

CRITICAL RATIONALISM VERSUS CRITICAL THEORY
A CONSIDERATION OF POPPER - ADORNO CONTROVERSY

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C E R T I F I C A T E

This is to certify that this dissertation, "Critical Rationalism versus Critical Theory: A consideration of Popper - Adorno controversy" submitted by Ms Surampudi Syamasundari in fulfilment of the partial requirement for the degree of M.Phil. to the Department of Philosophy, University of Hyderabad, is a record of bona fide research work carried out by her under my supervision.

This work has not been submitted in any form to any other University or Institute for the award of any Degree or Diploma.



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CHAPTER I
INTRODUCTION

Philosophy of science has become a frontier area of research and has been attracting an increasing number of practitioners. It has been attracting the attention of a growing number of thinkers, who do not fall strictly within the circle of professional philosophers of science. Some of the reasons for this growing academic reputation of philosophy of science are, (1) the fact that science has occupied a pre-eminent place in the ethos of contemporary civilisation; (2) the fact that philosophy of science has called into question, certain notions about science that were meticulously propagated since renaissance times, (3) the fact that philosophy of science, in its short span of life, disabused itself of certain dogmas that infested virtually all philosophical sub-disciplines, and, (4) the fact that philosophy of science has provided sharper focus and new dimensions to our discussions about the time-honoured philosophical questions. Of course, there may be many other reasons which have made philosophy of science what it is.

As distinct from philosophy of science-general, which discusses the issues pertaining to science in general, philosophy of special sciences attempts to grapple with those philosophical

issues that relate to specific and distinct scientific disciplines such as, natural science like physics and biology and social science like sociology and economics. Unlike philosophy of natural sciences, philosophy of social sciences is charged with deep rooted controversies and disagreements. This is understandable since social sciences address themselves to the issues, whose complexity of texture emanates from our understanding of human nature. That is why, the issues in philosophy of social sciences have an ideological component which is not apparent in the issues of philosophy of natural sciences.

The absence of a minimal consensus, the ideologically charged character of the discussions and further related factors, perhaps, have generated a looseness and absence of academic rigour in philosophy of sciences. But this very fact makes philosophy of social sciences, a more interesting and challenging area. The fact, that the central problems in philosophy of social sciences concern human issues in the contemporary setting, underscores the significance of philosophy of social sciences. Needless to say in the third world context, where the intellectual struggle against cultural imperialism and a search for identity via counter-consciousness, are of seminal significance, philosophy of social sciences has a special importance.

The central question in philosophy of social sciences concerns whether and if so how, social sciences are possible. The question is as old as the social sciences themselves, and has stood in the forefront of the century old discussion of philosophy of social sciences. The question concerns the method of social sciences, that is, the methods, the study of society ought to adopt in order to be scientific; in other words, the central issue is and has been, in a very broad sense, methodological. Further, social sciences are more receptive and responsive to philosophical reflections and discussions than natural sciences. The discussions in philosophy of natural sciences do not make any difference in day-to-day research in natural sciences, nor do they bring about any radical change in their direction. On the contrary, philosophical controversies about social sciences tend to affect the workings of the social sciences very deeply.

Even when philosophical controversies take place in natural sciences, they are only temporary and are confined to what Kuhn calls 'revolutionary periods'. Secondly, the controversies are resolved in a manner that satisfies the demands of the scientific community, and thus the role professional philosophers of science play, is only secondary and minimal. As against this, the philosophical disputes in the social sciences are perennial

and as a matter of fact, the role of philosophers has been as crucial as the social scientists participating in those controversies. The role of philosophers of science has been more effective in the context of social sciences than in the natural sciences. The reasons for the high sensitivity of social sciences to philosophical issues, and the perenniality of their philosophical interest is due either to the peculiarities of the current situation in social sciences, or to their innate character or to both.

It may be that the social sciences are in a state of 'under development' vis-a-vis the 'developed' natural sciences. Alternatively, one might even say social sciences are young and growing and thus are philosophically responsive unlike natural sciences which are old and mature and thus ceasing to display any sustained philosophical responsiveness. Kuhn would say that the philosophical responsiveness of social sciences is their being in the pre-paradigmatic stage. But philosophers like Peterwinch trace the philosophical responsiveness of social sciences, not to their lagging behind natural sciences in the process of intellectual maturation, but to their innate character. He says 'it is often supposed that newly developing disciplines, with no settled basis of theory on which to build further research, are particularly prone to throw up philosophical puzzles'.

But this, according to him, is a temporary stage which should be lived through and then shaken off as soon as possible. "But in my view, it would be wrong to say this of sociology. The philosophical problems which arise there, are not tiresome of foreign bodies which must be removed, before sociology can advance on its own independent scientific lines. On the contrary, the central problem of sociology, that of giving an account of the nature of social phenomenon in general, itself belongs to philosophy".¹

The central scene of the philosophical controversies of the social sciences has been Germany. The methodological debate in the German social science tradition has, to its credit, the revolutionary contributions of thinkers like - Marx, and eminent social scientists like Schmoller and Menger, Neo-Kantian philosophers like Windelband and Rickert, and eminent sociologists like Weber and Mannheim. It is not surprising that the methodological tradition of German social science has been unique in its analytical depth and speculative sweep and for this very reason, constitutes historical backdrop for even contemporary methodological debate. In this dissertation an attempt has been made to understand and deal with the most recent debate between Popper and Adorno, in the same tradition that has dominated the methodological debate, namely, the German tradition.

1. Giddens, Anthony, Positivism and Sociology, (ed., Anthony Giddens, Heinemann Educational Books Ltd., London, 1974) P.12.

It has been a practice to characterise the methodological controversy in social sciences as a controversy between positivists and anti-positivists. To a great extent, this is an acceptable characterisation. It is also to be noted that positivism, as a concept and as a movement, was largely a German product. It thrived in the works of neo-kantians, with whose philosophy it has close relations, philosopher-scientists like Mach and the members of Vienna circle. It is also true that German social science tradition has given birth to anti-positivists like Weber and Mannheim and more importantly, contemporary schools of social science like phenomenological social science and critical theory. The debate between Popper and Adorno is very significant because, in it we find the collision between two thinkers who represent positivism and anti-positivism at their best. Before we elaborate on this point, a few words about positivism are in order.

Positivism is an ideology. As an ideology it is a set of views which are held together, at places loosely and at places tightly. Hence, it is not possible to give a description of positivism in exhaustive and clear-cut terms. However, one can mention a few tenets as being central to the positivist ideology.

(1) According to the rule of phenomenalism, experience is the

base of knowledge. (Kolakowski, Positivist Philosophy, Penguin, 1972, p.15)

(2) The postulate of nominalism, according to which, an abstract concept or generalisation that figures in sciences, "gives us no extra, independent knowledge, in the sense that, via its abstractions, it opens access to empirically inaccessible domains² of reality".

(3) Methodological monism, according to which, there is only the method which is common to both natural and human sciences, the adoption of which provides unity to science amidst the diversity of subject matter of scientific investigation (Von Wright, Explanation and Understanding, Cornell univ.press, 1974).

(4) Physicalism, according to which, the exact natural sciences in particular mathematical physics, constitute a methodological ideal for all other sciences.

(5) Fact-value dichotomy, according to which, our factual judgements ought not have any value commitments and our value judgements have no fact content.

(6) Deductive nomologism - all explanations to be scientific, consists in the subsumption of the individual cases under hypothetically assumed general laws of nature.

(7) Scientism - Among the different types of knowledge, science exemplifies raionality and objectivity par excellence and thus constitutes an ideal to which the non-scientific knowledge form

2. Ibid., P.2.

must attempt to approximate.

(8) Reductionism - According to this tenet, non-physical phenomenon like the biological and social reality, can ultimately be reduced to the physical reality studied by physics or physics and chemistry, such that the different sciences are arranged in a hierarchy with physics or physics and chemistry occupying the highest rung.

(9) Structural identity thesis is another important feature of positivism. According to this, explanation and prediction have the same structure though they differ in their direction of time.

Lastly, the positivist construal of the method of science in some way or the other, in some measure or the other, asserts the dependence of theory over observation. It is not necessary that positivists should adopt all these and /or only these tenets in order to be a positivist. For, the list of the tenets is not complete. Secondly, it is not necessary to accept all these tenets since, though some tenets follow from the other, some are logically independent. Further, as in the case of any ideology, a follower of that ideology need not accept all its principles. This point is very important because, in our discussions of Popper, we attempt to show that Popper is a positivist, though he has not only rejected, but also most effectively refuted, some of the tenets of positivism.

As pointed out earlier, the controversy between Popper and Adorno is a collision between the best representatives of Positivism and anti-Positivism. As we shall see later, Popper's positivism is characterised by a logical sophistication that purifies positivism of its indefensible dogmas, and philosophical ingenuity that enables Popper to steer clear of both traditional and analytical epistemology and yet retain the normative spirit of both by not embracing naturalistic epistemology. Similarly, critical theory championed by Adorno, seeks to get rid of much of the wooliness of thinking characteristic of anti-positivism, by closely following the Marxian model, the most down-to-earth version of Hegelian thought. Apart from this, both Adorno's and Popper's positions have a practical significance. The positivists and the anti-positivists who took part in methodological debate in the past, did not provide a practical dimension to the debate; at best they were concerned to show how their own practice of social science was affected by their methodological position.

Critical rationalists like Popper and critical theorists like Adorno, relate their methodological views not only to the practice of social science but also to the real society, the ways in which it ought to be changed, in order to free it from evils like exploitation. Popper, thus comes out with the idea of social

engineering as a practical consequence of his theory of scientific method. For critical theorists like Adorno, social science must provide a critique of society by especially subjecting the cultural industry of capitalism to ruthless criticism, and thus exposing the false consciousness that capitalism personifies. Critical theory thus serves to supplement the task Marxism envisaged for itself, namely, the destruction of the capitalist society. It is these practical dimensions, which are cherished by critical rationalism and critical theory that make Popper-Adorno controversy a fertile area of study.

Another significant point about the dispute under consideration is that it squares well with the emerging ethos that has put positivism, a dominant discourse in the yesteryears, on the defensive. Kuhn's spirited attempt in his magnum opus, The Structure of Scientific Revolution, and later writings, to establish that the ultimate terms of description of scientific enterprise are sociological and not logical, Feyerabend's debunking of the law and order philosophy, which characterises the hitherto dominant mode of looking at science (be it induction-by-verification or induction-by-falsification) and Toulmin's historical and evolutionary construal of rationality - all these modes of iconoclast thinking have challenged the hold of positivism. Since, the present day anti-positivist stances

treat positivism, not merely as a doctrine of academic and technical significance, but as a dominant mode of thought and life that has permeated every aspect of human existence in the western society, the philosophical dispute involving positivism, has, in some sense, a civilisational significance. If one relates the present dispute to the emerging anti-positivist ethos, one can decipher the fact that the spirit of the dispute goes beyond the confines of social science methodology.

Of course, it is true that today very few thinkers would like to call themselves positivists. For, as Giddens points out, the word 'positivism' has become an abusive word like bourgeois (Positivism and Sociology - Anthony Giddens) . This is clearly illustrated in the present controversy. Because, no one in the debate claims to be a positivist, Dahrendorf characterises the positivist as the 'thirdman in the debate' and Giddens characterises the debate as 'Hamlet without prince' (op.cit.P.18). This unpopularity of positivism in no way reduces the possibility of the domination of our psyche by positivistic ethos nor the possibility of the case of positivism being defended by proxy. Even its most hardened detractors admit positivism did play a decisive role in the development of human thought with the advent of modern times. For this reason at least a dispute involving positivism, explicitly or not, remains

significant at least for some more time to come. That is why this dispute is "Likely to have a lasting impact on discussions of social science methodology³ Even if the general impression that the main disputants have simply talked past one another, or have talked at cross purposes is true, the value of the dispute itself is indisputable.

3. ()Ackermann, Robert, 'Popper and German Social Philosophy', Popper and the Human Sciences, (ed. Gregory currie & Alan Musgrave, Martinns Nijhoff pub. 1985) P.173.

Chapter II

CRITICAL RATIONALISM

In this chapter an attempt is made to explicate Popper's construal of social science. Popper's idea of the method of social science follows directly from his conception of scientific method. In Popper's frame-work, the defining feature of science as body of knowledge is its possession of a method, the explication of which is the central task of philosophy of science. This method is common to both natural and social sciences. Two points are apparent here. Firstly, something is a science because of the method which it adopts and not, because of its subject-matter. Secondly, it is the commonality of the method of science possessed by every individual science, that provides a unity to science as a whole.

The first point implies that any subject-matter can be subject to scientific understanding. This is because, the idea of 'scientific' is reducible to a set of cannons of scientific method which, in themselves, are subject-neutral. The second point is more significant. Popper seeks to establish the unity of science on non-substantive line. The Reductionist approach which also seeks to establish the unity of science, does so by reducing the various phenomena to one particular phenomenon,

namely, the one studied by physics. Popper does not adopt this⁴ Reductionist or substantive conception of the unity of science. Nor does he eschew the notion of unity of science. He seeks to work out a conception of that unity on non-substantive lines by explicating it in terms of a methodology which he calls hypothetico deductivism.

In order to appreciate Popper's conception of the method of social science, it is necessary to grasp the content and significance of his view of scientific method which he has put forward with a detail and clarity, that has made him one of the most profound philosophers of science in this century. However, it is necessary to place Popper's conception of the aim and method of science within the general scheme of his Epistemology, a few words about which are in order.

Even a cursory look at Popper's works impresses us with the grandeur of his philosophy which is reminiscent of the classical⁵ philosophers. This is rather significant in an age where the grandeur of traditional philosophers is viewed with suspicion and disapproval. The grandeur in Popper's thought is traceable to his construal of the philosophical issues within a broad canvas of the problematic.

Popper construes every technical issue in philosophy as part and

4. Popper, Karl 'Scientific Reduction and the Essential Incompleteness of All Science, Studies in the Philosophy of Biology, (ed., Fransisco Jose Ayala & Theodosius Dobzhansky, MacMillan, 1974).

5. Magee, Bryan, Popper, (Fontana Modern Masters, 1973).

parcel of one broad problem, namely, the problem of cosmology. "The problem of understanding the world - including ourselves, and our knowledge as part of the world".⁶ For Popper, the value of the philosophical interest in scientific knowledge lies in its ability to shed light on this central question of philosophy. In studying Popper's seminal contributions to our understanding of science, one must not lose sight of this central epistemological concern which alone sets in motion and lends deeper significance to his painstaking and insightful work on science. In an age of piecemeal analysis, where a miscellany of solutions for minute and unrelated issues has been transformed into a style of thought, Popper's attempt, to construe philosophy within a framework whose centre of gravity lies in a problem of broadest scope, is highly refreshing.

Popper's desire to constitute a link in the grand chain that originated in the Greek thought, has not mitigated his originality which consists, not only in rejecting to toe the line of philosophizing fashionable in his days but also in reformulating the classical concerns of philosophy in a novel way. The aim to retain the spirit of the classical epistemological tradition, without presenting it as the old wine in a new bottle, is realised by Popper, in a manner that speaks very highly of his philosophical ingenuity.

6. Popper, Karl The Logic Of Scientific Discovery (London: Hutchinson, 1968) P.15.

Popper, like classical Epistemologists, seeks to understand the nature of knowledge. But, he convincingly shows how the traditional formulation of the problem as 'what is the source of valid knowledge?' is not only wrong-headed but also authoritarian. It makes a questionable assumption that there is only one source of knowledge which bestows validity on our claims. The proof by 'pedigree' which this view implies, facilitates epistemic dogmatism and undermines free thinking. The question is very much similar to the central question of the classical political theory 'who should be the ruler?' whose wrong-headed and authoritarian character is apparent. Popper feels that just as political theory must replace this authoritarian question by the democratic question 'Given anyone to be the ruler, how the ruled should check misruling?', epistemology must replace the traditional question by the democratic question 'Given anything to be the source of knowledge, how should we check our mistakes?'

It must be noted that the dissatisfaction with the traditional questions of epistemology did not lead him to the camp of Analytical Epistemology. Popper finds the very approach of Analytical Philosophy to be, not only misconceived, but detrimental.⁷ Popper's disapproval of traditional epistemology

7. Ibid.,

and his resentment towards Analytical epistemology, did not lead him to naturalistic epistemology. In his forceful and spirited attack on sociology of knowledge, Popper has made clear his opposition to the naturalistic approach to the problem of knowledge. From this, it follows that, he views epistemology to be a normative inquiry and does not share the descriptivist conception of epistemology, characteristic of Naturalistic epistemologists.

Popper thus steers clear of Traditional epistemology, Analytical philosophy and Naturalistic epistemology and establishes his own approach as a distinct style of approaching the problem of knowledge. The orientation of Popper's epistemology remains critical and normative. The similarity and dissimilarity between Popperian and Traditional orientation is too clear to be elaborated.

Popper's epistemological position which he calls 'Critical Rationalism' stands directly opposite to empiricism of both traditional and modern variety. Common to both traditional and modern empiricism is the idea of primacy of experience in cognitive activity. They tried to establish the objectivity of human knowledge by demonstrating the rootedness of theoretical knowledge in experience, which by being claimed to be prior to theorising, was sought to be presented as pure and secure.

The task was sought to be accomplished by modern empiricism in a more refined and sophisticated manner by replacing the psychological idiom of traditional empiricism by a logical one. Irrespective of the difference in the idiom, the picture of the knower that emerges from the empiricist scheme is that of a passive entity rather than an active agent. For, in the act of cognition, according to empiricism, the human agent acts only as a receiver, ideally speaking. The subject does not take, it is only 'Given'. Popper rightly characterises the empiricist theory of mind as the 'bucket theory of mind'.

Traditional Rationalism went a long way in making room for the activity of the human agent, in the process of knowledge. However, since it was an answer to a wrong question, Popper feels the need to make certain essential modifications in the body of Rationalist theory. Critical rationalism is a modified version of traditional rationalism. Popper characterises the theory of mind presupposed or implied by rationalism in general and critical rationalism in particular, as 'search light theory of mind'. The subject, according to this theory, is not given, it takes, in accordance with prior knowledge. In other words, the idea of pure experience is a myth. And equally false is the idea of a secure basis. What guarantees objectivity to our claim is not the existence of a foundation constituted by the given, but, the

possibility of inter-subjective and critical evaluation of the solutions which we provide to our problems. Knowledge is essentially a problem solving activity and man is basically a problem solving animal. Any attempt to construe knowledge without reference to its purposive character is absolutely illegitimate.

The attempts to portray knowledge in terms of a deductive or deductive structure so common in epistemology, classica and modern, is guilty of overlooking the problematinality of the human context within and through which our ideas acquire life. Since the problem solving activity of man is essentially a dynamic process, knowledge is essentially dynamic. Hence, an adequate epistemology must consider knowledge in its dynamic mould. "The central problem of epistemology has always been and still is the problem of the growth of knowledge".⁸ It is against this background of Popper's epistemology that we have to understand his ideas of the method and aim of science. In what follows, an attempt is made to briefly highlight those aspects of his philosophy of science, which have a direct bearing upon his philosophy of social science.

A striking feature of his philosophy of science is the pre-
eminent position which is accorded to science in the gamut of
human knowledge. The epistemic esteem which science enjoys in

8. Ibid.,

Popper's scheme is less due to the fashion of the times than to certain epistemological reasons. It is due to his conviction that "the central problem of epistemology is the problem of the growth of knowledge and the growth of knowledge can be studied best by studying the growth of scientific knowledge"⁹. Secondly, science has evolved the most conscious, consistent, articulate and institutionalised form of critical procedure. And, criticism, according to Popper, is what propels the dynamics of science.

Popper's conception of scientific knowledge stands in direct contradiction with that of inductivists, whose view dominated till then. Central to inductivist conception of science, is the idea of pure observation. The inductivists maintained that the relation between theory and observation is the unilateral dependence of the former on the latter. As against this, according to Popper, all observations are theory-dependent. It is the problems which constitute the beginning of scientific procedure and not observations. Secondly, it is the hypothesis on hand, that decides which observation is relevant. The inductivists maintained that, to a given set of observations, there corresponds a single theory. As against this, Popper points out that a given set of observation statements can be consistent with any number of mutually inconsistent theories. Needless to say, Popper outright rejects the inductivist notion of theories

9. Ibid., PP. 15-16.

being winnowed from facts.

Popper considers theories winnowed, to be free creations of mind. Further, Popper construes scientific testing in terms of falsification and not in terms of verification, as inductivists did. This point is central to Popper's thought, since it relates to his very idea of falsifiability, as the criterion of scientificity. Here also Popper stands directly against inductivists, for whom the hall-mark of scientific statements is their systematic verification.

All this is very much known to even a beginner in philosophy of science. However, it is necessary to note these things, to bear in mind the fact that, Popper's idea of social science cannot be refuted on the basis of the arguments aimed at demolishing the inductivist elements in the positivist tradition of social sciences.

For Popper, the progress of science consists in our being able to go from theories to better theories. The betterness of a theory consists in the superiority of its explanatory power. Hence, explanation is the goal of science. Two important points about Popper's conception of scientific explanation are important here, for our purpose. Firstly, for Popper, all explanations are deductive nomological. Scientific explanation, of an event or a

type of events, consists in logically deducing the statement describing the events or the type of events from the premises constituted by a set of law statements, and statements describing the initial conditions. Secondly, Popper maintains the structural identity thesis, according to which, explanation and prediction have the same structure. That is to say, the explanatory status of a statement, which does not facilitate or bring about predictions, is to be held suspect. The deductive nomological model and the structural identity thesis, which Popper not only champions, but also claims to be their propounder, are very important in the sense that they bring him not only too close to positivism, but also become too handy for those who want to brand him a positivist.

With this barest outline of Popper's epistemology and philosophy of science, we will come to central theme of this chapter, namely, Popper's philosophy of social science.

Popper claims that the problems encountered by social sciences are mostly treated by Essentialist methods. This is one of the main reasons for the little progress made by social sciences. Methodological Essentialism sets about to discover the true nature or essence of the thing. It speaks about three ways of knowing a thing. (a) knowing the unchanging essence of the thing (b) knowing the definiton of the thing (c) knowing the name. The

essence may be discovered by intellectual intuition and a description of the essence of the thing is the definition of the thing. This can be better understood by contrasting it with 'Methodological Nominalism'.

According to the latter, the aim of science is to describe the behaviour of a thing in different situations and observing if there are any regularities in its behaviour. Words act as subsidiary tools and are not names of the essences. The task of science is the description of events of our experience, and an explanation of those events in the light of universal laws.

Natural sciences have fairly generally accepted this method. Physics, for instance, makes use of terms like atoms freely without going into the discussion of its essence. Popper points out that problems of social sciences are still treated only by Essentialist methods. Social scientists who have noted the progress of natural sciences, "believe that the difference in method is still necessary, and that it reflects an 'essential' difference between the 'natures' of these two fields of research".¹⁰

We can illustrate the above view by some of the arguments of historicism. The physicist deals with objects like energy or

10. Popper, Karl The Open Society and Its Enemies (Vol. I) (London : Routledge & Kegan Paul Ltd., 1945), p.33.

atoms which, though unchanging, retain a certain degree of constancy. Unlike this, in the social realm, everything is under the sway of historical flux. Therefore, a social scientist has to construct or detect essences, which are unchanging and on which definite pronouncements can be made. These arguments are similar to those which led Plato to his doctrine of Forms or Ideas. In fact, the controversy between Nominalists and Realists has its origin, in the doctrines of Plato and Aristotle.

Nominalists claim that quality is name of a thing - for instance 'whiteness' is named after snowflakes, clothes, swans etc.,. It is a name attached to a set of many things unlike proper names which indicate only one particular thing. Realists, whom Popper calls Essentialists, hold that there is the 'essence' of a thing which remains unchanged through all changes. Historicists adopt the Realist position as they believe that there are no permanent entities in social field. Hence, it is necessary to grasp their essence for offering a scientific explanation. Popper proposes to first explain and later criticise the approach called 'historicism' offered as a method of social sciences.

Antinaturalistic Doctrines of Historicism :

Historical relativity of social laws make the methods of physics, inapplicable to sociology. The following arguments can be offered in favour of the contention.

1. Generalisation - The adoption of naturalistic methods is hampered by the lack of uniformity in society, on which the generalisations are to be based. Social uniformities are man-made and differ widely from one historical period to another. Human activity can affect changes in them.
2. Experiment - This important feature of natural sciences, finds no place in social sciences as similarities are limited to a historical method. Hence, the consequences of any experiment conducted would be of limited significance.
3. Novelty - In Physics, nothing which is intrinsically new, emerges in course of new developments. In contrast, society learns from experience effecting changes from one period to another. Hence, nothing can repeat itself precisely.
4. Complexity - Social phenomena are more complex due to the impossibility of artificial isolation for carrying out an experiment. Moreover, reduction of social phenomena involves phenomena of psychology, which again include that of biology which can be reduced to terms in chemical and physical sciences.
5. Inexactitude of Prediction - Precise scientific forecast of social events is not possible as the prediction itself would cause actions which may upset the prediction.
6. Objectivity and Valuation - A prediction is a social happening capable of influencing other social phenomena including the one which it predicts. It may help precipitate the event

under consideration, or prevent the same. A social scientist may use this fact to his advantage - by either predicting a certain happening foreseeing that this would promote the occurrence or prevent it in the same manner. The very fact that his pronouncements influence the social life, destroys their objectivity.

7. Holism - The holistic character of social groups explains our inability to explain new social structures as mere permutations and combinations of the old (as is possible in physics). Object of sociology is more than a mere aggregate of its members. Therefore, only by studying the tradition and history of the group, can we understand the social structure of the group.

8. Intuitive understanding - A method capable of explaining social events must go beyond causal explanations. Physics aims at causal explanations and operates with the help of inductive generalisations.

Sociology aims at an understanding of the purpose and meaning and operates with the help of sympathetic imagination. It determines the role played by an event within a complex whole, constituting the past (history) and the present. This can be only intuitively grasped.

9. Quantitative Methods - Social sciences understand historical development in qualitative terms, whereas natural sciences employ

quantitative mathematical formulae. Stress on the qualitative character of social events leads to the question of the status of the social entities. There is a need to find out if a social entity is a name of a thing or denotes something about the thing. We return to the age-old controversy about universals and particulars.

History shows that methodological nominalism has had the upperhand in all the achievements of natural sciences. So, it is interesting to find out whether it is merely the anti-naturalistic attitude that forces the historicists to adopt methodological essentialism, or if there are other reasons. Historicism stresses the importance of change. To speak of change, even if nothing remains unchanged, we must be able to identify what has changed to be able to explain it. Though very few features remain the same during the changes in a social institution, the essential identity of the institution is preserved, enabling us to identify it even after change. So, we cannot talk of change in social sciences without presupposing an unchanged essence.

That principle of a thing, which remains unchanged when the thing changes, is its essence. Therefore, the changes which the thing undergoes, brings to light, different possibilities of the thing and thus its essence. It follows that the unchanging essence of

a thing can be known, only through its change. Applying this principle to sociology, we may conclude that essence or the real character of a social group can reveal itself and be known only through history. Essentialism, introduced to detect an identity in things that change, in turn furnishes a powerful argument in favour of the historicist method.

Historicists believe that a truly scientific or philosophical attitude towards politics and a deeper understanding of social life, must be based upon a contemplation and interpretation of human history. Popper says, "One should not enter into a discussion of these specious arguments before having considered the following question of method: is it within the power of any social science to make such sweeping historical prophecies?"¹¹ Popper argues that these claims are based on a gross misunderstanding of the method of science and on the neglect of the distinction between the scientific prediction and historical prophecy. Analysing the origin of historicism, Popper traces it back to the doctrines of Plato and Aristotle. However, it is only in Hegel that historicism appears in its modern form. The essentialism of Plato, adopts a historicist form and thus acquires an intellectual respectability in Hegel. The tendency to shrink back from the ultimate consequences of historicism, is characteristic of many historicists.

11. Popper, Karl, The Open Society and its Enemies (Vol I) (London: Routledge & Kegan Paul Ltd., 1945), P.2.

Heraclitus, despite his bold assertion that everything is in flux, seems to have shrunk from replacing the cosmos by chaos. He held on to the view that this changing world is governed by an unchanging law. Similarly, Plato, though arguing against a back-drop of historicism, did what an uncompromising and fully developed historicist would refrain from doing. He felt that the iron law of destiny could be broken. The attitude of social engineering, which is diametrically opposed to historicism, is also found in Plato. The historicist looks upon social institutions mainly from the point of view of their history. A social engineer is only bothered about designing the organisation in such a way as to serve the aims set out by him. A typical combination of these ideas is evident in Plato's social and political philosophy. This combination produces what can be called an Utopian system. Plato's political ends depend mostly on historicist doctrines. "First, it is his aim to escape the Heraclitean flux, manifested in social revolution and historical decay. Secondly, he believes that this can be done by establishing a state which is so perfect that it does not participate in the general trend of historical development. Thirdly, he believes that the model or original of his perfect state can be found in the distant past"¹² .

The most powerful contemporary form of essentialism/historicism,

12. Ibid., P.24.

namely, Marxism, owes a great deal to Hegel. Marx is the best example for a pure brand of historicism. He believed that the prediction in the field of society is possible on the same lines as historical prophecy. His 'scientific socialism' was to be based upon a study of historical causes and historical effects. Marx misled many a discerning thinker into believing that historical prophecy is the scientific way of approaching social problems. Therefore, Popper feels that a detailed discussion of Marx is essential for any criticism of historicism.

Historicistic thinking was characteristic of Marx's age. An illustration of the doctrines of Mill shows that he also believed in it. According to Marx, the ultimate aim of his work, Capital, is to lay bare the laws of motion of the world. Mill claims in the same vein that the fundamental problem of social sciences is to find the law by which, one stage of the society determines and produces its successor. Both believed in the existence of the laws of social dynamics. In accordance with the belief in historicism, both claim that the transition from one state to another in history, is not mere change but 'progress'. Marx and Mill differ in their views, on the method of social sciences, on a very important point. Mill believed that the study of society must be ultimately reducible to psychology (psychologism). This view was widely held by social scientists at that time.

Psychologism believes that human action can be best explained in terms of motives. Influence of social environment on human nature can also be accounted by psychologism, as it is man-made. An analysis of social institutions, according to psychologism, is ultimately reducible to elements in human nature. Mill's brand of historicism characterised by psychologism does not fit into the anti-naturalistic scheme outlined above. Though historicism is fundamentally anti-naturalistic, it is by no means, opposed to the idea that there is a common element in the methods of the physical and the social sciences. We shall discuss the pro-naturalistic elements of historicism and the manner in which Mill exemplifies these elements, later.

Popper says, "To have questioned psychologism, is perhaps, the greatest achievement of Marx as a sociologist. By doing so, he opened the way to a more penetrating conception of a specific realm of sociological laws, and of a sociology which was at least partly autonomous"¹³. Popper states that the immediate consequence of psychologism is the theory of origin and development. The question of origin, forces us to consider the idea of a beginning of the society. This also bring in a theory of a pre-social human nature to explain the foundation of the society. This is a historical myth. Popper and Marx are both anti-psychologists, though the reasons for this common stand are not entirely the same.

13. Popper, Karl, The Open Society and Its Enemies, (Vol II) (London: Routledge & Kegan Paul Ltd., 1945) P.88.

Marx admits with psychologists that social environment is man-made in a certain sense. This, however, does not mean that a conscious design always produces only the intended consequences. Social action cannot be produced in isolation, it affects the existing social phenomena. It also affects human nature - hopes, fears and ambitions of those immediately involved and often all members of society. Popper believes that "Psychologism is correct only in so far as it insists upon what may be called 'methodological individualism' as opposed to 'methodological collectivism'" ¹⁴. It rightly insists that the behaviour and the actions of collectives, such as states or social groups, must be reduced to the behaviour and to the action of human individuals. But, the belief that the choice of such an individualistic method implies the choice of a psychological method, is mistaken.

The programme of Marx, though admirable for its anti-psychologistic tendencies, commits the inherent fallacies of historicism. It fails to consider the important task of the social sciences -- that of social explanation. According to Popper, "it is the discovery of difficulties which stand in the way of social action - the study, as it were, of the unwieldiness, the resilience of the brittleness of the social stuff, of its resistance to our attempts to mould it and to work with it" ¹⁵, that constitutes the main task of social sciences.

14. Ibid., p.91.

15. Ibid., P.94.

Marx agrees with Mill that social phenomena must be explained historically but he replaces Mill's psychologism by what he calls materialism.

Marx recognised the limitations, that the material aspect of our life imposes on the freedom of the mind. He says, in the third volume of Capital, "the kingdom of freedom actually begins only where drudgery, enforced by the hardship and by external purposes, ends; it thus lies, quite naturally, beyond the sphere of proper material production"¹⁶ .

Marx's economism or historical materialism tries to show that man's freedom is always limited by the necessities of his material life. To free ourselves from the productive process, we need other people to work for us. Mankind is thus inevitably split into classes. Rulers determined by the class situation are bound to oppress the workers. If they wish to preserve their own freedom, they must pay for it by this new kind of bondage. They are compelled to oppress the ruled and the ruled in turn fight for their freedom. Though we cannot alter the system at will, we are bound to contribute to its transformation by this very logic of the class situation. With the help of this interpretation of the history of the society, Marx launches into the historical prophecy for the advent of socialism.

16. Quoted in Popper, Karl , The Open Society and Its Enemies , (Vol.II) (London: Routledge & Kegan Paul Ltd., 1945) P.103.

According to Marx, the important function of science consists in predicting the future. He felt that prediction is possible only if the future is determined by the past. Therefore, science can deal with our thoughts and ideas only in so far as they are necessitated by the material conditions of our life. In opposition to Hegel, he believed that historical prophecy is determined by tracing the development of man's relation to his natural environment. Popper concludes, "This is why we may describe Marx's brand of historicism as economism, as opposed to Hegel's Idealism or to Mill's Psychologism"¹⁷. Popper considers this replacement of Mill's psychologism by economism, a better method since it does not involve the questions about the origin of the society. Science of society, according to Marx, coincides with the history of the development of economic conditions of the society, that is, the conditions of production.

Popper distinguishes Marxism from Hegelian historicism, in that, Marx makes an honest attempt to apply rational methods to the problems of social life. "Science progresses through trial and error. Marx tried, and although he erred in his main doctrines, he did not try in vain. He opened and sharpened our eyes in many ways. A return to pre-Marxian social science is inconceivable"¹⁸. Marx claimed that the importance of science is to be judged by the consequences. Its important task is not to explain the past,

17. Op.cit., P.104.

18. Ibid., P.82.

but to predict the future. He went further and claimed that the future can be predicted only if it is pre-determined. Popper says, determinism is not a necessary pre-requisite of a science which can make predictions. Science can be rigidly scientific without this assumption as is evident in Physics, the most advanced of all sciences. Popper contends that this theoretical, abstract doctrine of determinism alone would not have led Marx to historicism. "It is the confusion between scientific prediction, as we know it from Physics or Astronomy, and large scale historical prophecy, which foretells in broad lines, the main tendencies of the future development of the society"¹⁹. This stress on scientific prediction, in itself, is an important and progressive methodological discovery, according to Popper.

Marx's historicist view of the aims of social science greatly upset the pragmatism which had originally led him to stress the predictive function of science. It forced him to modify his earlier view that science should, and that it could, change the world. The political system is a mere superstructure on the social, that is, the economic system in Marx. The forces of material production are in turn determined by historical forces. Economic reality cannot be altered at will by legal political reforms. Popper points out that Marx's theory seems to lay an undue emphasis on economic power. Marx felt that overcoming

19. Ibid., P.86.

these forces would lead to freedom. But the paradox of freedom is such that unrestricted freedom defeats the purpose of freedom itself. Any power uncontrolled is dangerous, be it economic or political. Therefore Popper says, "... that the principle of non-intervention, of an unrestrained economic system, must be given up"²⁰ .

Popper agrees that Marx presents a well-knit argument for historical prophecy. However, the best test for any method is comparing the practical results it yields, with the predictions about the same. The unrestrained capitalism, present in Marxian era did give way. However, it did not lead to a class-less society, that is, a socialist society. Popper is satisfied that historicist doctrines of method are at the bottom, responsible for the unsatisfactory state of the theoretical social sciences.

As pointed out earlier, historicism is not entirely opposed to pro-naturalistic doctrines. Success in Physics is viewed as the corroboration of its predicted events. The basis of all scientific activity is observation. Sociology is similarly empirical, that is, backed by experience. The events it explains, and the events it predicts are observable facts. Historicists are greatly impressed by the long term forecasts possible in Astronomy. They usually consider Celestial Mechanics, which is based on Dynamics, which is the theory of

20. Ibid., P.125.

motion as determined by forces. Sociology should similarly be based on social dynamics. Long-term predictions should also be possible, though not with the same degree of precision. Dynamics studies how interacting forces constitute new forces and conversely analyse forces into components. Similarly, the task of social sciences, according to historicism, is to analyse the forces which produce social change and create human history. All these elements taken from natural sciences, only strengthened the case for historicism. But they do not agree about the application of the method of generalisation. There can be no social uniformities which hold good beyond single periods. Laws of historical development connecting and determining the transition from one period to another, are the only universally valid laws.

Social sciences looks to the past and unlike the usual studies in History, also towards the future. Rational planning advocated by the technological social science will not and cannot be brought about according to plan. Only such plan as that which fits in with the main current of history is effective. Historical prophecy and interpretation of history can be the only basis for practical social action. Adoption of the naturalistic method implies a sociological theory according to which, society does not significantly develop or change. Historicist method develops

the science of society along similar lines. "Society will necessarily change but along a predetermined path that cannot change, through stages pre-determined by inexorable necessity"²¹ .

Popper characterises both pro-naturalistic and anti-naturalistic doctrines as 'scientistic', since they tried to copy, misguidedly, the methods of science. Both are characteristic of historicism. According to historicism, the task of social sciences, is to lay bare the law of evolution of society in order to predict its future. "It is this view of a society moving through a series of periods, that gives rise, on the one hand to the contrast between a changing social and unchanging physical world, and thereby to anti-naturalism. On the other hand, it is the same view that gives rise to the pro-naturalistic belief in so-called 'natural laws of succession'"²² . This belief in the days of Comte and Mill could claim to be supported by the longterm predictions of Astronomy, and more recently, by Darwinism.

Popper feels that the elements in pro-naturalistic doctrines are sometimes a result of misapplication of terms in Physics to Sociology. Comte's attempt to apply to Sociology, the physicist's distinction between Statics and Dynamics, is one such example. The society which the sociologist calls static, is analogous to those physical systems which the physicist would

21. Ibid.

22. Popper, Karl, Poverty of Historicism, (London:Routledge and Kegan Paul, 1957) P.106.

call dynamic. Solar system, for instance, is dynamic for a physicist whereas sociology terms it static as it is repetitive and does not grow or change. In physics, when we speak of movement of a body, we mean only that it changes its position relative to some system of co-ordinates. Sociologists mean by a movement of society, some structural or internal change. Popper says, "he will accordingly assume that a movement of society is to be explained by forces, while the physicist assumes that only the changes of movement, but not movement as such, have to be explained"²³. The hope that some day social science may find the laws of motion of society just as Newton found the laws of motion of the physical body, is a result of these misunderstandings.

The existence of trends or tendencies in social change cannot be questioned, but trends are not laws. A statement asserting the existence of a trend is existential, not universal. Mill admits of a confusion between laws and trends. He lays down a procedure for deducing a generalisation from some true natural laws which can be established independently. He calls it the inverse deductive method. Popper agrees that "Mill's method is a fair description of a procedure which is used, not only in the social sciences, but in all sciences and to an extent far beyond Mill's own estimate"²⁴. Popper says that a scientific problem generally

23. Ibid., PP. 113-114.

24. Ibid., P.121.

arises from the need for an explanation. According to Mill, "an individual fact is said to be explained by pointing out its cause, that is, by stating the law or laws of which its production is an instance. A law is said to be explained when another law or laws are pointed out, of which the law itself is but a case and from which it could be deduced"²⁵. This is a case of inverse deduction.

Popper differs from Mill in certain respects. He feels that we can never speak of cause and effect in an absolute way. We can only say that an event is a cause of another event - its effect - in relation to some universal law. The use of a theory for predicting, for explaining or for testing depends upon our interest. The difference between explanation, prediction and testing is not one of logical structure, but rather one of emphasis. Causal explanation of a regularity is different from explaining a specific event. For the former, we need some (a) general laws and (b) certain initial conditions which refer to a certain kind of a situation. We need a set of more general laws which have been tested and confirmed independently. In Mill's discussion of singular events, there is no clear distinction between universal laws and specific initial conditions. This is due to a lack of clarity in his use of the term cause. This affects his reduction method. It is logically possible to reduce

25. Ibid.

or explain trends but what Mill overlooks is that their persistence depends on the initial conditions. They look upon trends as if they are unconditional, like laws.

A reduction of these tendencies to laws, they believe, is possible from universal laws alone, such as laws of psychology. These trends which they consider laws, are unconditional prophecies as against conditional scientific prediction. "There is for example, a trend towards an 'accumulation of means of production'. But we should hardly expect it to persist in a population which is rapidly decreasing, and such a decrease may in turn depend on extra-economic conditions, for example, on chance inventions, or conceivably on direct physiological impact of an industrial environment. There are, indeed, countless possible conditions"²⁶. We have to all the time try to search for the conditions under which a trend would disappear. But, for the historicist the conditions under which the trend would disappear, are unthinkable. The trend occurred by historical determination and proceeds to the future in a pre-determined path. Popper says, "The poverty of historicism, we might say, is a poverty of imagination"²⁷.

Let us now consider the anti-naturalist element, which constitute the core of the historicist doctrine. Popper attempts to tackle

26. Ibid., P.129.

27. Ibid., P.130.

this problem by positing his method of a scientific study of the society which has features similar to that of natural sciences. Popper calls his method 'piecemeal social engineering'. This method resembles physical engineering, in regarding the ends as beyond the province of technology. This is in contrast to historicism which insists that the ends of human activities, dependent on historical forces, are within its province. Piecemeal method recognises the fact that many intended human actions do not always lead to the expected consequences.

Social institutions, it is thus evident, are not always a result of conscious design. A piecemeal engineer, hence, concentrates on the functional or the instrumental point of view. "Whatever his ends, he tries to achieve them by small adjustments and re-adjustments which can be continually improved upon."²⁸ He makes his way step by step carefully, always comparing the results expected with the results achieved, keeping a sharp lookout for the unavoidable, unwanted consequences that may creep in. This is in contrast with the holistic or Utopian social engineering. It aims at controlling the historical forces which, according to them, mould the future of the developing society. It attempts to give a blueprint for modelling the whole of society. In practice, according to Popper, their method is beset with a number of problems. For instance, the greater the holistic

28. Ibid., P.60.

changes attempted, the greater are the unintended and unexpected consequences, likely to occur. This is because, though societies are man-made in a certain sense, they are not true reproductions of a conscious design. So, the Utopian engineer will not be able to do everything according to his intended plan.

Popper claims that the Utopian method does not stand rigorous scientific testing. The Utopian engineer cannot tackle the problems of the society with an open mind. History, which shapes the future, has already chalked out the destiny of human society, and all he can do is to guide human actions towards the realisation of this future. Thus he will reject our criticism that he cannot plan things, since nobody can plan things but only follow the dictates of history. Popper declares "By a rejection apriori of such hypotheses the Utopian approach violates the principles of scientific method".²⁹ Problems connected with the uncertainty of the human factor-force, the Utopianist, to control the factor by institutional means 'The political problem, therefore is to organize human impulses in such a way that they will direct their energy to the right strategic points, and steer the total process of development in the desired direction'.³⁰ Popper rightly points out that in the above scheme there is no possible means of testing the success or failure. Therefore, no criticism is possible.

29. Ibid., P.69.

30. Ibid., P.70.

Utopianism resembles historicism in its rejection of piecemeal engineering. Historicism is not opposed to activism, but insofar as it is a technology, it is holistic. Mill's approach can be clearly shown to be holistic " states of society are like different ages in the physical frame; they are conditions not in one or a few organs or functions but of the whole organism ".³¹

Popper says "it is not so much the fact that it is a technology as the fact that it is a piecemeal technology that marks the difference between my approach and that of historicist. Insofar as historicism is technological, its approach is not piecemeal, but holistic".³² Historicism is opposed to any kind of social technology according to plan. But it is interesting to note that historicism very frequently allies with ideas typical of Utopian or holistic social engineering. Best examples to illustrate the above idea are Plato and Marx. According to Plato all change is decay. This was his law of historical development. His Utopian blueprint aims at arresting all change. Marx's utopian blueprint was dynamic aimed at developing in contrast to Plato's arrested society. Historicism is interested, not in development of social life, but of society as a whole. Utopian engineering is similarly holistic. Another common belief consists in regarding ends as neither matters of choice nor of moral decision. They maybe scientifically discovered within their fields of inquiry.

31. Ibid., P.72.

32. Ibid.

The above discussion of holism shows that it is one of the crucial positions of historicism to be attacked. The Gestalt school of psychology made 'wholes' the direct objects of scientific study. Popper contends that this offers no justification for considering 'society as whole' as an object for scientific inquiry. A whole is certain special aspect of the thing in question which make it appear as an organized structure rather than a mere heap. Gestalt's school considers these wholes for a scientific study. Things possessing these special structures maybe said to be more than the mere sum of their parts. For example, a melody is more than a mere collection or sequence of single musical sounds. But we have to remember that melody is only one of the aspects of this sequence of sounds. It is distinct from other aspects such as absolute pitch, absolute strength, etc.,.

The holistic approach to the society in contrast, claims that society can be studied as a totality of all the aspects of it and also of all the relations existing between its constituent parts. It is clear that this approach has nothing in common with the Gestalt school. Popper declares that wholes as considered by historicism can never be studied. All description is necessarily selective. If we wish to study a thing we are bound to study it

from a certain point of view. But holists believe that difference between Gestalt approach and a treatment of social wholes lies merely in the fact that - a Gestalt maybe grasped by a direct intuitive perception while social wholes are too intricate to be understood at a glance. They can be grasped only after reflection wherein all elements are noted, compared and confined. Popper rightly points out that no example to substantiate their position is ever cited.

Holistic planning overlooks the difficulty in centralising knowledge as can be done with regards to power. This leads to eliminating individual differences, imposing the view of a few over the rest . The assumption of centralised planning tacitly grants the utopian engineer, a power approaching dictatorial authority. Considering the utopianist's claim that his method of social experiment is comparable to experiments in physical sciences - it is true that planning is possible by way of blueprints in physical sciences. Popper claims that " this is possible only because many piecemeal experiments have been carried out beforehand... . Every model must be developed by the method of trial and error, by countless small adjustments".³³ A strong argument by anti-naturalists is that experiments, as carried out in natural sciences, are not possible in social sciences. This is due to the nonavailability of similar

33. Ibid., P.92.

conditions for repeated experiments. Therefore the historicist contends that the experimental method cannot be applied to the social sciences. Popper attributes the historicist claim to a mistaken notion of natural sciences. To secure similar conditions even in natural sciences, a long process of experimentation is necessary. Only then would we be able to achieve the required degree of similarity and also find out what kind of similarity is relevant. This research may have to be carried out before we are able to secure similar conditions for our experiments. Precisely analogous considerations hold for the anti-naturalists claim that artificial isolation is not possible in social sciences. We cannot know a priori what influences are disturbing and thus artificial isolation is possible only after experimentation. The differences between the conditions prevalent in different historical periods hampers social experiments. This is a condition peculiar to the social sciences according to the anti-naturalists.

Popper replies that "it would be experiments which led us to discover the change in social conditions ; experiments would teach us that certain social conditions vary with the historical period; just as experiments have taught the physicists that temperature of boiling water may vary with geographical position".³⁴ Difficulties of historical interpretations are

34. Ibid., P.95.

evidences of historical change. The discrepancies between the actual and the results of our (historian's) thought experiments are similar to the method of trial and error. Anthropologists by adopting the method of trial and error adjusted their expectations to the conditions prevailing and conducted successful experiments. It is true that for a physicist it is more feasible to change experimental conditions at will than it is for a social scientist. But that is all. There is no special feature in social sciences that renders it difficult to proceed on par with the natural sciences.

The validity of generalisations which play a pivotal role in natural sciences is confined to a particular historical period in social sciences. Popper rejoins that if the historicist asserts no more than that regularities are characteristic of a particular period, he will be merely asserting a trivial point. But the historicist goes further and claims that this situation creates difficulties unique to social science. Popper claims that a change in the physical environment creates analogous difficulty in natural sciences. Popper says "can there be a more obvious and proverbial regularity than the succession of day and night? Yet it breaks down if we cross the polar circle. It is perhaps a little difficult to compare physical with social experiences, but I think that such a breakdown may be quite as startling as any

that might occur in the social realm ". Similarly, laws discovered by Kepler are valid only for planetary systems but their validity is not confined to the period in which Kepler lived. Newton did not have to withdraw into a part of the universe where he could observe moving bodies free from the influence of gravitational and other forces in order to see the importance of the law of inertia.

Historicists point out that in social sciences' we can never discover a truly universal law whose validity extends beyond the periods in which we have observed it to hold. Popper contends that we are not sure of the universal validity while formulating the laws in natural sciences too. Asserting that the laws are valid only for a certain period amounts to admitting that change can never be explained by laws. This is not in accordance with the scientific spirit - if unexpected observations, in opposition to the laws made, arise, we need to revise our theories and merely assert that theories are valid only for a particular period.

Popper's Method of Social Sciences

Popper proposes a doctrine of unity of method according to which all theoretical or generalising sciences make use of the same method, whether they are natural sciences or social sciences. He tries to resolve the dispute between naturalism and anti-naturalism by 'unity of method'. The widely accepted methodology

35. Ibid., P.100.

of scientism advocates that the social sciences have a lot to learn from natural sciences and have to be modelled after the latter to attain the scientificity. In this method, the origin of science lies in pure observation. Starting from theory-free observation, we arrive at generalisation through induction. It is evident that pure observations are difficult in social science where the scientist cannot free himself from the value system of his own social class. But scientism or naturalism gained ground in social sciences, as is evident in the rise of Anthropology as an important discipline. This success is attributed to its adopting of an observational, descriptive and more objective method.

Popper extends the term scientism to cover the anti-naturalistic doctrines also. He describes scientism as a misunderstanding of the methods of natural science and the application of the same to the social sciences. According to Popper scientific objectivity is based solely upon a critical tradition. Popper says, "the so-called sociology of knowledge which tries to explain the objectivity of science by the attitude of impersonal detachment of individual scientist, and a lack of objectivity in terms of the social habitat of the scientist, completely misses the following decisive point; the fact that objectivity rests solely upon pertinent mutual criticism".³⁶ It misses no more than the

36. Popper, Karl, 'The Logic of Social Sciences', The Positivist Dispute in German Sociology, Transl. David Frisby & Adey Glynn (London: Heinemann Educational Books Ltd., 1976) PP.95-96.

social aspect of scientific objectivity.

Popper's method of social sciences offers deductive causal explanation and subjects them to critical examination. It is a method of trial and error. Trial consists in our encountering a problem and actively attempting to solve it. Popper disagrees with the view that science begins with pure observation. Scientific activity begins only with a conflict between our knowledge and supposed facts. Therefore, we can legitimately claim to have observed something 'problematic', and no more. In fact, Popper considers the question regarding the origin of a society invalid. "The question, "how did you first find your theory?" realtes, as it were, to an entirely private matter, as opposed to the question, "how did you test your theory?" which alone is scientifically relevant".³⁷ Popper declares that this is more clearly evident in social sciences where the objects of social sciences are mostly theoretical constructions. The scientist attempts to provide tentative solutions to the problem. If the solution does not withstand attempts at refutation, it is recognised as an error. The aim of subjecting the solutions to tests is to find out the weak points of a theory in order to reject it. This is the method of all sciences backed by experience. All theories are trials; tentative hypotheses - they are tried out to see whether they work. All experimental

37. Op.Cit., P.135

corroboration is tests carried out in a critical spirit to find out whether the trials err. This method is termed the hypothetico-deductive method or method of hypothesis as it does not grant absolute certainty to any scientific statements which it tests.

In a critical discussion we can find questions about truth of an assertion, its relevance to the problem in question. Popper says, "what is possible and what is important and what lends science its special character is not the elimination of extra-scientific interests but rather the differentiation between the interests which do not belong to the search for truth and the purely scientific interest in truth"³⁸. According to him, truth is to be our regulative principle. Though it is the decisive principle, relevance, significance, precision and simplicity of the solution have also to be considered. It is the task of science to separate extra-scientific evaluations from questions of truth. This critical approach originating from problems leads to satisfactory methodological results in social sciences.

Considering certain features of social sciences which are regarded as obstacles in applying a common method to both natural and social sciences -- theoretical constructions in social sciences are a result of constructing certain models in order to

38. Ibid.

explain certain experiences. The prejudice that social situations are more complex than physical ones arises when these models such as institutions are taken to be concrete natural entities. They are only abstract models constructed to interpret certain relations. On the other hand, concrete social situations are, in general, less complicated than concrete physical situations. Popper points out, "For, in most social situations, if not in all, there is an element of rationality... this makes it possible to construct comparatively simple models of their action and inter-actions, and to use these models as approximations"³⁹.

It is true that we possess a more direct knowledge of the 'inside of the human atom' than we have of physical atoms; but this knowledge is intuitive. The physicist hence is not helped by such observations, while framing hypotheses about atoms. But, intuition is a private affair. Science is interested only in the hypotheses resulting from these inspirations, and then only if they can be properly tested. The historicist claims that understanding social events which goes beyond causal explanations, operates with the help of sympathetic imaginations. This is in direct contrast with the natural sciences which aims at causal explanation with the aid of mathematical formulae. This anti-naturalist objection can be easily countered by our

39. Ibid., P.140

previous explanation. There is no harm in operating with sympathetic imagination as long as it leads to hypotheses rich in consequences and which can be properly tested.

Now turning to the aspect of the logic of social sciences - deductive logic is considered the organon of criticism. It is a theory of transmission of truth from premises to the conclusion. If all the premises are true, and the inference is valid, then the conclusion must also be true. And consequently, if the conclusion is false, in a valid inference, then one of the premisses is not true.

So, it is also a theory of re-transmission of falsity from the conclusion to the premises. This aspect of the deductive theory assists in our critical approach. Criticism is an attempt to show that unacceptable conclusions can be derived from the assertion we are criticising.

The basic concepts around which the critical approach revolves are truth and explanation. What we criticize is the claim that a particular theory is true. Any mistake consists in a failure to measure up to the standard of objective truth. According to Popper, "we term a proposition 'true' if it corresponds to the facts, or if things are as described by the proposition. This is what is called the absolute or objective concept of truth which

each of us constantly uses" ⁴⁰ . The second concept of explanation has two components-- what we hope to explain can be called explicandum, the solution is the explanation, which is always a theory, a deductive system. This helps us in connecting the explicandum with certain initial conditions to arrive at the explanation.

Apart from the hypothetico-deductive method outlined above, Popper refers to the possibility of adopting a method of logical or rational construction or zero method in social sciences. This method points out one important difference between natural and social sciences. In social sciences there is a possibility of constructing a model on the assumption of complete rationality on the part of all individuals concerned. Now, by estimating the deviation of the actual behaviour from the model behaviour using the latter as a kind of zero co-ordinate we arrive at a social explanation of the behaviour under consideration. An example of this method is to be found in economics where a comparison between actual behaviour and model behaviour to be expected on the basis of the 'pure logic of choice' is made.

Popper claims that a thorough investigation of economics establishes the existence of a purely objective method, called 'situational logic'. This method according to him can be extended to all social sciences. Popper contends that "Its

40. Popper, Karl, 'The Logic of Social Sciences' The Positivist Dispute in German Sociology, Transl. Frisby David & Adey Glyn, (London: Heinmann Educational books Ltd., 1976) P.99.

method consists in analysing the social situation of acting men sufficiently, to explain the action with the help of the situation, without any further help from psychology⁴¹. Objective understanding consists in realizing that the action was objectively appropriate to the situation. The method of situational analysis is an individualistic method, yet not certainly a psychological one. It excludes all psychological elements and replace them with objective situational elements.

Popper agrees that "The explanations situational logic described here, are rational, theoretical constructions. They are oversimplified and overschematized and consequently in general, false"⁴². But they can possess considerable truth content and in a strictly logical sense, be good approximations to the truth. Above all, situational analysis is rational, empirically criticizable, and, capable of improvement. Applying this 'logic of situation' in history, Popper finds that we can answer some of the questions posed by historicism.

Popper extends his thesis of the unity of scientific method to historical sciences. Historical sciences, given a certain singular explicandum, look for singular initial conditions which together with universal laws explain that explicandum. It is only in history that we are interested in the causal explanation of a singular event. In theoretical sciences, such causal

41. Ibid., P.102.

42. Ibid., P.103.

explanations are means of testing the universal laws. History makes use of universal laws, not to test specific hypotheses, but as implicit in his terminology. From the above analysis, Popper concludes that the task of history consists in describing certain happenings in their peculiarity or uniqueness. That means, they explain aspects which do not fit in causal explanations, such as the accidental concurrence of causally unrelated events.

Is there nothing whatever, in the historicist demand, therefore, for a reform of history - for a sociology which plays the role of a theoretical history? Popper concedes that there are some sound elements in historicism. It is a reaction against the naive method of interpreting political history merely as the story of great tyrants and great generals. "They indicate, at least the existence of a lacuna, of a place which it is the task of sociology, to fill with something more scientific"⁴³. Popper feels there is room for a more detailed analysis of the logic of the situation in this context. Beyond this logic of the situation, he feels we need an analysis of social movements. He points out that we need studies, based on methodological individualism, of the social institutions, of the way in which new traditions are created and the old ones break down. These models may then be used by historians along with other universal laws for explanation.

43. Popper, Karl , Poverty Of Historicism . (London: Routledge and Kegan Paul, 1957) P.149.

The lack of interest in universal laws as compared to theoretical sciences puts historical sciences in a difficulty. They possess no central point to which observations can be related, or from which observations can be made. So we are left with no choice but to introduce a selective point of view into one's history. The only draw-back of this historical approach is that it cannot be subjected to tests. Popper terms it 'historical interpretation', and points out that historicism mistakes these interpretations for theories. And if they can find many facts that can be interpreted in the light of a certain theory they hold, they mistake it for a proof of the doctrine.

These selective approaches fulfill functions in the study of history which are in some ways analogous to those of theories in science. But, these historical approaches, as a rule, cannot be tested. They cannot be refuted and apparent confirmations are, therefore, of no value. The only way out of this dilemma is to be clear about the necessity of adopting a point of view, and to be always aware that it only is one among many.

CHAPTER III

CRITICAL THEORY

Critical theory refused to consider knowledge as separate from, and superior to action. Disinterested scientific research is not possible as the researcher is always part of the social object that he is attempting to study. And because the society he participates in, is not a result of free, rational human choice, scientist's perception is necessarily mediated through social categories above which he cannot rise.

Although definitely a part of his society, the researcher was not incapable of rising above it at times. In fact, it is his duty to reveal those negative forces and tendencies in society that pointed to a different reality. He also rejected the ideal of general principles and verifying or falsifying examples. The general truths dealt with by critical theory, could not be verified or falsified by reference to the present order, simply because, they implied the possibility of a different one.

Unlike traditional theory which equated 'concrete' with 'particular' and 'abstract' with 'universal', critical theory followed Hegel for whom George Kline wrote, "concrete means many sided, adequately related, complexly mediated... while abstract⁴⁴ means one-sided, inadequately related, relatively unmediated".

44. Jay, Martin, Dialectical Imagination (London: Heinemann Educational Books Ltd., 1973) P.82.

By an examination of different concrete phenomena from all the different fields mastered by the institute's members, Frankfurt school, hoped that fruitful insights could be gained, that would help illuminate the whole. Underlying this endeavour, was the goal of social change. In relating research to praxis, the institute was careful to distinguish its approach from that of the pragmatists. Pragmatism ignored the fact that some theories contradict the present reality and work against it, yet are not false. It lacked a means of going beyond the existing facts like positivism. In the desire to unify theory and praxis, however, the distance that still necessarily separates them should not be forgotten.

The object of the traditional theory has always been the formulation of general, internally consistent, principles describing the world. This had been true, whether they were generated deductively as in Cartesian theory, or inductively as in J.S. Mill's theory. The goal of traditional theory, hence, had been pure knowledge than action. In Baconian science where it pointed to activity, its goal was technological mastery of the world, which was very different from praxis. Therefore, at all times, traditional theory maintained a strict separation between thought and action. The idea of critique which is central to Hegel-Marx tradition and is the leit motif of critical theory, is

invoked precisely to bring about an organic relation between thought and action, within a frame-work that retrieves 'action' from 'technological mastery over nature', 'thought' from 'pure theory'.

The application of the idea of critique is aimed to set at naught, the duality between thought and action, in favour of 'praxis' as a unitary principle.

The concept of 'critical theory' has its origin in the traditions of Kant's critical philosophy and of Marx's critique of ideology. Critique in the Kantian sense, is the examination by reason, of the conditions of possible knowledge, that is, examination of its own possibilities and limits. Reason assumes a self-reflective posture, where it critically appraises the categories of understanding it makes use of, in constituting the objects of knowledge. The only short-coming of Kant's critique is that he posited the categories of understanding as apriori. He failed to realise that categories themselves could be developed through time and are not a-historical. With Hegel, however, the notion of critique became historicised.

Marx's notion of critique, developed as a response to Kantian and Hegelian notions, is another important source of origin of critical theory. Critique, in Hegel, refers to the overcoming by

certain progressive historical forces, of constraints imposed by particular social forms, upon both life and thought. Constraints of human freedom, though manifest in concrete social relations, are ultimately construed by Hegel as being rooted in the realm of consciousness. Therefore, the struggle for emancipation from these constraints, also finds its resolution here. Marx continued Hegelian tradition in that, he too believed that the role of critique lies in the emancipation of men from their subjugation to relationships of power. But, Marx did not stop at a mere conscious apprehension of these relationships of power. While it is a necessary condition for moving towards the realisation of freedom, practical struggle is indispensable without which theory cannot be realised.

The emphasis on actual social conditions by Marx, made him break away from the traditional philosophical concerns to overtly economic ones. He viewed the object of concern -- the capitalist production process through economic categories, just as Kant viewed objects through the application of concepts. These categories, unlike in Kant, are historical and hence are not fixed and have to be constituted from time to time. The political economists, by and large, ignored this fact and hence Marx undertakes a critique of Political economy. A consistently critical approach which refuses to accept anything a priori, must

reject any first, final or immutable principles. This prevented the critical theorists from fetishizing even the economic base of Marx's method and the critique of political economy as a theory, remained to them, a form of historical reason.

Critical theory moved away from Marx when it tried to articulate and accord primacy to the relation between the sub-structure and super-structure. The investigations were to be empirical and to detect the actual 'psychic links' between mind and reality. What constituted the objects of our perception, judgement and action, was the central methodological concern of critical theory. Praxis - was used to designate a kind of self-creating action, which differed from the externally motivated behaviour produced by forces outside man's control. In Marxist terminology, the goal of revolutionary activity was understood as the unifying of the theory and praxis. According to critical theorists, the first critical philosopher was Kant. They mocked the objectivistic illusion of the positivists, which regressed to pre-Kantian certainties about reality per se, whereas Kant already showed that objects are 'constituted', through categories which filter and order forms.

Praxis and reason are the two poles of critical theory. As Marcuse wrote for the whole of Frankfurt school in Reason and Revolution, "Theory will preserve the truth even if revolutionary

practice deviates from its proper path. Practice follows the truth and not vice-versa"⁴⁵. Reality had to be judged by "the tribunal of reason", but, reason itself can never be taken to be a transcendent ideal which is a-historical. Truth, they argued, was not immutable. But denying the absoluteness does not indicate succumbing to relativism. "If Critical Theory can be said to have had a theory of truth, it appeared in its immanent critique of bourgeois society, which, compared the pretensions of bourgeoisie ideology with reality of its social conditions"⁴⁶.

The need for absolute intellectual certainty, Adorno argued, was likely to be a reflex of personal insecurity, "freedom is never given, always threatened... . The absolutely certain as such is always unfreedom... . It is a mistaken conclusion that what endures is truer than what passes"⁴⁷. For critical theorists there were no absolute premises of any kind. Adorno asserted that implicit genesis of logic itself lies in social behaviour. Formal logic and naive empiricism formed a perfect alliance as both insisted on an ultimate basis for knowledge. Instead of formal logic which perpetuated the dualism of form and content, Adorno advocated an alternative, suggested by Hegel. "Logic is not Being, but a process that cannot be reduced to the pole of 'subjectivity' or 'objectivity'... . There is no logic without sentences, no sentences without the synthetic mental

45. Quoted in Jay Martin, Dialectical Imagination. (London: Heinemann Educational Books Ltd., 1973) P.322.

46. Ibid., P.63

47. Ibid., P.69.

function." ⁴⁸ Truth, he contended "becomes the mutual dependency, the production through one another, of subject and object, and it should no longer be thought of as static agreement - as intention" ⁴⁹. Phenomenologist's tendency to reify the given, Adorno felt, was related to advanced bourgeois society's destruction of Erfahrung (experience) and its replacement by administered, lifeless concepts. Phenomenology thus represents the last attempt of the bourgeois society to rescue itself from impotence. Adorno pointed out, facts are products of collectively developed modes of perception, that is, they are 'mediated'.

A theory can be true only by being self-reflective; by making its methodological premises part of the objects it investigates. This is in contrast to the assertions of formal logic wherein rules of inference or facts are 'given', and are thus premises and not objects of investigation. All theories are not equal. Adorno asserts neither their trans-historical nor any formal criterion, but what under given circumstances, "a theory includes and what it excludes, decides about its quality" ⁵⁰. According to critical theory, reason is both historically objective and autonomous. Defining reason in terms of certain operational rules excludes the possibility of questioning the validity of the rules themselves. This exclusive ascendance of instrumental

48. Ibid., P.70.

49. Ibid.

50. Gebhardt, Eike, 'Introduction', The Essential Frankfurt School Reader, (Eds. Andrew Arato, Eike Gebhardt, Basil Blackwell, Oxford.) P.386.

reason cancels the possibility of autonomous reason. To focus not only what is, but also what could (should) be is the function of substantive reason. Critical theorists "saw clearly that the self cancellation of reason was occurring not because of its corruption, but through its own immanent logic as 'dialectic of enlightenment"⁵¹ .

Dialectic constitutes the core of critical theory. It is neither an ideology nor a method in the sense of a research technique. It is necessary to explain the concept of dialectic before we proceed any further, whether two entities stand in a dialectical relationship to each other is an entirely empirical question. 'Abstract entities' in the Hegelian sense are undialectical by definition. Abstract here always implies an abstraction from the constitutive context of an entity. for instance, the individual abstracted from his social context, whose terms it needs to articulate or manifest itself, no longer stands in contradiction to the general, is no longer its negation - no longer stands in any necessary relation at all. It is trivial to assert that anything that has two sides is, therefore, dialectic.

Another serious misunderstanding is the misreading of Hegel's triad describing the movement of historical reality as a compromise - a kind of middle ground between thesis and anti-thesis. This led Kirkegaard, for instance, to overlook the fact

51. Ibid., P.393.

that "mediation takes place in and through the extremes (of the thesis and anti-thesis)" ⁵² and not as a simple give and take between the two. The new synthesis, therefore, is a new "working reality" so to speak. The dialectical contradictions within empirical reality, the antitheses which negate the theses, are not a matter of the absolute existence or non-existence of a predicate. The dialectical contradiction of "a" is not "non-a", but "b,c,d, ..." and so on. Instead of assuming a complete set of predicates as either belonging or not belonging to the object, critical theorists assumed multiple modalities for any historical object. "Critical theorists warned against the 'practice of defining' statically an illusory, isolated essence (of which operational definitions are then but mere extensions) abstracted from the ongoing historical process" ⁵³ .

In an effort to check the arbitrariness of the definition, we have to posit 'substantive' opposites to clarify our working assumptions, rather than mere formal ones. Finally, the difference to be analysed is between a formal concept of contradiction and a substantive one. But, far from rejecting formal logic, "a dialectical theory... true to its principles, will tend to retain the relative truths (!) of particular positions and incorporate them into its own comprehensive

52. Quoted in Gebhardt, Eike, 'Introduction', The Essential Frankfurt School Reader, (Eds. Andrew Arato, Eike Gebhardt, Basil Blackwell, Oxford) P.398.

53. Gebhardt, Eike, 'Introduction', The Essential Frankfurt School Reader, (Eds. Andrew Arato, Eike Gebhardt, Basil Blackwell, Oxford) P.399.

54
theory" .

The experience of non-identity between the two spheres, i.e., in the final analysis between subject and object, is the starting point for critical theorists. Every phenomenon we know, is a synthesis, though we are not commonly aware of the socio-historical a priori which constitute the synthesis. Our experience of a unified phenomenon is a prima facie evidence for our synthesizing activity. The ingredients of a synthesis (the subjective and objective) move at different paces and in different directions. The properties/predicates of the object are revealed by this movement of the ingredients that constitute the object of our experience. In order to understand this synthesis, we quickly alienate our active contribution, thus converting it into a property of the object. This temporal synthesis, where we interact as though with "alien" entities enables us in realizing the reality. Therefore, a dialectical totality "realises itself only through its parts, through the gap, through alienation, reflection - in short, all these modes that are anathema to Gestalt theory"⁵⁵, that is, the Gestalt notion of unity.

Subjectivity is the form of the objective and how (not what) of the reality. Individual identity consists only in the transcendence of these objects, i.e., in activity of negation. Subjectivity being the categories of possible experience and

54. Ibid., P.399.

55. Ibid., P.401.

objectivity being what is experienced, there is a reciprocity of form and content. Form is a synonym of mediation, according to Adorno. Therefore, subjectivity cannot be a substance by itself and subjectivity and objectivity are not separable like two substances but are moments of one and the same process. Rather than trying to eliminate subjectivity, operative in any approach,⁵⁶ we should "bring this subjectivity back to its objectivity" .

Closely bound up with the above analysis of the dialectic of subject and object, is the relation of theory and praxis. Every new insight into the object, it follows from our earlier analysis, brings about a change in its identity, consequently changing our attitude and expectation from it, thus affecting our action. Therefore, it is a misnomer to speak of 'application' of a theory since this very process implies the gap it is trying to bridge.

Since Comte, empirical social science has taken the natural sciences as its mode. Sociology can never be like natural sciences because "theoretical reflections upon society as a whole, cannot be completely realised by empirical findings. Each particular view of society as a whole, necessarily transcends its scattered facts"⁵⁷ .

It is true that philosophy was originally linked to the doctrine

56. Ibid., P.403.

57. Adorno, Theodor , 'Sociology and Empirical Research' , The Positivist Dispute in German Sociology. Transl. David Frisby & Glyn Adey. (London: Heinemann Educational Books Ltd., 1976) P.69.

of society. Therefore, sociology is nothing new as far as its subject matter is concerned. For instance, in Plato, the doctrine of society is linked to the core of his metaphysics, the doctrine of Eternal ideas. Plato's conception of society took departure from the given social conditions, and the thought contained in them was intended to interact with these conditions. The design of an ideal society is always dependent on the existing society. But the continual and progressive development of physical sciences where exact and well-defined laws are the ideal, demanded a parallel theory in society. Empirical social research gained primacy as an answer to this particular demand.

With the ideal of cognition based in natural sciences, the effort was to formulate societal phenomena as if they were coherent as a mathematical proof. Society is characterised by inconsistencies and contradictions, therefore, it is not amenable to treatment by natural science model. But empirical sociology attempts to do this - such an empirical sociology degenerates into an administrative science, since, empirical sociology's love for generality hides the heterogeneity of society. The aim of modelling along the lines of natural sciences was for achieving controlled and directed orderly progress. In other words, social technology became the key idea for the new discipline. According to Adorno, even Marx shares some of these ideas of Comte, for

whom otherwise he had nothing but contempt, in over-emphasizing the primacy of technique, that is, the role of productive forces in the societal progress. According to Adorno, the gradual development of the positivistic method tended to widen the gap between theory and method. Adorno argues that, in every theoretical attempt, that is aimed at harmony, there is an implicit effort to eliminate from society, real contradictions which are basically its constituent elements.

A theory of society, unlike empirical social research, should at the same time imply a critique of sociology and its scientific enterprise. With the absence of the critical consideration that social phenomenon like modes of behaviour, etc., are infinitely mediated, that is, produced socially, empirical social research falls a victim to its own results. Even the most rigorous methods can lead to false or meaningless results. There is no universal heuristics, only the most insistent and uncompromising self-criticism. The fact that social phenomena are mediated by the spirit, by the consciousness of human beings should not mislead us into deriving these phenomena themselves from spiritual principle, regardless of the circumstances. The questions in sociology relate to the confrontation between man and nature and the objective forms of sociation. In the empirical scientific research, the selection of the research

objects is guided by the method available.

Empirical sociology has become subjective in its attempt to remain objective. The 'objective' data is constituted by the subjective phenomena like opinions and attitudes, the behavioural modes of the human subjects. Empirical sociology overlooks the fact that such subjective phenomena are determined by the societal totality which is objective. Therefore, the objectivity of the empirical sociology is merely the objectivity of the method, and not of what is investigated. A circularity results from this. "In the empirical scientific process, the selection of research objects and the starting point of investigation are guided, if not by practical administrative considerations and not so much by the essential nature of what is investigated, but rather by the available methods which, at most, must be developed further... . The procedure of operational or instrumental definition, generally current in empirical techniques which will define a category such as "conservatism" by means of certain numerical values of the answers to questions within the investigation itself - sanctions the primacy of the method over the object, and ultimately sanctions the arbitrariness of the scientific enterprise itself" ⁵⁸ . The objectivity of empirical social research is an objectivity of methods, not of what is investigated.

58. Ibid., PP.72-73.

The moment one hypostatizes that state which research methods both grasp and express as their immanent reason, we are ignoring the self-reflective, critical aspect. Instead of making it the object of one's thought, one is now contributing, intentionally or otherwise, towards its perpetuation. The critical theorists assert that only an insight into the genesis of the existing classes and their relationships to the meaning of that experience would explain the phenomena. If such perspectives are pushed aside, "then scientific mirroring indeed remains a mere duplication, the reified apperception of the hypostatized, thereby distorting the object through duplication itself"⁵⁹, according to Adorno. The societal phenomena do not possess the type of homogeneity that is seen in the natural sciences. Therefore, we cannot progress to the same degree from partial assertions about societal phenomena to their general assertions. If one proceeds from individual investigations to the totality of the society, what we gain is merely a classificatory higher concept, but not those which express the life of the society itself.

Empirical social research, Adorno asserts, must bring out the objectivity of what is the case socially - and must do so without any idealisation. The real understanding of social reality is a

59. Ibid., P.76.

critique of illusions that dominate reality. Taking the example of exchange value, Adorno says,

"Exchange value, nearly a mental configuration when compared with use value, dominates human needs and replaces them; illusion dominates reality. To this extent, society is myth and its elucidation is still as necessary as ever... . The critique of this illusion has nothing to do with the positivistic scientific critique, according to which, one cannot regard the objective nature of exchange as valid. This validity is unremittingly corroborated by reality itself"⁶⁰ .

Obviously, not all empirical social investigations fulfill a critical function. That empirical social research is successful to a certain extent itself is a critical reflection upon society. It indicates a precisely individualistic society where the individual is blindly subjected to the general and is himself disqualified. Adorno advocates, "despite its awkward basis in the social structure, empirical social research should retain its capacity for self-criticism to the extent that the generalisations which it achieves should not immediately be

60. Ibid., P.80.

attributed to reality, to the standardised world, they should
61 always be attributed to the method as well" . But, even
analysis with a strictly delimited range of interest, should
contain something of this non-ideological spirit to achieve what
they promise.

Social theories cannot be tested and refuted with the aid of
strict investigations. This does not mean that empirical
sociology is useless. It can be of some use, if it is combined
with central questions of theory. Empirical sociology deals with
appearances, they are not illusions but are appearances of a real
essence. Empirical sociology can demythologize theory. It can
be of maximum utility, if it can see the mediation of societal
objective, even in the case of subjective consciousness.
"Empirical social research is not only a corrective, in that, it
prevents blindly superimposed constructions, but also in the
relationship between appearance and essence. If the task of a
theory of society is to relativize critically, the cognitive
value of appearance, then conversely, it is the task of empirical
research to protect the concept of essential laws from
62 mythologization" .

Social research is dependent upon confrontation with theory and
with knowledge of objective of social structures. This mediating

61. Ibid., P.78.

62. Ibid., P.80.

conceptuality is not, in anyway, a general formulation of average expectations, nor is it an abbreviating addition on the part of a science. Society obeys this conceptuality which provides the objectivity-valid model for all essential social events. It is not an illusion to which organizing science sublimates reality, but is immanent to reality. Adorno rightly points out, "In the social sciences, one cannot, therefore, proceed from the part to the whole, as one can in the natural sciences, since it is something conceptual, totally different in its logical extension and in the unity of features of any individual elements which constitute the whole" ⁶³ .

Psychology has realised after Freud, that the experience of objects subjectively mediated like the society, is increased in its conclusiveness by increase in the degree of subjective participation. According to Adorno, this insight is yet to be incorporated into the social sciences. Adorno confines the task of empirical social research strictly to the limits of analysis of the society given above. For example, if a survey provides an overwhelming evidence that workers no longer consider themselves to be workers, denying therefore, the existence of such a thing as the proletariat. Such subjective findings of the empirical social research have to be compared with the objective findings such as the position of those questions in the

63. Ibid., P.81.

production process, their control or lack of control over the means of production. Thus empirical findings concerning human subjects would still retain their significance. The existence of such consciousness, whether as an element of affirmation of what exists, or as a potential or something different, is a moment in societal totality.

Empirical social research cannot evade the fact that in accordance with its methods, 'the given', which it encounters as something final, is 'conditioned'. Therefore, the givenness of facts, which is the concern of its methods, is distinct with the real basis, a being-in-itself of facts. Adorno insists, "the cognitive problem of its self-critical development remarks, namely, that the facts ascertained do not faithfully reflect the underlying societal conditions but rather they simultaneously constitute the veil by means of which, these conditions of necessity, disguise themselves"⁶⁴. Empirical social research itself becomes an ideology, as soon as it posits public opinion as being absolute. This is a fault of an unreflectedly nominalistic concept of truth. The only way out, according to Adorno, is provided by immanent analysis; "the analysis of the consistency or inconsistency of opinion in itself and of its relationship to reality (Sache), not however the abstract antithesis of the objectively valid and of opinion"⁶⁵. The nature of human beings,

64. Ibid., P.85.

65. Ibid., P.86.

their being subjects, depends upon the objectivity, upon the mechanisms they obey, and which constitute their concept. One has to perceive in the facts themselves, the tendency which reaches out beyond them. That, according to Adorno, is the function of philosophy in empirical social research.

The dimension of future built up in the critical theory, explicated through its dialectical method lies, not in focussing on what is there alone, but on what there could very well be. And what we want to collect data for, decides what data we collect. Adorno insisted, "we do the world too much honour to think of it entirely as a system. Precisely those on whose thought and action any change - the only essential thing - depends, owe their existence to the inessential... to what according to the great laws of historical development, may turn to be completely coincidental"⁶⁶. Just as we use our present perspective to look at the past, we might employ the perspective of a possible future to examine the present.

66. Gebhardt, Eike , 'Introduction' , The Essential Frankfurt School Reader, (Eds. Andrew Arato, Eike Gebhardt, Basil Blackwell, Oxford.) P.405.

CHAPTER IV

THE CONTROVERSY

Before we take up directly, the controversy between Critical Rationalism as represented by Popper and critical theory as articulated by Adorno, it is necessary to place the controversy in terms of its historical setting and thematic significance.

This controversy is only the most recent version of a long standing and continuous debate over the method and aim of social sciences that characterises the German sociological thought. The debate can be traced to Schmoller-Menger controversy of 1870s and 80s in Methodenstreit in Economics, over the question whether economics should proceed according to the 'exact' or 'historical', the 'deductive' or the 'inductive', the 'abstract' or the 'empirical' method. Here Menger takes up a position which is somewhat similar to the positivistic position, whereas, Schmoller does exactly the opposite by adopting what is called historical method. Schmoller questioned not only Menger's rejection of historical method, but also his characterisation of it. Consequently, he rejected the very distinction between the historical and theoretical method that was central to Menger's thesis. As Frisby points out, "In this controversy, it was

perhaps not the relation of the theory to reality which was at issue but rather what constitutes theory, in a context in which both Schmoller and Menger rejected classical political economy"⁶⁷ .

The second stage of the controversy is to be found in the debate between Windleband and Rickert, both of whom belong to the neo-Kantian school. Here the attempt of both has been to concretely ground the separation of the natural from the historical or cultural sciences. Windleband's main concern was with the methods of research. His distinction between the nomothetic and idiographic sciences is accordingly based on the cognitive interest or the cognitive goal of each discipline. Natural sciences, according to him, have a technical goal or interest whereas historical idiographic sciences have a practical goal. The dualism that marks these two disciplines cannot be transcended.

Rickert relativised the distinction between nomothetic and idiographic sciences. The basis for the distinction here is located in the scientific concept formation. Frisby points out that "the insistence on the epistemological priority of concept formation over the activity of judgement - and in this he was following Kant - led Rickert to transfer Windleband's problem of classification to the level of scientific concept formation"⁶⁸ ;

67. Frisby, David , 'Introduction to English Translation', The Positivist Dispute in German Sociology, (London: Heinemann Educational Books Ltd., 1976), P.xix.

68. Ibid., P.xxi.

and "For Rickert, science can only ask of values, whether they are valid, not whether they exist. This can only lead to a restriction of the notion of understanding. As Habermas argues, Rickert remains trapped in the dichotomies of fact and values..."⁶⁹ . It is very easy to find strong traces of positivism in Rickert who vis-a-vis Windelband takes his neo-Kantianism to its logical conclusion. However, this is not at all surprising since "Neo-Kantianism and British empiricism have two fundamental assumptions in common: the first is that 'the problem of knowledge' rather than 'the problem of being' is the central problem of philosophy, the second is that a sharp distinction can be drawn between what we experience and the 'importance' or 'value' we attach to it"⁷⁰ .

From now onwards, the concept of value becomes the philosophical centre of gravity for the methodological reflection in German sociological thought. Thus, the early decades of twentieth century saw the division between two schools of German thought over the question of value. The key figures in the controversy being Sombart, Knapp, Schmoller, and more than anyone else, Max Weber. Weber defined sociology as the scientific investigation of the general cultural meaning of the socio-economic structure of human communal life. He asserted that there would be a permanent struggle of a plurality of value whereas Schmoller did

69. Ibid., P.xii.

70. Passmore, John , A Hundred Years of Philosophy , (Pelican, 1968) , PP.477-478.

visualise the possibility of 'objective value judgements' whereby ethics might increasingly become an empirical science.

The advent of sociology of knowledge in the post-first world war period, sharpened the issues of value-problem. Weber's rich and complex work on methodology and value, has given rise to both positivist and anti-positivist interpretation of his work. Perhaps, he falls somewhere in between. As Frisby notes, "Even though Weber did not use understanding as a way of distinguishing the natural from the human sciences, and although he was critical of the notion of verstehen, he did not give it a sub-ordinate place to nomological explanation; rather understanding and explanation were seen as complementary, whilst at the same time, understanding served as a connecting link between causal knowledge of social phenomena and a value relevant interpretation of social phenomena"⁷¹.

The immediate predecessor of our present controversy is the one between Horkheimer, the pioneer of critical theory and logical positivists, whose theory Horkheimer regarded as the last bastion of traditional theory. Horkheimer says that traditional theory that characterises the practice of specialised sciences, "organises experience in the light of questions which arise out of life in present day society... . The social genesis of problems, the real situations in which science is put to use, and

71. Frisby, David , 'Introduction to English Translation'. The Positivist Dispute in German Sociology. (London: Heinemann Educational Books Ltd., 1976), P.xxv.

the purposes which it is made to serve, are all regarded by science as external to itself"⁷² . On the other hand, a critical theory of society, "... has, for its object, men as producers of their historical way of life in its totality. The real situations which are the starting point of science are not regarded simply as data to be verified and to be predicted according to laws of probability. Every datum depends, not on nature alone, but also on the power man has over it. Objects, the kind of perception, the questions asked, and the meaning of the answers all bear witness to human activity and the degree of man's power"⁷³ .

However critical theory has gone much ahead of Horkheimer as a formidable variety of anti-positivist interpretative methodology of social science. Logical positivism has disappeared from the scene, giving its place to hypothetico-deductivism or critical rationalism which today stands as the strongest rival to critical theory in particular, interpretative social science methodology in general. A collision between the two has an intellectual significance, as it constitutes a significant stage, if not the climax of a century-old methodological reflection.

The preceding brief outline about the earlier controversies in Germany now opens way for the estimation of what is distinctive about the present positivist dispute. The present controversy

72. Horkheimer, Max , 'Post Script', Critical Theory , (Newyork = 1973), P.244.

73. Op.cit., P.xxvi.

seems to have little in common with the debate in, Methodenstreit. It is more close to the neo-positivist position. Habermas argues that, "the neo-positivist position restricts the cognitive interest in the acquisition of knowledge to a purely technical interest, and ignores both the practical interest by which we come to make our expressions intelligible and the emancipatory interest which is usually reduced to the technical"⁷⁴. Any discussion of methodology presupposes that we know and agree on the object to which the methodology is related. In the present dispute, this is not the case. Thus, what seems to be at issue here, is the attempt to reduce science to methodology in such away that what characterises science is its methodology in the abstract.

Scnadelbach, however, disagrees with this line of argument. He suggests that one should look for the source of the controversy in the concepts of interpretation of methods. If the positivist dispute is not in the strict sense, a Methodenstreit, then perhaps, one should look for the source in Werturteilsstreit. the dispute succeeded in bringing to the fore not only methodological issues but also the aims of social sciences. For instance, Habermas-Albert debate is concerned with the connection of social-scientific theory and practice. The diversity of issues present in the positivist dispute suggest that there is not a

74. Ibid., P.xxviii.

single debate, but several debates are taking place.

However, due to paucity of space, we confine ourselves to the stances of Popper and Adorno and make minimum reference to those of others like Albert and Habermas who further developed the ramifications of the central difference between Popper and Adorno. The central theme of Adorno's theory is that society, the object of the study of sociology, is full of contradictions and yet determinable. While contesting the claims of Popper regarding social sciences, he concedes along with Dahrendorf that his counter-theses merely try to take up what Popper has said, and try to 'reflect' upon them further.

Popper locates the origin of scientific activity in the discovery of problems. The discovery of the problems, according to Popper, is "the discovery that something is not in order with our supposed knowledge and facts"⁷⁵. Popper's thesis assumes that the contradiction lies in the subject's inability in understanding the object. This implies that, clarity of thought and accumulation of knowledge help in resolving the contradiction. Developing Adorno's central theme, it is evident that contradictions apparent in society, necessarily develop in reality, and can, in no way be removed by more knowledge. To guarantee the perception of this contradictory nature of reality, Adorno extends rationality to it. He perceives this

75. Popper, Karl, 'The Logic of the Social Sciences'. The Positivist Dispute in German Sociology, Transl. Frisby David & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976), P.88.

contradiction as essential to reality. Adorno agrees that the transposition of natural scientific methods on social sciences, advocated by scientism is rightly rejected by Popper. But he goes further in his criticism than that would be in tune with Popper's model. Problems in sociology do not arise as elucidated in Popper's model. Here the problem is imputed to the deficiency in the subject and can be removed by knowledge. Adorno refuses to distinguish his position from Popper as combining both epistemological and practical concerns, while Popper refers only to the epistemological concern. Adorno finds separating both these concerns would be fetishizing science.

After the discovery that a problem exists, an attempt is made to propose a solution. The proposed solution is subject to criticism. An attempt at the criticism of the solution involves the reduction of thoughts (facts) to observation. Adorno counters Popper's argument by the thesis that, in the problems of social sciences only immanent criticism is possible. Criticism is, the development of the contradictions of reality through knowledge of them. Immanent criticism is never purely logical but concrete as well - it is the confrontation between concept and reality. For Popper, criticism signifies 'a pure mechanism of the temporary corroboration of the general statements of science', which according to Adorno, is a purely cognitive or

possibly 'subjective' concept of criticism.

Moreover, Adorno points out that the conception of problem, in Popper, has been tailored to meet the proposed format of the solution. The solution should be open to criticism and unless it is open to refutation, it cannot be regarded as scientific. For instance, "whether or not capitalist society will be impelled towards its collapse, as Marx asserted, through its own dynamic is a reasonable question, as long as questioning is not manipulated..."⁷⁶ The success of the 'hypotheses-solution' format in natural sciences offers no rationale for adopting the same in social sciences. Societal facts are not as predictable as the natural-scientific facts.

An individual phenomenon in the society can be only explained in its relation to the whole, and the whole cannot be explained away by a set of experimental observations. Adorno asserts that there is very little difference between solution and criticism. For instance, a solution which is simple and direct, when criticised, fulfills the inherent possibilities within the solution, thus extending our knowledge. Unlike Popper, who does not elaborate his stance apart from saying that a proposed solution must be subject to refutation, Adorno moves a step ahead. He postulates that since only immanent criticism is possible, there is no distinction between solution and criticism.

76. Adorno, Theodor, 'Introduction', The Positivist Dispute in German Sociology, Transl. Frisby David & Avey Glyn, (London: Heinemann Educational Books Ltd., 1976), P.42.

Popper sees the objectivity of science in the objectivity of critical method. He says, 'the main instrument of logical criticism - the logical contradiction - is objective'⁷⁷. There may not be an exclusive claim for formal logic in Popper's thesis, but there is at least this suggestion that formal logic serves as the organon of criticism. Adorno feels that Popper's concept of criticism inhibits logic by restricting it to scientific statements without regard to the logicity of its substratum, which it requires in order to be true to its own meaning.

Popper advocates a theory of scientific objectivity according to which "objectivity can only be explained in terms of social ideas such as competition (both of individual scientists and of various schools); tradition (mainly the critical tradition); social institutions (for instance, publication in various competing journals and through various competing publishers: discussion at congresses); the power of the state (its tolerance of free discussion)"⁷⁸. Adorno argues that the categories assumed above are not absolute. For instance, 'competition' involves the entire competitive mechanism. This ordering schemata negate apriori, the objective structures of the society.

Adorno maintains that Popper, while agreeing that objectivity of

77. Popper, Karl, 'The Logic of the Social Sciences', The Positivist Dispute in German Sociology, Transl. Frisby David & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976) P.90.

78. Ibid., P.96.

science does not depend upon the individual scientists, can offer no more solution than 'intersubjectivity' within an organised science. Therefore, according to Adorno, Popper did recognise that scientific co-operation is a social concern, but did not go into full implications of this 'social concern'. Social sciences is distinct from natural sciences, in that, the former has a dual character. It is subjective, in the sense that, it is a result of human creation. It is objective, in the sense that, there can be no subject over and above the society which can view it as an object. When the dual character is ignored as in the case of positivism, society can be viewed only as an object without accounting for its potential subjective character.

Positivism fails to account for this dual character due to its strict adherence to the principle of non-contradiction. Adorno points out that critical theory acknowledges this dual character, though is more in favour of society as the subject.

The maxim of trial and error, adopted by Popper, has unavoidable natural scientific association, according to Adorno. This principle goes against every thought that cannot be tested. Adorno thinks, the narrow confines of experiment rob sociology of the 'speculative moment' which is indispensable for societal knowledge. As mentioned earlier, Popper identifies objectivity of

science with the critical method. From the above assumption, Adorno draws a consequence which is in direct contrast with Popper's intention. Unlike Popper, Adorno insists that critical method should not be restricted to a self-reflection upon its statements, but extend to a critique of the object. It is a tall order for any method to adequately describe the object. Adorno points out the inescapable if not the unilateral dependence of reality upon the method present in Popper. In such a conception, the method has to strive to adequately define the object. Therefore, "the content of the theorem which is to be criticized decides when the critique of sociological categories is only that of the method, and when the discrepancy between concept and object is to the latter's detriment since it claims to be that which it is not. The critical path is not merely formal, but also material"⁷⁹.

Adorno, in his 'Introduction' in the *Positivist Dispute*, criticizes at length, the positivist concept of science. One has to keep in mind that this criticism cannot wholly apply to Popper. Adorno himself concedes this point when he says that Popper's position is more flexible than the normal positivist stand. Adorno says, "the positivists whilst striving to liquidate philosophy, advocate a philosophy which, resting on the authority of science, seeks to immunise itself against

79. Adorno, Theodor, 'Sociology and Empirical Research'. *The Positivist Dispute in German Sociology*. Transl. Frisby David & Adorno Glyn, (London: Heinemann Educational Books Ltd., 1976), P.114.

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itself" . Positivism, in its search for an objectivity which is almost external, still failed to counter the latent subjectivism that remains. For instance, in Carnap, the link with the older subjective positivism, still remained through his sensualist interpretation of protocol statements. Since these are simply given in language and are not immediately given as sense-certainty, it gave rise to Wittgenstein's problematic. But his language theory could in no way penetrate the latent subjectivism.

The objectivity of the structure, according to the dialectical theory, is the apriori of cognitive subjective reason. Dialectics, unlike a deductive system, is not a method independent of its object. It does not possess a canon of thought that can regulate it. Society is made up of human beings and is constituted through their functional connection. Any attempt at understanding is, therefore, through the recognition of the unreduced subject. In contrast, natural sciences offer a non-human object to study which we are compelled to situate objectivity entirely within the categorical mechanism, in abstract subjectivity. There seems to be a tacit approval on Adorno's part about the description of natural sciences according to the positivist model. Since he conceives the object of social sciences in an entirely different mould, he opposes any attempt

80. Adorno, Theodor, 'Introduction', The Positivist Dispute in German Sociology, Transl. Frisby David & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976), P.5.

at imposing the natural scientific model upon the social sciences.

The object of knowledge is mediated through the subject (which incidentally the positivists also admit), but the reverse is also true - the subject also forms a moment in the societal process. Therefore, in society, the harmonistic tendency of science, if applied, helps conceal the rift between the general and the particular. The unity of science represses the contradictory nature of its object. Society does not allow itself to be nailed down as a fact. This speaks of mediation. It also implies that the facts are neither final nor impenetrable. Totality is not an affirmative but a critical category. Dialectical concept of totality is the 'objective structure' through which every social individual observation can be understood.

The logical deductive model which the positivists strive for, is at the core of what has to be criticised for the dialecticians. Dialectical theory must always distance itself from the dominant system. Otherwise, it becomes undialectical. Popper distances himself from the traditional positivists when he concedes that a universal law-like hypotheses could not be regarded as meaningfully verifiable and this applies to even protocol statements. But, Adorno argues that this traditional positivist

thesis of verification cannot be replaced by a postulate of 'confirmation'.

Adorno continuing his criticism on positivism, extends it to the refined version of Popper. The success of the 'hypotheses-solutions' format in natural sciences, is no guarantee for transferring it to social sciences. Within the objective, law-like nature of society, is its contradictory nature, and ultimately its irrationality. It is the task of social theory to reflect upon the latter also and not to argue it away through adaptation to the ideal of prognosis either by corroboration or refutation. For instance, the appearance of social reality might not always reveal the principle facts underlying that structure of social reality. It is as though society imposes a false consciousness which has to be penetrated for any understanding of it.

A detailed examination of the above fact is possible through the criticisms of Adorno and Popper directed at 'sociology of knowledge'. Adorno agrees with Popper in his criticism of sociology of knowledge. But, Adorno points out that the form of 'ideology' represented in 'sociology of knowledge' is a degenerate form of the classical idea. The classical doctrines of ideology called it a 'socially necessary illusion'. An

attempt was made to explain the falseness of the ideology which has its base in the structure of the society. Sociology of knowledge dissolves the distinction between true and false consciousness in an attempt to arrive at the 'objectivity'. Adorno points out that, it has thus reverted to a pre-Marxian conception of science, thus taking a step backward.

But, Popper in failing to distinguish between the classical form of ideology and its present degenerate form, does not acknowledge the presence of ideology or false consciousness in the structure of society. This is evident especially when he points out that the objectivity of science is independent of the objectivity of the individual scientist. He rightly denounced the degenerate form of ideology in the above instance but at the same time did not see the presence of the authentic conception of the same as necessary.

As mentioned earlier, in sociology interpretation is not possible without a reference to the societal totality. The anticipation of totality alone would not suffice, if qualitative gap between essence and appearance is not considered. Totality is not a mere collection of facts nor can it be over and above the facts themselves. Adorno considers the importance of the exact recordings of empirical observations in social sciences while he believes that the role of the theory lies not only in

interpreting the empirical observation but also transforming itself in the course of the interpretation.

Popper contends that the quality of the social scientific work depends on the significance of the problem. Adorno says that Popper fails to qualify the fact that it is not always possible a priori to judge the relevance of the object. Among the attributes Popper uses to describe science like honesty, directness, etc., Adorno emphasizes the qualities of originality and boldness which are of course subject to criticism.

Adorno is in agreement with Popper in rejecting Psychology to be the basic science of social sciences. But the arguments offered for this conclusion are widely opposed to those of Popper. For instance, an organisation like the 'institution', though derives its structure through people constituted in a particular form, confronts the participants as something so alien that it cannot be meaningfully reduced to simple modes of human behaviour.

According to Adorno's thesis, society, grasped as societal totality, can be understood through all the moments actively participating in it. That is, society is mediated alike by Psychology, Economics, History etc.,. This is the reason why Adorno does not maintain a radical independence, similar to that of Popper, between the disciplines of Psychology and Sociology.

Popper advocates an 'open'society, which he presents as a consequence of his 'logic of social sciences'. But Adorno argues that Popper's construal of rational thinking conflicts with his idea of 'open'society. His close regimented thought postulated by his 'logic of science' as a 'deductive system' is against the idea of any experience that does not fit the aforesaid system. Adorno concedes that Popper did recognise the possibility of a critical discussion in the realm of values. But his initial liberality disappears when he adheres to the deductive system.

The fact-value dichotomy or the value-freedom maintained by Popper conflicts with Popper's own admission that scientific ideals of objectivity and value-freedom are in turn values. Secondly,

"the false chorismos of value-freedom and value reveals itself to be the same as that of theory and practice. Society, if it is understood as the functional context of human self-preservation, 'means' this: namely, that it aims objectively at a reproduction of its life which is consonant with the state of its powers. Otherwise, every societal arrangement - even

societalization itself - in the simplest cognitive sense, is absurd. As soon as it were no longer actually retarded by societal or scientific authoritative orders, the subjective reasons or the ends-means relation would be transformed into objective reason, which is contained in the axiological moment as a moment of knowledge itself. Value and value-freedom are mediated dialectically through one another" ⁸¹ .

Adorno charges Popper of having accepted the 'concept of science' as unproblematic. According to Popper, the conception of science which dominates today, and science as it exists today, are unproblematic. It only needs further elaboration and application in the realm of the social life. Adorno refuses to accept the central issue in social science methodology to be one of sharpening and elaboration. According to him, "no matter whether sociology as a science, has to maintain society in its particular functioning form... or whether sociology strives for the change of society's basic structures as a result of societal experience, this is determined down to the last category by the theory of science and therefore can scarcely be decided in terms of the theory of science... . Divergencies here are not those of world

81. Ibid., PP. 62-63.

view. They have their rightful place in logical and epistemological questions... . Dialectics remains intransigent in the dispute, since it believes that it continues to reflect beyond the point at which its opponents break off, namely, before the unquestioned authority of the institution of science"⁸² .

At a Congress of German Sociologists in Tübingen, the debate between Popper and Adorno, on 'the logic of social sciences', took place. The debate was carried on later by Albert and Habermas. The articles of the Congress, when brought out in the book 'The Positivist Dispute in German Sociology', there was included an 'Introduction', by Adorno which was originally not presented in the Tübingen discussion. In reply, Hans Albert wrote 'A Short Post Script to a Long Introduction'. Popper finally replied in his article 'Reason or Revolution', to the questions raised by Adorno in the 'Introduction', and later articles of Habermas. He, however, did not elaborate his position as Hans Albert already explicitly defended Popper in answering Habermas. He also felt that most of the questions and misunderstandings would be cleared by referring to his detailed works of 'Poverty of Historicism' and 'The Open Society and Its Enemies'.

As I have already presented a detailed version of Popper's theory in the chapter 'Critical Rationalism', I will deal mostly with

82. Ibid., P. 67.

the article 'Reason or Revolution' in this chapter. Popper charges that, by branding him a 'positivist' a highly misleading name was given to the debate in which he feels not one single 'positivist' is involved. Popper echoes Dahrendorf's remarks on the discussion, who felt that the discussion was "dominated neither by Popper nor Adorno, but instead, by a 'third man', conjured up by almost all participants in the discussion, but yet, against whom, the two symposiasts unreservedly adopted a common stance. This 'third man' was given several names by his friends and enemies alike - 'positive method', 'unmetaphysical positivism', 'empiricism', 'empirical research', and so on"⁸³.

The purpose of critical rational discussion, according to Popper, is to make the use of violence, obsolete. Our tentative hypotheses should be critically discussed and if need arises, they need to be eliminated without eliminating the propounders of the thesis. For any thesis to be subject to rational criticism, its formulation in simple, clear terms is essential for Popper. Popper, while conceding that natural scientists are no more objective than social scientists, says "If there is more 'objectivity' in the natural sciences, than this is because there is a better tradition, and higher standards of clarity and of rational criticism"⁸⁴. Adorno grants that the desire for a clear

83. Dahrendorf, Ralph , 'Remarks on the Discussion'. The Positivist Dispute In German Sociology. Transl. Frisby David & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976) P.125.

84. Popper, Karl , 'Reason or Revolution', The Positivist Dispute in German Sociology. Transl. Frisby David & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976), P.293.

expression, in explaining an object, is legitimate. This desire is to conceptualize clearly, what is not clear. But clarity, Adorno contends, cannot be made into a criterion for the object itself.

This is so, especially in social science -- sociology cannot be satisfied with the data derived from empirical observations but it must attempt to reveal the derivation of the contradictions from the data. For instance, consider a survey in political sociology, carried out in the form of questionnaires given to a sample population. A cursory observation would only reveal that the answers are 'true', in spite of their reference to subjective opinions. This is because, they form a part of the societal objectivity to which opinions themselves belong.

However, a more insightful study would have to analyse the contradictions arising in the context of the questionnaires' inconsistency - that is, in producing both true and false characterisations for a single object in question. For the progress of knowledge, the moment of immediacy must be transcended. Criticising the criterion of 'simple' formulations, Adorno traces its roots, back to the dogma of Descartes-"The most simple - whatever one could imagine this to be - is 'more true' than what is composed... . The reduction of the more complicated to the simple a priori, deserves greater merit... . Through its association with honesty, simplicity becomes a

scientific virtue" . But Adorno feels that it is the objects, which decide objectively, whether the social formulation should be simple or complex.

Popper, elaborates the criteria of 'clarity' and 'simplicity' extolling their virtues against the prevailing cult of un-understability in Germany. He points out that it has become a fashion in the academic circles, especially in Germany, to formulate even simple theses in high sounding impressive and thereby, often obscure jargon. He argues further that this incomprehensibility conflicts with the standard of truth and eliminates every possibility of critical discussion.

It is useful to recall Dahrendorf's remarks on the discussion at this point in the debate. He points out that, inspite of Adorno contending that the differences between him and Popper are determinable, as the debate proceeds, one is increasingly aware of the fact that the differences are obviously profound, not only in content, but also in the type of argumentation itself.

Refuting Popper's charges of un-understandability, Adorno says, "If one contaminates by association, dialectics and irrationalism, then one blinds oneself to the fact that criticism of the logic of non-contradiction does not suspend the latter but rather reflects upon it"⁸⁶ . Adorno's characterisation of society

85. Adorno, Theodor , 'Introduction', The Positivist Dispute In German Sociology, Transl. Frisby David & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976), P.40-41.

86. Ibid., P.66.

itself banishes any room for a simple clear formulation of the societal phenomena. The fact that social facts cannot be reduced to mere observation statements, according to Adorno, should not hinder critical discussion. The prejudice that knowledge has to confront states of affairs that in themselves are clear is a legacy of the positivist model. It is true that 'immediacy' is essential, to conceptualize even categories which distance themselves greatly from immediacy, as society. But, as mentioned earlier, this 'immediacy' has to be transcended to understand 'society'.

Popper concludes his remarks on the debate stating clearly that, he was labelled a 'positivist' by Adorno and Habermas, for no reason other than his interest and work in 'natural sciences'. He finds no other justification, as he was against the aping of the natural sciences, by social sciences, and also did not agree with the model of natural science put forward by the positivists.

But, Popper's rejection of the indictment that he is a positivist, has not convinced his critics, who on the other hand have substantiated their accusation. They question the nature of the 'thesis of falsifiability' proposed by Popper. According to Habermas, mistakes can be detected only if we first posit 'criteria for validation'. And these criteria are to be found

only in the origin or formation of knowledge, questions about which are rejected by Popper as philosophically illegitimate.

After Kant's proof of categorical elements in perception, the claims of sense-perception to finality were effectively dismissed. Therefore, first-hand experience of what is immediately perceived is not possible. But, according to Habermas, Popper draws radical conclusions from this. Empirical data are interpretations in the framework of previous, hence they share the latter's hypothetical character. All knowledge, hence in Popper's scheme is reduced to the level of opinions and conjectures. Even conjectures which have withstood rigorous testing remain at the level of 'suppositions'. Pure thought, sense-experience, established tradition - all lack authority as sources of knowledge. Hence, Popper concludes that the question of the derivation of knowledge must be replaced by the question of its validity.

He further contends that the positivist model in the form of verification of scientific statements is illegitimate. This is because it is dependent on the authority of the senses. According to Popper, our inquiry should be directed to a method which can uncover false opinions from among the mass of uncertain opinions. Habermas and Adorno agree to Popper's critique about the origin of knowledge, verifiability theory etc.,. But they

assert that 'mistakes' can be discovered only on the basis of the 'criteria of validation'. The standard of falsification is arbitrary, as this method advocated by Popper can be substantiated only by recourse to tradition, in this case, the critical tradition.

This critical tradition is the independent variable upon which thought and observation are dependent. "He assumes the epistemological independence of facts from the theories which should descriptively grasp these facts and the relations between them. Accordingly, tests examine theories against 'independent' facts. This thesis is the pivot of the positivistic problematic which Popper still retains"⁸⁷ .

According to Adorno and Habermas, Popper fails to reconcile the supposedly inherent uncertainty of scientific information with the technical confidence with which it is applied everywhere. But Albert, on behalf of Popper, contends this argument by attributing it to a confusion of the 'logical' with the 'sociological' questions. The same view is expressed by Elisabeth Stroker too. Her arguments are aimed both at revealing the inconsistencies within Popper's philosophy and the way in which these prove to be targets for critical theorists' attack.

She rightly points out that, according to his own principles,

87. Habermas, Jurgen , 'Rationalism Divided in Two', Positivism And Sociology, Ed. Anthony Giddens , P.200.

Popper cannot claim for an absolute foundation of critical rationalism. Therefore, he has to concede the risk of failure for his critical rationalism, even brought about by 'non-critical' and in his sense 'dogmatic' conceptions. Sensing this dilemma, Popper refrained from characterising his rationalism as a 'theory' of rationality, which would then be open to critical discussion. He calls it a 'general attitude' which requires nothing for it but a 'decision'. He further concedes that the 'decision' for a critical rationalism itself can be 'irrational'. According to Prof. Stroker, "Evidently it is the falsificational kernel in Popper's critical rationalism which entails this consequence"⁸⁸.

But she argues that, for a more fruitful debate it is not sufficient to accuse Popper of just blind decisionism. It is important to see this 'decisionism' as an intrinsic inconsistency in Popper's scheme. She agrees that it is to the merit of the critical theory to have pointed out the 'missing self-reflection' in Popper. But she further contends that, critical theory has done nothing to compensate the aforementioned inconsistency. Critical theory, on the other hand, propounds 'a fundamental technological interest in which science is rooted and that, allegedly, remains concealed by Popper's 'pseudo-rationalism'. She points out an important distinction that has to be borne in

88. Stroker, Elisabeth, 'Does Popper's Conventionalism Contradict His Critical Rationalism? Objectons Against Popper In German Philosophy And Some Metacritical Remarks', Methodology, Metaphysics and the History of Science, (Eds. R. Cohen and M. Wartofsky, D. Reidel Pub. 1984), P. 275.

mind by any critic: "First, what is wrong, inadequate in need of correction and complementation in a theory, and, second, what is brought forth or made impossible by such defects"⁸⁹. She agrees with Albert that critical theory often unreflectedly identifies the instrumental action of science with technical practice.

However, even if critical theory is guilty of such an illegitimate identification, the charge that Popper is guilty of positivism can be independently substantiated. It might appear that Popper is far from embracing positivism because, he repudiates the ideas of theory-free observations and unilateral dependence of theory over facts. But the more one observes the contrast between a radical construal of theory-observation relation propounded in the works of Kuhn and Feyerabend⁹⁰, the more one feels the need to consider the distinction between the positivist and Popperian views to be merely academic and non-substantial.

The distinction is further narrowed down when one notes that even eminent positivists did concede, the impossibility of absolutely theory-free observations. Comte notes,

89. Ibid., P. 278. (emphasis mine).

90. Particularly see Feyerabend Pk. 'Problems Of Empiricism' Vol. II, The Nature and Function of Scientific Theories. (Ed. R.G. Colodny, Univ. of Pittsburgh Press, 1970) -- Here, he lays bare a non-linear and dialectical relation between observation and theory that constitutes a radical departure from positivist idea of theory-free observations.

If on the one hand every positive theory has to be based on observations, it is, on the other hand, also true that our mind needs a theory in order to make observations. If, in contemplating the phenomena, we did not link them immediately with some principles, it would not only be impossible to combine isolated observations and draw any useful conclusions, we would not even be able to remember them, and for the most part the facts would not be noticed by our eyes" ⁹¹ .

If we accept Popper's claim that he is not a positivist since he does not grant the absolute theory freedom of observations, we will be pushed to the absurd position of not accepting Comte as a positivists. This renders apt, Von Wright's characterisation of critical rationalism as "the heir to the neo-positivism of the Vienna circle" ⁹² . Popper cannot dump Von Wright into the camp of the 'neo-Hegelian irrationalists', as he does with critical theory and its allied views. Von Wright is very forthright in his indictment when he says, "the somewhat patricidal anti-positivism of Popper and his followers must not be allowed to obscure the historic continuity... nor to blur the contrasts with the other professedly anti-positivist currents of contemporary philosophy. Essentially, the movement of thought sometimes called critical

91. Quoted by Frank, Philip, 'Einstein, Mach and Logical Positivism', Albert Einstein: Philosopher-Scientist Vol. I. (Ed. Schlipp, P.A. Harper&brothers, 1959), PP.277-8.

92. Wright, Von, Explanation and Understanding, (Cornell Univ.Press, 1971), P.9.

rationalism, is an upholder in our era of an intellectual tradition whose great classics are Comte and Mill"⁹³ .

Popper's crypto-positivism allows his critics to charge him of scientism. Apel argues that neo-positivism reduces Kant's transcendental logic to formal logic or to a logic of science. They seek to eliminate the question of cognitive interests from the basic problematic of the logic of science. Its restricted level of reflection becomes apparent when it seeks to extend its methodological ideals beyond the realms of natural sciences. Apel further points out that in this process of extrapolation from scientific methodology to a critical social philosophy, Popper commits two fallacies. Apel points out that the foundation of critical rationalism in Popper lies in the methodological ideal of unified science together with social engineering. But social technology does not possess its ideal pre-condition in the model of 'open society'. "The organization of understanding concerning necessary standards of social technology is, however, not itself a standard of social technology, and it cannot be supported merely on the basis of the results of science which has itself already made the subjects of understanding into the objects of empirical-analytical behavioural explanation"⁹⁴ .

93. Ibid., P.

94. Frisby, David , 'Introduction to English Translation', The Positivist Dispute in German Sociology. (London: Heinemann Educational Books Ltd., 1976), P. xxxv.

The second misunderstanding, according to Apel, arises due to an illegal transfer of the ideal of the community of scientists to a wider frame-work. Apel suggests that, it is thus evident that, extrapolation of scientific methodological ideals does not lie in the methods of natural sciences, but in the critical method which elevates the 'community of scientists' to the paradigm for an 'open society'. As a consequence, the cognitive interests of the natural sciences define the thought operations in critical argumentation. Apel concludes that the Popperian prejudice against the conception of a non-scientistically orientated methodological rationality limits the frame-work of critical rationalism.

This prejudice prevented the critical rationalists from ignoring hermeneutic dialectical philosophy which is concerned with "the identity and non-identity of the subject and object of communicative knowledge and action as interaction in an 'open society'" ⁹⁵. Apel points out that this failure is evident in the critical rationalist tradition itself in the works of Kuhn, Lakatos and Feysereband.

Adorno's charge that Popper is positivist, has an important political overtone. In making his charge, Adorno characterises positivism, not so much in terms of justificationist methodology, and foundationalist epistemology and similar other familiar

95. Quoted in Frisby, David, 'Introduction to English Translation', The Positivist Dispute in German Sociology. (London: Heinemann Educational Books Ltd., 1976), P. xxxvi.

tenets of positivism. After all Popper might argue, though not convincingly, against attributing such tenets to him. Hence, Adorno characterises positivism, as a view that rejects the distinction between appearance and reality. Adorno does not seem to be very much off the mark as positivism is rooted in the classical Empiricist tradition. Its fore-fathers like Hume, Mill, Mach, etc., swore by empiricism, whose central dictum was 'esse est percipi'.

Popper's sustained attack on 'essentialism' also give credence to Adorno's charge that Popper embraces positivism, by identifying appearance and reality. In the domain of social reality, such an identification results in the acceptance of the appearance of society as social reality. Such a social positivism can only make room for trivial changes in the current social order, and in the long run this serves the status quo. As Ackerman points out,⁹⁶ "Popper does seem to be a positivist in this sense" .

Adorno attempts to expose the highly conservative consequences of this position, which is portrayed by its upholders to be highly progressive and radical. But to be fair to Popper, he does recognise the contrast between the radical character of his theory of method, and the conservative character of his social theory. He says, "And it is a fact that my social theory(which favours gradual and piecemeal reform, reform controlled by a

96. Ackerman, Robert , 'Popper and German Social Philosophy', Popper and the Human Sciences, (Ed. Alan Musgrave, Martinus Nizoff's Pub. 1985), P.177.

critical comparison between expected and achieved results) contrasts strongly with my theory of method, which happens to be a theory of scientific and intellectual revolutions" .⁹⁷

Popper thus removes the teeth of Adorno's attack by the above confession. Popper thinks that he can afford such a confession, as he can establish a coherence between his radical view of science and conservative political philosophy. He tries to show that an adequate construal of rationality demands revolutionary spirit in science and conservative thinking in connection with social reality. This brings us to Popper's theory of rationality, the 'leit motif' of Popper's thought.

However, before we consider Popper's rationality thesis, a word about methodological individualism, the essence of his methodology of social sciences is in order. Methodological individualism fits well with the idea of society as an assemblage of freely acting individuals, an idea very much shared by Popper. But Popper's opposition to psychologism and other considerations compelled him to advocate seminal importance of institutions and their relative independence from individual humanbeings at least in short run.

Popper provides the social institutions, an ontological status and maintains their immunity to the will and action of individuals,

97. Popper, Karl , 'Reason or Revolution', The Positivist Dispute in German Sociology, Transl. Frisby David & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976), P. 291.

almost to the same extent as Marx does for relations of production. Whereas Marx was consistent since he does not maintain methodological individualism, Popper is not. To quote Ackerman,

"Methodological individualism suggests a loosely jointed society of independent individuals, but when it is coupled with a theory of institutions, it can lead quite quickly to a holism of its own. In the end, then, the choice is not a simple one - between measured change and uncontrollable disruption, or between piecemeal social engineering, it may be choice between holistic changes, even when power relations, class struggle, and misinformation are not considered" .⁹⁸

Hence, according to Ackerman, the need for Popperians "to a developed notion of rationality that can deal more effectively with value-conflict in the world as we find it"⁹⁹ . But Ackerman seems to forget that such a developed notion of rationality cannot be Popperian theory of rationality is inextricably linked with Popper's idea of piecemeal social engineering. As pointed out earlier, some of the criticisms mentioned above can be

98. Ackerman, Robert , 'Popper and German Social Philosophy', Popper and the Human Sciences, (Ed. Alan Musgrave, Martinus Nizoff's Pub. 1985), P. 180.

99. Ibid.

circumvented by developing an adequate theory of rationality. But Popper's theory of rationality itself suffers from serious inadequacies, such that it cannot be developed further.

As Elisabeth Stroker recognises, critical rationalism confronts a dilemma which it cannot resolve. As she points out,

"According to his own principles, an absolute foundation of critical rationalism cannot be possible; such a foundation would mean its immunization and thus its self-refutation. But if Popper remains in agreement with his own principles and denies the possibility of an unshakeable basis for his own conception, then he must allow the risk of failure for his critical rationalism, and even in principle admit that it can be brought to failure by 'non-critical', that is, in his sense, by dogmatic conceptions"¹⁰⁰ .

Popper was not blind to this dilemma. Anticipating such a predicament, he did not characterise his rationalist position as a 'theory' of rationality. Popper, therefore, remains a conventionalist, as the idea of decision is central to his thesis. Critical rationalism ends up in a predicament, no better

100. Stroker, Elisabeth, 'Does Popper's Conventionalism Contradict His Critical Rationalism? Objections Against Popper In German Philosophy and Some Metacritical Remarks', Methodology, Metaphysics, and the History of Science, (Ed. R. Cohen and M. Wartofsky, D. Riedel Pub. 1984), P. 275.

than Hume's. This does not, however, imply that critical theory is in a better position than critical rationalism. It only succeeds in showing Popper's theory of rationality as intrinsically inconsistent, and therefore, instead of standing up to its own claims, ends up as a 'halved rationalism'. The failure lies in their claim that scientific knowledge is guided only by an interest in technical availability. Prof. Stroker says, "What critical theory confuses here is the distinction between an instrumental activity aimed at examining theories and their claimed knowledge of reality, and a technical activity by which confirmed theories and the results to be gained by their application are transformed into technical products"¹⁰¹ .

The above mentioned confusion is both the cause and effect of the view of natural sciences entertained by critical theories. This is very clearly brought out in the writings of Adorno, whose idea of natural sciences even seems 'pre-Popperian'. In his attempt to bring a contrast between natural sciences and social sciences, Adorno characterises the natural sciences in positivistic terms. Thus, he asserts that the unique feature of social theories is that they are under-determined by facts. He ignored the well-established philosophical and historical truth that this is very much so even in the case of theories of natural sciences. He describes the procedure of natural science as 'part to

101. Ibid., P. 279.

whole'procedure. This description is not only naive but wrong. Adorno seems to have in mind the idea, that science only aims at generalisations inductively arrived at on the basis of particular instances.

First of all, empirical generalisations are very small part of scientific corpus. Secondly, the question of replacing one empirical law by another is determined by whether, that replacement affects adversely, the structure of the existing physical theory as a whole . After all, a bundle of laws do not constitute science. The laws exist as parts of an overall structure, in and through which, the laws stand inter-related. It is this fact that renders the description of scientific procedure as one that proceeds from part to whole, naive and simplistic. The 'whole' does not come into being, but exists throughout.

It is clear from the above exposition that Adorno shares the positivist construal of natural sciences. He fails, therefore, to develop a view which is diametrically opposed to 'positivism', whose personification he sees in Popper. In conceding the veracity of the positivist model for natural sciences, Adorno has lost the war. He can only console himself that he has won the battle by laying bare the 'positivist content' of the opponent's position.

CHAPTER V

CONCLUSION

As we have seen in our previous discussion Popper adopts methodological monism according to which the social sciences and natural sciences have a common method and their relation, in so far as method is concerned is one of identity. Adorno adopts methodological dualism according to which natural sciences and social sciences have essentially different methods, and their relation is one of difference. Popper construes willy_nilly that one method, in as we have seen positivistic terms. Adorno's methodological dualism accepts positivist characterisation of the method of natural sciences. Therefore, what is common to both Popper and Adorno is their construal of the method of natural sciences, irrespective of the gap between Popper's 'identity' thesis and Adorno's 'difference' thesis.

Not accepting the common thesis between the two, one can adopt a third alternative, namely, adopting methodological monism or characterising the method of science in non-positivistic terms. This means methodological monism is not a sufficient condition of positivism.

It is only a necessary condition. Hence the third alternative can be characterised as, anti-positivist methodological monism. The need for such an alternative, one may say, is the upshot of previous discussion concerning Popper-Adorno controversy. It may be added here, that the type of methodological monism advocated below, is in a qualified sense. It is not contended here that the method of social sciences and the method of natural sciences are absolutely identical. All that is maintained here is that the methods are identical enough to render methodological dualism unwarranted. In short, as against Popper's identity-thesis and Adorno's difference-thesis, the thesis maintained here is one of identity-in-difference.

What is central to any articulation of the third alternative is the post-Popperian development in philosophy of science, which have adversely affected the received view of natural science which constituted the paradigm of scientific knowledge. We will confine ourselves to two of the important developments in this connection. The first one concerns what is called the underdetermination of the theory by facts in natural sciences. According to this view which has been widely held at present, the scientific theories can neither be conclusively verified nor conclusively falsified by facts. Since the basis for acceptance cannot be constituted wholly by factual support, further determining criteria are necessary.

Such criteria have, "the status of rational postulates or conventions or heuristic devices at different historical periods- these include general metaphysical and material assumptions, e.g., about substance and causality, atoms or mechanisms, and formal judgements of simplicity, probability, analogy, etc.." ¹⁰² Also these further criteria include what are appropriately called value-judgements. It should be noted that these value-judgements are not simply those which pertain to the desirable or undesirable uses of the scientific result.

They are "evaluations that enter more intimately into theory constructions as assertions, that it is desirable that the universe be of such and such a kind, and that it is or is not broadly as it is desired to be" ¹⁰³ . However it is true that such values are filtered out, once the theory is accepted and the further development of the theory will not depend upon the acceptance of those criteria. As Mary Hesse points, "The 'filtering-out' mechanism has been powered by universal adoption of one overriding value for natural science, namely the criterion of increasingly successful prediction and control of the environment" ¹⁰⁴ . She calls this criterion pragmatic criterion.

102. Hesse, Mary, 'Theory and Value in the Social Sciences', Action and Interpretation Studies in the philosophy of the Social Sciences, (eds.: Christopher Hookway and Philip Pettit, Cambridge Univ. Press, 1978) P.1.

103. Ibid., P.2.

104. Ibid.

The moot point is that the theories of natural sciences and the theories of social sciences do not show any essential difference between them in so far as their acceptance is concerned and their respective criteria upon whose basis they are adopted. Hence it is wrongheaded to talk of the exclusive factual basis in the case of natural sciences. But it may be objected that further development of natural science theories is guided by successful empirical predictions whereas social science theories are not. But this argument does not warrant adoption of a dualist thesis on the grounds of the alleged factual basis of natural science theories. To quote Mary Hesse again, "There is also a sense in which value judgement enters into the very adoption of the pragmatic criterion itself- the judgement that the requirement of predictive success should override all other possible criteria of theory choice"¹⁰⁵.

So when social scientists adopt something else in the place of pragmatic criterion say, unmasking of social relations as in the case of Marxists, or facilitating value-relevant political action as in the case of Max Weber, they are merely exercising a value choice in connection with the development of their theories. Hence so far as the choice of criteria for the success of a theory and thus the aim of their discipline are concerned, they are adopting a value position as an alternative to another value position,

105. Ibid., P.3.

adopted by natural scientists. Therefore, it is unwarranted to demarcate natural sciences from social sciences on the basis of fact-value dichotomy.

In other words, value commitment is too ubiquitous to provide the much needed plank of fact-value dichotomy to warrant dualism. The second post-Popperian development is the idea concerning explanation. According to the received view, explanation is the aim of science and the structure of explanation is deductive nomological. These ideas originated in the deductive conception of knowledge that can be traced to the very origin of western philosophical tradition.

The deductive nomological conception of scientific explanation has come under fire because there are many types of explanation in natural sciences themselves which cannot be reduced to the deductive nomological form. The DN model received a further jolt when it was shown by Mary Hesse and others that, in a scientific explanation the domain of explanandum gets re-described by the very act of explanation¹⁰⁶ - a fact that militates against the very spirit of deductive nomological model. The picture of the theories that emerges from the emphasis placed upon the re-description of the explanandum is very close to that of 'metaphor'. The metaphorical construal of scientific theories so well articulated by Mary Hesse¹⁰⁷ and the construal of the aim of

106. Hesse, Mary, 'The Explanatory Function of Metaphor', Logic, Methodology and Philosophy of Science, (eds.: Y. Bar-Hillel, North Holland Pub. Amsterdam, 1964)

107. Ibid.

science as consisting in making things intelligible rather than explaining them, - so ably articulated by Finocchiaro¹⁰⁸ and others have adversely affected the view that the aim of science is explanation.

In the place of explanation, understanding as the aim of science has gained so much ground that, philosophers of science realised that the old idea of science as providing deductive explanations and the equation of the logical with rational that accompany the idea, owe their dominance not to any cognitive reason. It can be traced to the sociological fact of their consonance with the calculative mode of thinking, characteristic of capitalism and business society.¹⁰⁹ This metamorphosis of our idea of the aim of natural science from 'explanation' to 'understanding', belies the conventional understanding of the relation between natural and social sciences. Methodological dualists are wrong in thinking that natural and social sciences have different aims, explanation in the case of the former and understanding in the case of the latter.

Similarly, methodological monists like Popper are wrong to think that both natural and social sciences have the same aim of, explanation. For let alone the social sciences, even the natural

108. Finocchiaro, Maurice, 'Scientific Discoveries as Growth of Understanding : The Case of Newton's Gravitation' in Thomas Nickels (ed), Scientific Discovery. Logic and Rationality (D.Reidel, 1980)

109. Wartofsky, Marx W., 'Scientific Judgement : Creativity and Discovery in Scientific Thought', Scientific Discovery: Case Studies (ed.: Thomas Nickels, D. Reidel, 1980)

sciences cannot be taken to aim at explanation without arbitrarily overlooking the many facets of scientific theorising.

The above discussion brings out, however sketchily the complex relation between and natural and social sciences. It construes the relation between them in terms of identity-in-difference, though the identity aspect is emphasised more. It might appear that in steering clear of the two extremes of Popperian monism and Adorno's dualism, we are slightly leaning towards the Popperian position. But it is not true. Apart from the obvious fact that our picture of scientific method is far from that of the positivists, the position maintained here rejects the Popperian idea that, the explanations in natural sciences are somehow paradigmatic and therefore, those of social sciences must be modelled upon them.

In order not to entertain the pro-naturalistic science view, it is necessary to work out a theory of rationality exactly opposite to that of the positivists. It may be noted that, this is precisely where Adorno failed. We will end our dissertation with a few words regarding the nature of such a theory of rationality.

It is obvious that an anti-positivistic theory of rationality must base itself upon the theory of 'being' for the very requirement of it's being anti-positivistic. It is to Heidegger's credit that he recognised that one of the fundamental assumptions of British Empiricism which it shared with neo-Kantianism, is that the

'problem of Knowledge' rather than 'the problem of Being' is the central problem of Philosophy. Hence the subsumption of the 'problem of Being' under the 'problem of Knowledge' must be set at naught, if we want to develop an anti-positivist theory of rationality. So the answer to the question, 'what is rationality?' in the anti-positivist framework presupposes the answer to the question, 'what is Being?'. If as Heidegger thinks, "only in Man can Being be domiciled", then the question, 'what is the nature of Man?' is prior to the question concerning the nature of rationality.

"If the anti-positivistic theory of rationality locates rationality in the human being, it implies that ideally speaking all explanation must not only be didactic but also normative since in its framework, progressiveness, objectivity and rationality make sense only within the context of human needs and possibilities. If all explanations, ideally speaking, must be both didactic and normative, explanation in natural science where normativity is at its minimal must be treated as the limiting case of ideal explanation rather than as its paradigmatic case, as it is the case in the positivist framework" ¹¹⁰.

The failure to develop such a theory of rationality by Popper exposes the futility of his dis-avowal of positivism. On the other hand, Adorno's failure to develop the same lays bare the serious limitations of his anti-positivism.

110. Kulkarni, S.G., 'The Availability of a Marxian Critique of Technology', (Unpublished).

B I B L I O G R A P H Y

Ackermann, Robert.

'Popper and German Social Philosophy', in Popper and the Human Sciences, (Ed. Alan Musgrave, Martinus Nizhoff's Pub. 1985).

Adorno, Theodor , W.

'Sociology and Empirical Research' and 'Introduction', in The Positivist Dispute in German Sociology, Transl. David Frisby & Glyn Adey , (London: Heinemann Educational Books Ltd., 1976),

Arato, Andrew and Gebhardt, Eike, eds.

The Essential Frankfurt School Reader, with a "General Introduction" by Paul, Piccone, (Oxford: Basil Blackwell, 1978)

Dahrendorf, Ralph.

'Remarks on the Discussion', in The Positivist Dispute In German Sociology, Transl. David Frisby & Adey Glyn, (London: Heinemann Educational Books Ltd., 1976).

Frank, Philip.

'Einstein, Mach and Logical Positivism', in Albert Einstein: Philosopher-Scientist Vol.I, (Ed. Schlipp, P.A. Harper&brothers, 1959).

Frisby, David.

'Introduction to English Translation', in The Positivist Dispute in German Sociology, (eds: David Frisby and Adey Glyn) (London: Heinemann Educational Books Ltd., 1976).

Giddens, Anthony,

Positivism and Sociology, (ed., Anthony Giddens, Heinemann Educational Books Ltd., London, 1974).

Habermas, Jurgen

'Rationalism Divided in Two', in Positivism And Sociology, (Ed. Anthony Giddens)

Hesse, Mary

'Theory and Value in the Social Sciences', in Action and Interpretation Studies in the Philosophy of the Social Sciences (eds: Christopher Hookway and Philip Pettit, Cambridge Univ Press, 1978)

'The Explanatory Function of Metaphor' in Logic, Methodology and Philosophy of Science, (ed: Y. Bar-Hillel, North Holland Publishers, Amsterdam, 1964)

Horkheimer, Max

'Post Script', in Critical Theory, (Newyork: 1973).

Jay, Martin.

Dialectical Imagination (London: Heinemann Educational Books Ltd., 1973).

Kulkarni S.G

'The Availability of a Marxian Critique of Technology"
(unpublished)

Magee, Bryan.

Popper, (Fontana Modern Masters, 1973).

Passmore, John.

A Hundred Years of Philosophy , (Pelican, 1968)

Popper, Karl

'Scientific Reduction and the Essential Incompleteness of All Sciences, in Studies in the Philosophy of Biology, (ed., Fransisco Jose Ayala & Theodosius Dobzhansky, MacMillan, 1974).

The Logic Of Scientific Discovery (London: Hutchinson, 1968).

The Open Society and Its Enemies (Vol. I and Vol II) (London : Routledge & Kegan Paul Ltd., 1945).

Poverty Of Historicism , (London: Routledge and Kegan Paul, 1957)

'The Logic of Social Sciences', and 'Reason or Revolution' in The Positivist Dispute in German Sociology, Transl. David Frisby & Adey Glynn, (London: Heinemann Educational Books Ltd., 1976) .

Stroker, Elisabeth

'Does Popper's Conventionalism Contradict His Critical Rationalism? Objectons Against Popper In German Philosophy And Some Metacritical Remarks', in Methodology, Metaphysics and the History of Science, (Eds. R. Cohen and M. Wartofsky, D. Reidel Pub. 1984).

Von, Wright.

Explanation and Understanding, (Cornell Univ.Press, 1971).