Abstract

Realizing the ultimate inadequacy or irrelevance of logical positivism in understanding the growth of science, Kuhn sets about the task of giving a genuine explanation in which theory change comes about. One of the chief criticisms that Kuhn and others have raised against logical positivism is that the empiricist picture of the structure of scientific theories is unrealistic, it does not reflect the way in which science is actually done. While in the work of Kuhn much historical evidences lie in the background to articulate his account. The model of science, which Kuhn sees, has been explicated in terms of his notions of Paradigm. Kuhn characterizes a period of time during which a particular scientific community shares a paradigm as a period of normal science. During such a period, the energies of the members of the community are given over in solving puzzles defined by the paradigm which is itself based on some significant scientific
achievements. Further Kuhn argues that a transition from one paradigm to another involves a change in meaning, which establishes the endeavor that the scientist with a new paradigm sees differently from the way he has seen before.

Logical positivists hold that meaning of a scientific term remains invariant across a theory. On the contrary Kuhn was of the view that meaning of a scientific term varies through paradigm shift. Thus he establishes the positive and salutary virtue of his notion of paradigm shift. The meaning variance thesis has been a reaction to logical positivist’s tradition, which holds that change, and comparison of meaning of scientific terms presented no problem.

The author in this thesis has made the modest attempt to analyse the problem of meaning variance or conceptual change, which has been dominated so much in post positivistic philosophy of science. Because the creation of concept through which to
comprehend and communicate about physical phenomena constitutes much of the scientific enterprise. Thus it has been explored in Chapter-II that meaning variance according to Kuhn occurs in the form of paradigm shift.

It is desirable according to the topic to analyse the views of the few eminent post-Kuhnian thinkers such as Imre Lakatos, Larry Laudan, C R Kordig, Mark A Stone and John Watkin to see their approaches and findings. The chapter-III entails the respective position in the light of Kuhnian notion.

Lakatos begins his reworking on Kuhnian paradigm into research program and argues that the rationality of science lies in scientific research program and maintains that the relative merits of research programs can be compared and assessed. His research program methodology is concerned with how a mature science develops a particular theoretical prospective on the world. He defines the research program in terms of problems shift, which is
said to be progressive if it is both theoretically and empirically progressive, otherwise it is degenerative. Thus Lakatos established that a mature and rational way of doing science is to undertake a research program, developing a theoretically progressive problem shift by trying to modify theories by the addition of new hypothesis.

In response to Kuhn’s assault on the traditional philosophy of science and Lakatos’ alternative view about the progress in science through research program, Laudan developed his model in the form of research tradition, which provides a guideline for the development of specific theory. The primary function of a research tradition is to establish a general ontology and methodology so that the rational persuitability of it may be determined by the rate of progress it has exhibited. Regarding meaning change as advocated by Kuhn, Laudan says that Kuhn’s view leads to argue that history of science is nothing but a
succession of a different world view and the rational change can never be made between such divergent schemes of the universe because each has its own rationale and integrity. Keeping the view of both positivists and post positivists regarding comparison of theories, Laudan holds another view and says that neither correspondence rule nor a theory-true observation language is necessary and established that we can compare theories with respect to internal consistency or coherence.

Now comes the brief view of the eminent post-Kuhnian thinker taken in this work is C R Kordig who maintained his stand against the meaning variance and incommensurable position of Kuhn by sketching six methodologically undesirable consequences. Finally Kordig established an alternative account and suggested that comparison of different theories are possible which are made through appeal to shared principles and meaning at first and second level.
Mark A Stone has also been discussed as a post-Kuhnian and he objected to Kuhn’s notion of paradigm shift (criteria for meaning change). As stated by Kuhn, the possession of paradigm as well as the decision to reject one paradigm and to accept another is a necessary condition for practicing science. Further the scientist never abandons one theory until a successor is at hand. Mark A Stone established a sharp opinion and exemplifies several cases where scientist can and must reject one paradigm without ready successor.

The last eminent post-Kuhnian thinker who has been endorsed in the present work is John Watkin who confronted with Kuhn’s account and raised his objection about the possibility of the emergence of a new paradigm; (criteria for meaning variance) and suggested that paradigm monopoly, clash between old and new paradigm must go.
Thus there is no lack of suggestions for the criteria used by scientists in making their choice. At last, in my analysis, I find Kuhn’s approach of paradigm shift; a dependent criteria for meaning variance is more successful, more revolutionary and may provide enough avenues and insights to the coming philosophers of science in their major concern of investigations.