CONCEPTION OF SCIENTIFIC METHODOLOGY IN SOCIAL SCIENCE: A CRITIQUE OF THE COMTEAN AND DURKHEIMIAN POSITIVISM

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Abstract
This paper conducts a philosophical examination of the claims of the unity of method between science and social science. It challenges the defence of what is held by some scholars as 'unified science' view and the extension of the method of natural science to social science. The claim, basically, is that the logical properties of an adequate explanation are the same throughout science, and by extension, applicable also to social science. In response, the paper examines the natures of the Comtean and Durkheimian scientific sociology which have had most profound influence on the methodology of social sciences. Comte expounds a system of the sciences, showing their theoretical interconnections and proceeds to add to the already existing sciences, a new science of sociology. This was based on his assumption that the methods of natural sciences can be extended to moral, social, political and religious problems. Comte believes that positivism would place philosophy and the social 'sciences' on the same intellectual foundation on which the sciences rested. Durkheim, on his part, goes a step further by refining the concept of positivism originally laid down by Comte, promoting what could be considered as a form of epistemological realism, as well as the use of hypothetico-deductive model in social science. However, the task of philosophy in relation to natural sciences is to clear up conceptual ambiguities and lay down standards of intelligibility, scientific status and validity. In this paper, we argue that these standard which are universalizable should equally apply to social science. We posit that if social scientific explanations are to count as "scientific" at all, they must conform to the standards already established in the natural sciences.
Keywords*:* Philosophy, Scientific Methodology, Positivism, Social Sciences.

Introduction

Positivist philosophy or 'positivism' is usually associated with the name of Auguste Comte and his philosophical descendants in sociology. Comte, specifically, devoted all his time developing a "social physics" that would be free of all speculation and anchored firmly in scientific knowledge. In this work, we critically examine the conception of the nature of scientific sociology which has had the greatest influence both on the practice of social scientists and on their conceptions of what they do. Positivists often concede that the social sciences have their special problem. Obviously, there are practical and logical obstacles to the use of the experimental method since social phenomena are far more complex. Our knowledge of social phenomena must pre-suppose a prior development of the more fundamental science and so on, but these are for the positivist, matters of detail or matters of history. But as a matter of fact, social scientific explanations if they are to count as 'scientific' at all must conform to the standard already established in the natural sciences. Suffice it to say that such pronouncements are usually made

in the name of some conception of the "Unity of Science". Though this may vary from the rather loose of uniformity of methods, and forms of explanation throughout science, to the much more demanding ideal of the 'reduction' of all sciences to the fundamental science of physics (Benson 12). Ironically, such a notion of the unity of science as a logical water tight system of statements, all deducible from a small number of premises, come close to the very ideal of metaphysics which the positivists are so devoted to debunking. In view of the foregoing, Keat and Urry argued that the transference of conceptions of science from the natural to the social sciences is not simple and direct. They posited that relating of methodological positions to given writers will be more problematic than in the case of natural science (69).

For the positivists, it is usual to say that sociology began at the beginning of the 19th century, with Henri de Saint – Simon and August Comte. Realists, by contrast, might argue that the subject of sociology conceived of more broadly than in the positivist formulation, lies in the 18th century Scottish Enlightenment and especially, in the works of Adam Ferguson and John Miller. Hence the 19th century sociology, as suggested by Swingewood, was poised between two paradigms – competitors, the Positivism of Saint – Simon, Comte, Mill, Spencer and Durkheim; and the realism of Miller, Ferguson, Marx and some later Marxists (Keat & Urry 69). In this work, we are not concerned with the latter group – the realists, but with the positivists and their claims to the application of scientific methodology.

Methodological Approaches in the Scientific Inquiry

In the history of the development of science, different methodological approaches have been put forward as a guide to scientific inquiry. These include inductivism, critical rationalism, positivism, anarchism, and so on. The method where general scientific laws are established from a great number of particular observations or facts of experience is known as inductivism. In his *Logic of Scientific Discovery*, Karl Popper first drew the attention of the scientific community to the fact that empirical sciences are characterized by inductive reasoning. This method gained currency during the great scientific revolution of the 17th century which was pioneered by the works of such scientists as Galileo and Newton. Critical rationalism, another method of science, which is associated with the Popperian School, has to do with the attempt to find fault with, or form and give a judgement or opinion on a scientific work by making it undergo the test of reasoning (Popper 112). This arose out of the debate over the issue of demarcating science from non-science or pseudo-science. In this regard, Popper introduced the falsifiability criterion which operates through observation and the conduct of empirical test or experimentation. He equally introduced the concepts of verisimilitude and corroboration to determine the degree to which a theory is falsifiable (Uduigwomen 70, 87). Imre Lakatos, "The Revisionary Popperian", in his *Criticism and the Growth of Knowledge*, proposed "falsificationism and the methodology of scientific research programme" as an alternative to the Popperian approach. This is owing to the fact that the inductivist and falsificationist accounts

of methods of science gives a piecemeal account of scientific theories in their assessment of the growth of scientific knowledge.

Thomas Kuhn, in his *The Structure of Scientific Revolution*, introduced the collaborative and sociological approach to method of science which entails scientists working as a team in the scientific community and solving scientific puzzles. Contrary to the common view that the history of science is characterized by the study of cumulative discovery, Kuhn posits that the history of science is essentially the study of discontinuous and incommensurable paradigms and paradigm shifts (Ojong 10, 11). The anarchist methodology of science was put forward and popularized by Paul Feyerabend. In his *Against Method*, Feyerabend avers that all methodologies of science have not provided adequate rules for the conduct of scientific inquiry. He opines that all methods employed in scientific inquiry have their shortcomings or limitations, and thus, the only rule that really holds is "anything goes" (Feyerabend 296).

The Positivist Methodology of Science

The foregoing, notwithstanding, the search for a suitable methodological approach to guide the scientific inquiry will be incomplete without positivism. Positivism is a term frequently used to characterize a number of theoretical positions in philosophy as well as in the social sciences. Positivism is defined as a general attitude of mind, a spirit of inquiry, an approach to the facts of human existence (Stumpf 340). Its central is first of all negative in that it rejects the assumption that human nature has some ultimate purpose or end. Secondly, positivism gives up any attempt to discover either the "essence" or secret causes of things. On the positive side, its spirit is expressed in the attempt to study facts by observing the constant remains between things and formulating the laws of science simply as the laws of constant relations between various phenomena (Stumpf 343). Positive Philosophy is based belief that we cannot have knowledge of anything but observable phenomena and the relations between them (Keat & Urry 72). This implies that science cannot inform us of the essence, or the underlying structure of such phenomena.

Positivism as a school of thought or philosophical ideology was given a head-start through the work of Auguste Comte, as earlier stated. The fundamental factor that drives the positivist methodology in science is the concern about what ought to be admitted into the corpus of scientific knowledge. Thus, the positivist approach is concerned with the establishment of criteria for the demarcation of science from non-science. In a broad sense, positivism holds that all genuine knowledge is based on sense experience and can only be advanced by means of observation, verification, confirmation and experimentation (Ojong 25). Consequently, knowledge gained through metaphysical speculations which excludes the aforesaid empirical method of arriving at knowledge are jettisoned as meaningless, spurious and unreliable. The work of Comte represents what we might call "Social Positivism". John Stuart Mill (1806-1873) and Herbert Spencer (1820-1903) both were in different ways influenced by the Comtean positivist movement and both

wrote books analysing Comtean system (Mill 1965; Spencer 1968). Mill, specifically, wished to secure moral progress with a thoroughly scientific analytical case. Mill's position in his *System of Logic*is the assumption that any methodological requirements valid in the natural sciences will be valid in the social sciences. However, Mill's view of the constituents of the progressive state was quite different from that of Comte in the area of "unchecked liberty" of thought and "unbounded freedom of individual action". Where Comte had argued that although the laws of the more fundamental sciences like chemistry and Physics were subsumed in the laws of the higher ones, like sociology, they could not alone generate the later, Mill inclined to the more atomistic view that they could. For him, social sciences was not like chemistry, in which combinations produced entities different in kind from their constituent elements. Mill's criticisms of the Comtean system were mainly motivated by his belief that Comte had not lived up sufficiently to his positivist principles. We shall come back to this in our critique of the Comtean positivism.

Another form of positivism is Evolutionary Positivism associated with Herbert Spencer and Ernst Haekel. Both Social and evolutionary positivism are centred on humans and are inspired by faith in the progress made in the empirical sciences. However, their point of divergence is that while Social Positivism is based on society and history, Evolutionary Positivism is based on nature which is the concern of biology, ecology and physics. There is also legal positivism which is opposed to the natural law theory by insisting that laws are the command of the sovereign. This school is ably represented by Jeremy Bentham, H.L.A. Hart, Hans Kelson, Joseph Raz, Cesare Lambroso (founder of the positivist school of penal law), and Richard Dworkin. Critical Positivism or empiro-criticism is another aspect of the philosophy and method of positivism. It came to the limelight in the last decade of the 19th century through the works of Ernest Mach and Richard A. Avenarius. The duo held that there is no real difference between the realms of the physical and psychical because a thing is both a set of sensations and the thought of it. They argue that although a thing is a set of sensations, it is the thought of the thing that enables us to talk of it as being 'perceived' or 'represented' (Uduigwomen 64, 65). Perhaps, one of the most popular forms of positivism is Logical Positivism coined by A.E. Blumberg and H. Feigl in 1931 to designate a set of philosophical ideas postulated by members of a group of scientists, mathematicians and philosophers, who addressed themselves as the "Vienna Circle". It was the position of this group that the success and growth of science was due largely to the restriction of the scientific inquiry to the domain of experience and matters of fact. Logical Positivism adopted the verification principle, according to which, a proposition is meaningful, if it can be verified directly (empirically) or is capable of being verified in future by empirical method.

On the Scientific Status of Social Sciences

Our task here is to consider the methodological question about the scientific status of the social sciences which is central to our discussions on the philosophy of the social sciences. This is the question of whether the social sciences should count as

sciences at all. We need to make a distinction between two aspects of the issue on hand. One, the first aspect deals with the question of whether, in fact, social science is scientific. Two, whether scientific study of human behaviour and society is possible. This focuses on the issue of whether human beings (Homo sapiens) can be understood scientifically (in terms of explanation, prediction and objective tests) in the same way as non-human, natural things? In responding to the first question, we have the following to say: (i) the aim of science is to discover general laws in terms of which certain conditions can be linked to particular events. Those laws apart from being universal in the sense that they should apply to all events or things of a certain kind are also precise and are rigorously formulated; (ii) that such laws enable us to explain and predict events and; (iii) that the search for such law is usually conducted in a systematic way, thus making possible the steady accumulative growth of scientific knowledge.

On the basis of the criteria enunciated above, it might be difficult to sustain the argument that social science fits perfectly in to the picture on the following grounds: (i) that social science have few generalizations which stand in comparison with such generalizations in scientific laws; (ii) that following from (i) above, there is nothing one can call social technology – a fact in which we can explain disparity in the level of human attainment in science and technology and human ability to fashion social orders that can guarantee for human peace, equity, justice, fairness and freedom; (iii) that human nature is so complex that objective tests (in consideration of human subjectivity) and accurate predictions (at all times and circumstances) seem quite difficult, if not impossible; (iv) that the steady and cumulative growth of scientific knowledge in the natural sciences is almost lacking in the social sciences (see Ryan 1970 & 1973). Those who claim that the study of human behaviour and humans in society is an empirical discipline see themselves as relying on the scientific method already established in the sciences such as observation and the formulation of hypothesis. The positivist under interrogation (Comte and Durkheim), and others such as Mill and Spencer, have thought of themselves as applying to social phenomena (event), the same sort of scientific investigative standard which are already applicable in the investigation of natural event or phenomena. For the positivist, then, the observation that there are uniformities in human societal behaviour provides, not just a necessary but also a sufficient ground for the possibility of the application of scientific procedures to the study of human behaviour and society. This position rests on the metaphysical assumption that since the world is a sequence of events (natural events) which occur in a law-governed manner, therefore, events that form human thoughts and actions cannot but follow the same pattern as well. It is argued that they are simply one sub-class of these events. Consequently, to deny that the scientific study of human behaviour is possible is to deny that human beings are a part of the natural world. Being that as it may, it is quite germane to point out here that human behaviour, unlike the natural objects or things we find in the world, is quite complex and unpredictable in a way that makes it difficult for investigators to achieve a symmetry between explanation and prediction. We shall now interrogate

the social positivism of Comte and Durkheim in our attempt to elucidate our position.

The Comtean Social Positivism

Although Auguste Comte (1798 – 1857), French social philosopher coined the term "positivisme" and is regarded as the founder of positive philosophy, he was by no means a profoundly original thinker either in philosophy or sociology. According to John Stuart Mill, 'positivism' was "the general property of the age" (Stumpf 340). It will be germane to approach his work through prior discussion of the philosophical tradition to which he belonged and the traditions of social thought which informed his work. Comte had begun his serious thinking in an age and at a place that were characterized by intellectual confusion and social instability (the France of the early nineteenth century). He gained from Saint-Simon a belief in the possibility of steady progress in human civilization, and from his study of the sciences, Comte acquired an almost religious respect for the precision and certainty of scientific knowledge. He synthesized these two strands in his thinking in a point of view which he named positivism. Negatively, Comte repudiated earlier philosophies, English at well as German, on the grounds that their speculation going beyond the limits of empirical verification, were meaningless. Constructively, he expounded a system of the sciences, showing their theoretical interconnections and proceeded to add to the already existing sciences, a new science of sociology. Comte based this development on his assumption that the methods of natural sciences can be extended to moral, social, political and religious problems. In all intents and purposes, he believed that positivism would place philosophy and social 'sciences' on the same intellectual foundation on which the sciences rested (Lamprecht 412).

The text which best demonstrates Comte's intellectual scope is the *Cours de philosophie positive* which was published in six volumes between 1830 and 1842. As a positivist, Comte stressed the need to base scientific theories on observation but his own writingswere "highly speculative" (Broom& Selznic, 4). He posited that although science made tremendous progress, we have not yet properly applied it to the issues that matter, where it can improve the social, political and moral spheres of human existence (Lawhead 435). Although many of Comte's ideas were not original with him, his work nevertheless represents "the first major systematic formulation of Modern Positivism" (*Encyclopedia Americana*, 451). The central themes of his work were the evolution of human mind and the necessity of devising scientific foundations for social rule. These themes, one a scientific doctrine, the other a political programme, became the component parts of the positivistic philosophy that he founded.

Cours De Philosophie Positive

Comte's positivism is expressed in his *Cours Phiosophie Positive* (or Course in Positive Philosophy). The Course begins with Comte's announcement of the discovery of a 'fundamental law' to which the development of the human mind is subject (primarily Comte's law refers to the human species, but he also believed

that this fundamental law was recapitulated in individual intellectual development).“This Law is that each of our principal conceptions, each branch of our knowledge, passes successively through three different theoretical states: the theological or fictitious, the metaphysical or abstract, and the scientific or positive” (18).Here, Comte presented his law of the three “theoretical conditions” of intellectual development. In the first, primitive “theological or fictitious stage where people rely on the power of supernatural beings existing beyond the physical world so that explanations are given ultimately in supernatural terms. In the second, “metaphysical” stage, explanations is ultimately theological, where supernatural entities are replaced with abstract notions. In the third and final, “positive”stage, the mind is freed by reason and observation from its vain egotistical search for “absolute notions”. Comte’s ideas, thus, became a major source of inspiration for the 19th century shift from metaphysical to “scientific” philosophy, which meant, at that time, that knowledge was sanctified by some sort of social verification. This is a complete reversal of the Cartesian notion of “cogito” - “I think, therefore 1 am”, in which certainty is grounded through the individual’s own internal relation to the truth. Truth in the new, “scientific” sense meant truth publicly verified. Further, in turning away from the Cartesian introspective philosophy, in which the appreciation of one’s own psychological states is taken as an epistemological yardstick, and moving toward the public, “sociological” realm of cross-verification and “social facts”,Comte articulated the first systematic account of social science, which he called “sociology” (Kolak 819)

Comte attempted to put into practice his intellectual project of a “sociology”, conforming to his notion of the positive method. First, the status of the class of phenomena which sociology takes as its object. All living beings present ‘two distinct orders of phenomena’ - those pertaining to the individual, and those pertaining the species. This distinction is of particular importance in the case of social species such as man. The second order of phenomenon are those pertaining to the species. Social phenomena are more complex and particular than the natural, and are also dependent upon the individual phenomena. But it does not follow that social psychology is merely an appendix of individual psychology (as St. Simon held), nor that the ‘collective study of species’ can be treated as a deduction from the study of the individual (as in Enlightenment political philosophy and classical political economy).The interaction of individual and the action of each generation upon its successor are the sources of a modification of the effects of the laws of individual phenomena (Benson 18). This modification is responsible for the autonomy of social phenomena, and its social conditions are the primary concern of sociology. Thus ‘social physics’ must be founded on a body of direct observation proper to it alone with regards to its intimate and necessary relation to psychology.

Once having delineated, to his satisfaction, the proper field of sociology, Comte sought to apply to it a “fundamental distinction”which he derives from the other sciences – especially biology. This is the distinction between the ‘static’ and ‘dynamic’ treatment of phenomena. In fact, Comte’s use of the distinction in no

sense corresponds to its use in other sciences, but it is nevertheless an important distinction. Social statics has as its objective the study of constituent parts of the different forms of social order and their mutual relationships, abstracting as far as possible from their 'movement' or 'development'. The laws proper to social statics are 'laws of co-existence'. Social dynamics has as its objective the discovery of general laws governing the overall development of human societies and ultimately of the human species itself. The Law of three stages which we have already discussed is a leading law of social dynamics. Comte advocated the positive study of order in the social statics, and of progress in the social dynamics, the consequences of which will be a reconciliation of the principles of progress and order or an orderly progress. Comte thought that as any kind of knowledge reaches the positive stage, the more it is general, simple and independent of other sciences. Since 'social physics', or sociology, is for him most complicated, individual and dependent of the sciences, it will be the last to reach that stage. Although sociology is dependent upon the other sciences, both for empirical data and development of their methodologies, sociology is reducible to three other sciences. Comte, therefore, opposed any theoretical reduction of the social to some other level.He said that in simpler inorganic sciences, the individual elements are much better known to us than the whole which they constitute. In this case, we must proceed from the simple to the compound. Thus, the growth of social conflict between workers and managers is explained by the fact that modern society is passing through a 'critical' stage before the re-establishment of the new 'organic' stage which will be positivistic.

A Critical Appraisal of the Comtean Positivism

Several important criticisms of Comte, and of the whole positivist programme for the social sciences, have to do with the notion of law-governed character of social phenomena, and in particular with Comte's distinction between two sorts of sociological laws. Some of these criticisms are directed from philosophical standpoints that are systematically opposed to the positivist one (collectively we can refer to these as 'humanism'). But other criticisms come from within the empiricist tradition (especially Karl Popper). The first criticism is that Comte's whole conception of an analogy between the application of social knowledge in political change, and the application of physical knowledge in industry warfare, trade and so on, hereafter referred to as "social engineering" is vitiated by Comte's defective concept of a "Law of succession" (Popper, 64). Popper's criticism is also (mis)directed against Marx on the (mistaken) view that Marx like Comte held a conception of history as a necessary sequence of stages. Comte did not specify how one distinguishes between empirical regularities (night following day) and the scientific law which would explain such regularities (like the rotation of the earth) (see Mill, 1965). He also holds to a more general instrumentalist or pragmatist view of science which in some ways run counter to his positivism. Following Comte's observation principle, it is unclear whether we can 'observe' society, since all that can be observed are various features, elements and consequences. He fails to specify just what he means by the observable, and hence by the unobservable and the scientifically illegitimate. Again, when Comte argues that it

is society which produces invariable and constant sequences, he uses society as a concept referring to the unobservable (see Keat & Urry) 75).The 'social' or 'society' as we can deduce from the foregoing premise, thus, refer to real entities which for Comte cause other phenomena to exist or persist. Consequently, Comte employs here a mode of explanation which in terms of his positivistic philosophy of science should be discarded as being metaphysical. As earlier noted, Mill in his work, *A System of Logic*, criticizes Comte for not living up sufficiently to his positivist principles. He sharply criticizes Comte's emphasis on methods of inquiry and neglect of methods of proof, though it should be added that his own statement of the canons of induction is susceptible to a similar criticism. Mill even more strongly disagrees with Comte's social outlook and called it "the completest system of spiritual and temporal despotism which ever yet emanated from a human brain, unless possibly that of Ignatius Loyola" (Frankel 338).

In his rejection of the Comtean model, Mill suggests that social sciences should be modelled upon Newtonian mechanics and this is interesting for three reasons. First, it is linked to his desire that science, and particularly social science, should enable us to predict events so that they can be more effectively controlled. Second, Newtonian mechanics can be seen as conforming well to the positivist ideal of explanation and as exemplifying a non-necessitarian view of causation. Third, Mill holds to an atomistic view of the universe which can be seen specifically in his methodological individualist interpretation of the social sciences. He argues that the laws governing the behaviour of people in social interaction can be inferred from the laws which govern the behaviour of individuals apart from society. Since the basic elements or atoms in society are individual people, it will be the laws of psychology from which all the laws and regularities relating to social life must be deduced. Thus, for both ontological and epistemological reasons, the laws of psychology are the only secure basis for social science. This is also because law-like relations between social phenomena cannot be observed in any simple sense nor can they in general be arrived at through experimentation (Keat & Urry 76). Thus, Mill advocates a kind of theoretical reductionism which we do not find in the Comtean system. However, it appears Mill, on his part, takes society for granted in a way that the continental intellectuals did not. He seems to lack the second condition for comprehensive sociological conceptions, the monistic confidence of the rationalist, the conviction that there was one principle which if established would ensure a society at once just, coherent and enduring.

The Durkheimian Positivism

The French thinker, Emile Durkheim (April 15, 1858– November 15, 1917), was profoundly preoccupied with the development of sociology as a legitimate science. He went a step further by refining the concept of positivism originally laid down by Auguste Comte, promoting what could be considered as a form of epistemological realism, as well as the use of hypothetico-deductive model in social science. His works, *The Division of Labour in Society* (1893), The Rules of Sociological Method (1895), and the famous *Suicide* (1897,), confirm him as a positivist as well as outline his positivist doctrine. Durkeheim's conception of

science is positivistic, holistic and realistic. However, the positivist doctrine is the predominant element while the rest are more perspicuously viewed as essentialist features.

There is a certain tension between the positivism of Comte or Durkheim and their belief in the irreducibility of the social. Hence, it would be wrong to characterize the sociological work of such writers as simply positivistic. The fully positivist programme would give behavioural definitions of mental states such as states of consciousness, moral beliefs, values and their motives and reasons for acting. It is quite germane to point that the Comtean positivism claimed that scientific laws could be deduced from empirical observations. However, the Durkheimian positivism going further, maintained that sociology would not only discover "apparent" laws, but would be able to discover the inherent nature of society. Durkheim describes his position as that of a 'scientific rationalist' and that he wishes to extend to the study of human behaviour the methods and procedures of natural science. Conceiving of science as the careful and clear establishment of law-like relations of cause and effect, he argues that sociology should be similarly concerned with the identification and establishment of such relations within the field of social behaviour. In his task of giving to sociology 'a method and a body', a realm of phenomena to be studied scientifically by the sociologist, included social facts, those morphological, demographic and ecological features, legal rules and institutionalized norms, established beliefs and practices and un-institutionalized social currents, which constitute the organisation of society into which any member is born and continues to act (Keat & Urry 78).

Durkheim argues that all that is subject to observation has the character of a thing, that such observations are fundamental base for any scientific enterprise. This position is obviously positivist. One of the objectives of the rules is the demonstration, against certain of Durkheim's philosophical opponents, of both the possibility and necessity of a specifically scientific knowledge of the social order and the attempt to construct a conception of the methods and forms of scientific explanation in their application to the new domain (Benson 84). Durkheim is of the view that sociology and psychology are separate levels of analysis and that even if reduction does turn out to be possible, sociologists would not have lost their raison d'etre (any more, we might say than chemists have lost their own because we can now reduce chemistry to physics) (Runciman 1972). Durkheim's claim for the autonomy of sociology can be sustained only at the cost of his claims for its empirical standing. Finally, Durkhéim asserted in his preface to the second edition of the *Rules of Sociological Method,* that the properties of the living cell are not properties of its constituents; the properties of water are not properties of hydrogen and oxygen; and in the same way, the properties of societies of society are not properties of the individuals who compose it (see page xviii).

A Critical Appraisal of the Durhkeimian Positivism

On close assessment, Durkheim's sociology can be criticized as being fatally vitiated by its illegitimate reification of collective concepts. His characterization of social facts as external to individuals, as exerting a coercive power over them and as not spontaneously intelligible or transparent to them, has equally provoked continuing opposition. The opposition comes from the tradition of thought which insists on the distinctiveness of the human world, and the consequent impossibility of a 'naturalscience' of human social relations. Durkheim's reification of the social world amounts to submission to a conservative scientific ideology. Although human agents are the creators of their social world, the world they create achieves its own independence. According to Popper in his *Poverty of Historicism*, men forget that their world is their own product and it becomes an alien power ever them, which they cannot understand, By contrast, in establishing the facticity of the social world as an epistemological conclusion, it seems Durkheim is arguing for the universal and necessary character of reified social forms. This is at once a denial of history and the advocacy of resignation in the face of a coercive status quo. His claim that the validation of historical or social-scientific discovery rests on empathetic intuition and his concomitant acceptance of psychologism has equally exposed him to incisive criticisms.

Conclusion

From all we have said so far, it is quite clear that sociological positivism championed by Comte advocated the development of a new positive, philosophical outlook of the society based on assumed certainties of science. Just as the dominant tradition at the period in the philosophy of science has been positivistic, so also is the predominant orientation in the historical development of social science. It has been argued here, that social scientific explanations should conform to the standards already established in the natural science, if they are to count as 'scientific'. The explanation and prediction of natural phenomena, their existence and interconnectedness are the primary objectives of science (Boersema 133-175). Phenomenon must not only be relevant in terms of explanation but also in testability. Thus, Hempel posits that science is 'concerned to develop a conception of the world that has a clear logical bearing on our experience and is thus capable of objective test' (1966; 1970).However, it should be added that this onerous task, as we seen in this paper, is not an easy one owing to the complexities of human nature and society.

The contradictions and problems we find in the Comtean and Durkheimian positivism are indicative of the inherent complexities we find in human nature in relation to society. Obviously, this makes the application of a pure scientific method to society quite problematic. This is to say that human behaviour is simply unpredictable unlike natural objects. Because of this nature of unpredictability, it is pretty difficult, if not impossible, for social science to achieve a symmetry between explanation and prediction which is easily achievable in natural science.

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