

## CHAPTER I

### Our Ordinary Conception of Time

The notion of time is commonly taken for granted; its validity is seldom questioned by us, for time appears to be an inalienable feature of the world of our experience. The commonsense conception of a physical object involves both the notions of space and time. A particular object is said to exist at a particular space and at a particular time. In ordinary discourse there are many words that are used to express either spatial or temporal relations between objects or events. An event is said to be something that happens at a particular spatial point and at a particular temporal instant. For, every event seems to have a duration; that is to say, it occupies some time. An allied notion is that of 'being present' which is understood in terms of the temporal concept 'now'. A corollary to this is the notion of 'distance' or 'interval' which is also used in

a temporal sense. Just as Calcutta and Delhi are spatially distant from each other, Zeno and Bradley are temporally so. We distinguish between spatial parts of things; in the same manner, we speak of temporal parts. Anything having temporal length or duration can be divided into temporal parts. Some physical objects are spatially very small like dust; similarly, there are also very small temporal events like a flash of lightning. We commonly conceive space as something distinguished from the matter or objects in it and time as something distinguished from the events that occur in it. Time has only one dimension, while space has three - length, breadth and thickness. It is said that all movements in time are in one direction, from past to future. In space an object can move from one location to another and come back to its starting point. But in the case of time the movement is towards future and there is no return; time is said to be irreversible.

Time appears to involve the characteristics of pastness, presentness and futurity. We conceive of events as continually changing in respect of these characteristics. An event continually becomes less and less future, becomes present, and then continually becomes more and more past. These temporal facts are expressed in language either by means of temporal copulas or adverbs, e.g, 'I am writing now', 'I was eating my dinner', 'I shall be eating my

breakfast'. But these are also expressible by a non-temporal copula and temporal adjectives, e.g., 'My writing is present', 'Eating my dinner is past', 'Eating my breakfast is future'.

Thus temporality has a very important part in our ordinary thinking and acting. Just as if we try to imagine the world without the spatial aspects in things then these things would not have shapes, nor would they be extended; the different things would not be separated from one another by various distances; the entire physical world would then have no dimensions; likewise, without time in human experience, birth, and the years of activities would be without any order. Events would have no duration. Durability of particular things would mean nothing; between the beginning and the end of anything, or of all things, no time would pass. The removal of temporal aspects of things and experiences would then completely change our conception of the physical world, of human life and experience, of the universe as a whole.

But how is time known? We experience objects and events in space and time. We perceive shapes and sizes of objects and distances between them. We have also the awareness of the duration of events or of the intervals of time. But we do not perceive space itself or time itself. A curious fact about the nature of both is that space seems

to be divided into smaller spaces and time into a number of shorter times. Even in the case of smaller spaces and times we perceive only that which they contain. The spatial and temporal units thus appear as relations between these contents. But the particular units of space and time are not complete in themselves. Each particular unit of space requires other space to surround it, and each movement of time needs other time to precede and follow it. So we common people assume that there is an all-embracing Space and an all-embracing Time of which these spaces and times are fragments. It seems that we could not think intelligibly about objects and events without this conception of a whole Time and Space as a framework within which particular spaces and times are related. Moreover, the world as it is, the objects which it contains, the events that occur within it are said to have their existence and reality only when they are located in space and time. So it can be paradoxically said that if Space and Time are to exist, they must also exist somewhere at some time.

It appears that though space and time play an important part in our experience, they are most curiously contradictory conceptions. In our ordinary conception things and persons occupy space. This suggests the image of a large container holding the material world as its content. Within space material bodies seem to move about. But Space itself

does not seem to move. In the same manner the concept of Time suggests the image of a river in which events flow. But this kind of conception has the implication that if no bodies existed and no events occurred, Space and Time might still remain. But empty space and empty time would then be two non-entities equivalent to nothing at all, yet without them we could not conceive any reality.

So it may be said that we ordinarily think of space and time in two opposite ways : (i) we think of space and time as independent substantial entities, (ii) but we also think that spatial and temporal expressions only denote relations between objects and events. But how can space and time be relations between objects and events, and so dependent upon them, and also be substantial entities independent of them ?

The commonsense conception of space and time is, therefore, confused and contradictory. This confusion is largely due to two opposed classical theories - the Absolute and the Relational theories of space and time. And to do away with this confusion it is necessary that we present a very brief account of these two theories.