Longmans/HMSO*	1949	30	0
Economic Development in Northern Ireland	Cmd 479 *Belfast, HMSO*	1965	10	0
Economic Report on 1964	*HMSO*	1965	3	6
The Economic Situation: A Statement by Her Majesty's Government	*HMSO*	1964		9
Growth of the United Kingdom Economy to 1966. National Economic Development Council	*HMSO*	1963	8	6
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Northern Ireland Economic Survey	Cmd 453 *Belfast, HMSO*	1963	5	0
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Scottish Development Department. Report for 1964	Cmnd 2635 *HMSO*	1965	9	6

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Statistics					
Abstract of Regional Statistics. No. 1. 1965	*HMSO*	1965		7	6
Annual Abstract of Statistics. No. 101. 1964	*HMSO*	1964		22	6
Digest of Scottish Statistics *Twice Yearly*	*HMSO*			5	0
Digest of Statistics: Northern Ireland *Twice Yearly*	*Belfast, HMSO*			7	6
Digest of Welsh Statistics *Annual*	*HMSO*			8	0
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DUNNING, J. H. *and* THOMAS, C. J. British Industry. 2nd edn	*Hutchinson*	1963		15	0
GROVE, J. W. Government and Industry in Britain	*Longmans*	1962		42	0
HANSON, H. A. Parliament and Public Ownership	*Cassell*	1961		30	0
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COUNCIL OF INDUSTRIAL DESIGN. Annual Report 1963–64	*HMSO*	1964		3	6
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Monopolies, Mergers and Restrictive Practices	Cmnd 2299 *HMSO*	1964		1	0
Regional Development Plans and Studies					
Central Scotland. A Programme for Development and Growth	Cmnd 2188 *HMSO*	1963		5	6
The North East. A Programme for Regional Development and Growth	Cmnd 2206 *HMSO*	1963		5	0
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The West Midlands	*HMSO*	1965		12	6
Nationalised Industries in Britain Reference Paper R.5629/64	*COI*	1964		free*	
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Wales and Monmouthshire: Report on Developments and Government Action 1963	Cmnd 2284 *HMSO*	1964		8	6

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Ministry of Power Statistical Digest *Annual*	For 1964 *HMSO*	1965		27	6

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CORBIN, E. G., *Editor*. Guide to the Coalfields, 1965	*Colliery Guardian*	1965		25	0

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	National Coal Board				
	Vol. I. Report For 1964–65	*HMSO*	1965	5	6
	Vol. II. Accounts and Statistical Tables For 1964	*HMSO*	1965	16	6
	The Coal Industry in Britain Reference Paper R.5610/64	*COI*	1964	free*	
	Safety in Mines Research 1963	*HMSO*	1964	6	6
Petroleum	LONGHURST, HENRY C. Adventure in Oil	*Sidgwick & Jackson*	1959	21	0
	UNITED KINGDOM PETROLEUM INDUSTRY ADVISORY COMMITTEE. UK Petroleum Industry Statistics Relating to Consumption and Refinery Production *Annual*	*Petroleum Information Bureau*	1965	free	
Electricity and Gas Supply	ELECTRICITY COUNCIL. Power for the Future	*The Council*	1960	free	
	———Statistical Digest for 1964	*The Council*	1965	free	
	GAS COUNCIL. The Growing Gas Industry	*The Council*	1965	free	
	SLEEMAN, J. F. British Public Utilities	*Pitman*	1953	20	0
	Annual Reports and Accounts				
	Central Electricity Generating Board For 1963–64	*HMSO*	1964	12	6
	Electricity Council For 1963–64	*HMSO*	1964	13	6
	Gas Council For 1963–64	*HMSO*	1964	12	6
	North of Scotland Hydro-Electric Board For 1964–65	*HMSO*	1965	7	6
	South of Scotland Electricity Board For 1964–65	*HMSO*	1965	8	0
	Nuclear Energy in Britain Reference Pamphlet RF.P.5151/65	*COI*	1965	free*	
	Report of the Committee of Inquiry into the Electricity Supply Industry [Herbert Committee] Cmd 9672	*HMSO*	1956	11	6
	Reports from the Select Committee on Nationalised Industries:				
	The Electricity Supply Industry				
	Vol. I Report and Proceedings	*HMSO*	1963	11	6
	The Gas Industry				
	Vol. I. Report and Proceedings	*HMSO*	1961	8	0
	The Second Nuclear Power Programme Cmnd 2335	*HMSO*	1964		5
	A Ten-year Programme for Electricity Supply in Northern Ireland Cmd 497	*Belfast, HMSO*	1965	1	6
	Town Gas: Its Manufacture and Distribution	*HMSO*	1958	5	6
Water Supply	HARTLEY, DOROTHY. Water in England	*Macdonald*	1964	50	0
	SKEAT, W. O., *Editor*. The Manual of British Water Engineering Practice	*Institution of Water Engineers/Heffer*	1961	105	0
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	British Rainfall For 1959–60	*HMSO*	1964	90	0
	Ministry of Housing and Local Government For 1964 Cmnd 2668	*HMSO*	1965	6	6
	Water Pollution Research Laboratory, 1964	*HMSO*	1965	13	0
	CENTRAL ADVISORY WATER COMMITTEE. Report of Sub-Committee on Information on Water Resources	*HMSO*	1959	1	3
	———Sub-Committee on Growing Demand for Water Final Report	*HMSO*	1962	3	6
	Hydrological Surveys (Series, by Regions)	*HMSO*	1959 to 1964	9 to 30	6 0
	Report on the Water Resources of Wales Cmnd 1331	*HMSO*	1961	7	6
	Surface Water Year Book of Great Britain 1962–63 *Annual*	*HMSO*	1965	30	0
	Water Conservation, England and Wales Cmnd 1693	*HMSO*	1962	1	3
	The Water Service in Central Scotland	*HMSO*	1963	7	6

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Construction	HENRY, DOROTHY *and* JEROME, J. A. Modern British Bridges	*U.R. Books*	1965	63	0
	PANNELL, J. P. M. An Illustrated History of Civil Engineering	*Thames & Hudson*	1964	42	0
	ROSKILL, O. W. The Building Industry—1962 Onwards	*The Builder*	1963	63	0
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	Building Research, 1964	*HMSO*	1965	11	0
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	British Construction Work Overseas	Reference Paper R.5445 *COI*	1962	free*	
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Manufacturing Industries	BRITISH IRON AND STEEL FEDERATION. Annual Report 1964	*BISF*	1965	free	
	BURN, DUNCAN. The Steel Industry 1939–1959	*Cambridge University Press*	1961	90	0
	GLASS MANUFACTURERS' FEDERATION. The British Glass Industry	*GMF*	1963	free	
	HAGUE, DOUGLAS C. The Economics of Man-Made Fibres	*Duckworth*	1957	30	0
	KEELING, B. S. *and* WRIGHT, A. E. G. The Development of the Modern British Steel Industry	*Longmans*	1964	25	0
	PARKINSON, J. R. The Economics of Shipbuilding in the United Kingdom	*Cambridge University Press*	1960	40	0
	RAINNIE, G. F., *Editor*. The Woollen and Worsted Industry	*Oxford University Press*	1965	30	0
	ROBSON, R. The Cotton Industry in Britain	*Macmillan*	1957	60	0
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	SOCIETY OF MOTOR MANUFACTURERS AND TRADERS. The Motor Industry of Great Britain 1964	*SMMT*	1964	55	0
	The British Agricultural Engineering Industry	Reference Paper R.5501 *COI*	1963	free*	
	The British Motor Vehicle Industry	Reference Paper R.5374 *COI*	1962	free*	
	Development in the Iron and Steel Industry: Special Report, 1964	*HMSO*	1964	11	0
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	DIGBY, M., *Editor*. Year Book of Agricultural Co-operation	*Blackwell*	1964	42	0
	ERNLE, *Lord*. English Farming Past and Present. New edn by G. E. Fussell and O. R. McGregor	*Frank Cass/Heinemann*	1961	50	0
	MCCRONE, GAVIN. The Economics of Subsidising Agriculture	*Allen & Unwin*	1962	25	0
	———*and* ATTWOOD, E. A., *Editors*. Agriculture in Britain: Selected Papers	*Welsh University Press*	1965	21	0
	ORWIN, C. S. *and* WHETHAM, E. H. History of British Agriculture	*Longmans*	1964	63	0
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WILLIAMS, H. T., *Editor*. Principles for British Agricultural Policy *Oxford University Press*	1960	18	0	
Agricultural Research in Britain. Reference Paper R.5431 *COI*	1962	free*		
Agricultural Statistics, United Kingdom 1961–62 *HMSO*	1964	5	0	
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Agricultural Marketing Schemes For 1962–63 *HMSO*	1964	7	6	
Animal Health Services in Great Britain For 1963 *HMSO*	1965	8	0	
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Annual Review and Determination of Guarantees For 1965 Cmnd 2621 *HMSO*	1965	3	6	
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Farm Incomes in England and Wales *Annual* For 1963 *HMSO*	1965	9	6	
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Fisheries Year Book and Directory 1964 *British Continental Trade Press*	1964	30	0	
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Fisheries of Scotland For 1964 Cmnd 2644 *HMSO*	1965	9	6	
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Annual Statistical Tables				
Scottish Sea Fisheries For 1964 *HMSO*	1965	7	6	
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The Fishing Industry Cmnd 1453 *HMSO*	1961	1	0	
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	BOWN, A. H. J., DOVE, C. A. *and* TOOTH, E. S. Port Operation and Administration. 2nd edn *Chapman & Hall*	1960	45	0
	CHAMBER OF SHIPPING OF THE UNITED KINGDOM. Annual Report 1964–65 *CSUK*	1965	free (limited)	
	CORPORATION OF LLOYD'S. Lloyd's List Annual Review 1964 Supplement to Lloyd's List and Shipping Gazette *The Corporation*	1964	free (limited)	
	COURSE, *Capt.* A. G. The Merchant Navy To-day *Oxford University Press*	1956	15	0
	International Shipping and Shipbuilding Directory, 1965 *Shipping World/Benn*	1965	80	0
	NATIONAL PORTS COUNCIL. Port Development: An Interim Plan *HMSO*	1965	42	0
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	THORNTON, R. H. British Shipping *Cambridge University Press*	1959	21	0
	Report of the Committee of Inquiry into the Major Ports of Great Britain [Rochdale Report] Cmnd 1824 *HMSO*	1962	15	0
Inland Transport	FOSTER, C. D. The Transport Problem *Blackie*	1963	40	0
	JACKMAN, W. T. The Development of Transport in Modern England. 2nd edn *Frank Cass*	1962	140	0
	SARGENT, J. R. British Transport Policy *Oxford University Press*	1958	18	0
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	Re-organisation of the National Transport Undertakings Cmnd 1248 *HMSO*	1960	1	0
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Railways	ALLEN, G. FREEMAN. British Railways Today and Tomorrow *Ian Allan*	1963	30	0
	ELLIS, C. HAMILTON. British Railway History, 1877–1947 *Allen & Unwin*	1960	35	0
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Roads	Report from the Select Committee on Nationalised Industries: British Railways	*HMSO*	1960	6	6
	BRITISH ROAD FEDERATION. Basic Road Statistics	*BRF*	1965	1	0
	BUCHANAN, C. D. Mixed Blessing: The Motor in Britain	*Leonard Hill*	1958	30	0
	The Highway Code, including Motorway rules	*HMSO*	1963		6
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	Road Pricing: the Economic and Technical Possibilities [Smeed Report]	*HMSO*	1964	4	6
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	Traffic in Towns [Buchanan and Crowther Reports]	*HMSO*	1963	50	0
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	Transport Holding Company: Annual Report 1964	*HMSO*	1965	7	6
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Inland Waterways	EDWARDS, L. A. The Inland Waterways of Great Britain and Ireland. 2nd edn	*Imray, Laurie, Norie & Wilson*	1962	45	0
	HADFIELD, CHARLES. British Canals: An Illustrated History. Rev. edn	*Macdonald*	1962	36	0
	ROLT, L. T. C. The Inland Waterways of England.	*Allen & Unwin*	1962	35	0
	BRITISH WATERWAYS BOARD. The Future of the Waterways	*HMSO*	1964	7	6
Public Transport in Northern Ireland	ULSTER TRANSPORT AUTHORITY. Annual Report For 1962–63	*Belfast, UTA*	1964	1	0
Civil Aviation	Aeroplane Directory of British Aviation	*Annual Temple Press*	1965	45	0
	BRITISH INDEPENDENT AIR TRANSPORT ASSOCIATION. Annual Report For 1964–65	*BIATA*	1965	free	
	JACKSON, A., J. British Civil Aircraft, 1919–1960 Volume I	*Putnam*	1960	63	0
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	PUDNEY, JOHN. The Seven Skies	*Putnam*	1959	30	0
	TAYLOR, JOHN W. R. ABC of British Airports	*Ian Allan*	1964	3	0
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Most of the organisations concerned with sport publish year books covering results and records of the previous season and future prospects; many weekly or monthly periodicals on sport are also published. In addition, some newspapers issue annual surveys of sport.

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Bold type in a sequence of figures indicates main references

As the main purpose of this book is to inform readers overseas about Britain, organisations and societies are generally indexed under their subject matter rather than under *Association of, British, National, Royal,* etc. (i.e. *Accidents, Royal Society for the Prevention of; Anglers, National Federation of*). In cases where the first word is not separable, however (e.g., *Royal Air Force, Royal Society*) entries will be found appropriately.

Items are indexed under England, Northern Ireland, Scotland or Wales only where they are matters peculiar to these countries; otherwise they are indexed under the relevant subject headings.

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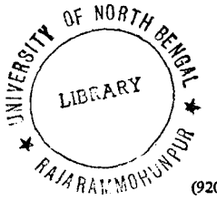
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