INTRODUCTION

The problem of justification of induction has long been one of the central problems of empiricist epistomology. In order to understand the problem we have to be clear about the meaning of Induction or inductive inference.

An inductive argument is that for which it is claimed that the premisses make the conclusion more probable than any equally detailed rival, although the argument is not deductively valid. In inductive inference premisses give the probablity of the conclusion; for example:

'This A is B
that A is B
Therefore all A's are B'

C. S. Peirce gives a definition of an induction. In induction, he says, "We generalize from a number of cases of which something is true, and infer that the something is true of a whole class".[1]

The problem of induction concerns the justification for the belief that future will resemble the past; or we can say that the problem as it is usually understood concerns all our beliefs about matters of fact which go beyond our experience or observation.

To solve the problem of induction and to avoid Hume's scepticism, philosophers have put forward many solutions. I have taken up for discussion mainly three types of justification which have been provided in recent years.

The first chapter is "A short Historico - Critical Survey of the Problems of Induction". The historical background does not show a continuous development of the problem in an unilateral direction, even though most of the thinkers who discussed this problem were empiricists. There have been various interpretations of induction and its utility has been judged in various ways, not only in past but in present times as well. Chapter-I deals with the various historical analysis of induction, with particular references to Aristotle, Bacon, Mill and Hume.

The second chapter is an attempt to reformulate the problem. Actually Hume was not clear to himself as to what type of justification is required for induction, or what type of justification would be acceptable to him. He was rather confused about the solution of the problem.

Some philosophers e.g. A. J. Ayer think that Hume's problem of induction is a pseudo-problem. Others have tried to reformulate it and give it a more genuine form. The problem of induction which Hume raised has been

reformulated in the following manner: How can the ultimate principle of inductive reasoning be justified ? Many answers have been given to this question.

The third Chapter is an `Analytical Justification of Induction'. Those who subscribe to this type of justification maintain that principle of induction is itself analytic. Paul Edwards, P. F. Strawson, Nelson Goodman, S. F. Barker, Asher Moore among others are the main representatives of the analytic approach to the problem. The basic thesis of analytic justification of induction is that inductive inference is rational, and this is an analytic truth. When we call any belief rational, it means that it is like the standard example. By saying that an inductive inference is correct is just to say that it has a form similar to that of standard example. An example will make the point clear.

"We come to learn what the term `green' means by being shown standard example of green objects like grass, leaves in spring, runner beans etc. After knowing this, whenever anyone describes other objects as green, we will be able to understand that they are like the standard example. It is nonsensical to ask whether standard green objects are really green. Similarly we cannot question whether the examples of correct inductive inference by which we have been taught the meaning

of `Correct inductive inference' really are correct".[2]

In the fourth chapter `Inductive Justification of Induction' has been discussed. This Justification is called inductive because it claims the success of induction as evidence for the regularity holding in future, which our normal inductive procedure assumes. Hume holds that there is a circularity in this type of justification. Inductivists have seriously tried to solve the problem by showing that induction can be justified without circularity. They argue that induction is a reliable guide for our expectations because it has worked well so far.

Inductive justification was first explicitly proposed by C.S.Peirce in 1877-78. R.B.Braithwaite and Max Black are two of the staunchest supporters of non-circularity of inductive justification of induction. They claim that inductive justification is not circular in the ordinary sense, but only in the sense that the conclusion asserts the correctness or reliability of the rule of inference by which it is reached. They claim that this kind of circularity does not spoil the cogency of an argument.

The fifth chapter deals with the `Pragmatic Justification of Induction'. Herbert Feigl and Hans Reichenbach are proponents of this kind of justification. It has been developed in recent years in many writings of Wesley Salmon. The attempt

is to show that if a desire to make correct prediction is presumed, one ought to adopt the rule of induction, rather than any other rule. It is maintained that it is rational to adopt this rule because it is uniquely suited as a means to attain correct predictions.

Herbert Feigl distinguishes between justification and vindication. According to him we can justify particular induction by reference to the general principle of induction, but we cannot justify the principle in the same way. What we can do is to ask for a vindication of the adoption of the rule of induction. Such a vindication consists precisely in showing that if the goal of predicting the future is to be achieved, the rule of induction is the way to achieve it. This is the kind of justification provided by Hans Reichenbach for his straight rule of induction. W. C. Salmon has shown great resourcefulness in defending Reichenbach's view of "Pragmatic Justification of Induction".

In the `Concluding Chapter' an attempt has been made to clarify the problem of the justification of induction by the comparative study of deduction and induction. The problem arose in course of the development of inductive logic; when this logic will be fully developed, the problem of induction can be dealt with more adequately.

It is true that till today there has not been any generally agreed solution of the problem, though a good deal of clarification has been made. The problem of induction perhaps can be satisfactorily tackled, if we can develop the logic of confirmation. The logic of confirmation may supply us the rules by means of which induction may be justified. Some recent developments in this field have also been taken up briefly.