THE SOCIAL SCIENCES AND THE SCIENTIFIC STUDY OF SOCIETY:  
THE FACT – VALUE DICHOTOMY DEBATE REVISITED

UGUMANIM BASSEY OBO  
DEPARTMENT OF POLITICAL SCIENCE  
UNIVERSITY OF CALABAR  
CALABAR – NIGERIA  
Talk2obo@yahoo.com

THEOPHILUS OYIME ADEJUMO  
DEPARTMENT OF POLITICAL SCIENCE  
UNIVERSITY OF CALABAR  
CALABAR – NIGERIA  
theophilusoyime@yahoo.com

ABSTRACT

One major question which confronts students and scholars in the social sciences is whether facts and values can be separated in their researches. On the one hand, there are those who argue that with the use of some scientific tools, fact–value dichotomy is possible in the social sciences. On the other hand, others argue that in view of the subject matter of the social sciences, fact–value separation is impossible. This essay examines some of the arguments of these contending schools of thought, and an attempt is made to show that with the application of some instruments and techniques, systematic and objective inquiries can be conducted in the social sciences. It is acknowledged that it is unrealistic to expect the social sciences to be as exact and accurate as the natural sciences since both groups of disciplines have different subject matters. Furthermore, it is argued that the influence of personal values in research is not peculiar to the social sciences; the natural scientist is also influenced by his/her values.

Key Words – Science, Social Sciences, Facts, and Values.
I. INTRODUCTION

“...Is an objective social science possible? That depends on what one means by objectivity. Is a value-free social science possible? That depends on what one understands by values and the manner in which they enter into social scientific research. Does a value-laden social science preclude an objective one? That depends on whether or not values are themselves subject to rational, ‘objective’ inquiry and debate”.


“...Social science, any science, does not exist in a vacuum. It arises in a particular historical context, a particular mode of production. Science in any society is apt to be geared to the interests and impregnated with the values of the ruling class, which ultimately controls the conditions under which science is produced and consumed, by financing research, setting national priorities and controlling the educational system, etc...


One familiar question which perennially confronts students and researchers in the social science family is whether a scientific and an objective study of social phenomena is possible. On the one hand, there are those who contend that as disciplines which study man and the human society, the social sciences can be scientific and objective with the application of some of the techniques and methodologies developed in the natural sciences. On the other hand, there are those who fulminate the social sciences as “unscientific” and “value – laden”, and argue that in view of what these disciplines study, it is not possible for us to have a “science of society”. Within the context of Political Science, this unresolved problem is captured by Butley, Kelly, and Macnaugton (in Nna, 2000:95) thus:

One of the most persistent debates dividing political scholars in recent years centres around the notion of a scientific approach to the study of political life. Is a true science of politics possible? Can we study political problems in a fashion broadly similar to the scientific analysis of natural and physical events? Is it possible to accumulate a body of knowledge about political processes which will share the precision, objectivity and reliability characteristic of findings in the more conventionally accepted scientific disciplines?

Part of the argument of those who excori ate the social sciences is that an attribute of a “scientist” is the ability to clearly isolate his/her values, biases, and personal idiosyncrasies from his/her studies and researches; and that since this is impossible in the social sciences, the collapse of these disciplines is inevitable. This essay examines the core argument of the two dominant perspectives on the fact-value dichotomy debate in the social sciences. We shall attempt to re-echo germane questions such as: is a value-free social science possible? If so, is it desirable? If a value – free social science is not possible, at what points and in what manner do values enter into social scientific research? And if a value – free social science is a myth, is an objective social science also a myth? (Riley, 1974:1).
This essay is organized into five parts. Part one contains the introduction; in part two, an attempt is made to clarify the key concepts employed in this discourse. Some of the anti-social science arguments of critics of the scientific study of society are highlighted in part three. In part four, we examine the views of some of the scholars who contend that with the aid of appropriate tools and methods, scientific and objective social studies are possible. Part five contains the conclusion.

II. Conceptual Clarification

In order to guarantee some degree of analytical convenience, it is imperative for the major concepts employed in this essay to be situated within proper definitional perspectives. We agree with the assertion that social scientists may not always be unanimous in their usage of terms; nevertheless, they must have limited meanings for their concepts. Scholars must try to specify the sense(s) in which they use a term that may have more than one sense if they hope to be understood (Ogban-Iyam, 2007:20).

The word science is derived from the Latin word scire, which means “to know”. Science is difficult to define primarily because people often confuse its content with its methodology. To some, science connotes a prestigious undertaking; to others, it implies a body of true knowledge; to still others, it means an objective investigation of empirical phenomena (Frankfort-Nachmias and Nachmias, 1996:2-3). According to Hitchner and Levine (1981:2), narrowly, science consists of a body of facts and truths arranged systematically to show the operation of general laws, especially as they exist in the natural or physical world. More broadly, it is organized and verifiable knowledge, based upon objective observation and experience – in simplest terms, these conclusions founded upon the best available evidence.

It has also been reasoned that to the general public, science means the body of knowledge which is exact and capable of demonstration; systematic and illustrative of general laws. It is a method of gaining knowledge, a way of organizing information; it can also be described as a social institution embracing many members who have a special code of behaviour. Nothing is inherently scientific about energy, the sun, voting statistics or traffic jam, for example. They all become scientific when they are studied in a special way (Oyediran, 1998:3). The point has equally been made that science is a systematic (organized) body of knowledge as well as a method and a system of deriving the truth. It is systematic because it establishes or seeks to establish a relationship between theory and empirical facts. It gathers facts or data and links them together in their causal sequence with a view to drawing valid inference (Eminue, 2001:51).

According to The American College Dictionary (in Johari, 2005:30), science “is a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws”. In other words, a science is a systematized study of facts linked together in their causal sequence with a view to drawing valid inferences that may be subjected to empirical verification or experimentation (Johari, 2005:30). In the words of Pella, O’Hearn, and Gale (in Umoren, 1996:11),

(a) science proceeds as a series of approximations, and it attempts a systematic and comprehensive understanding of physical reality;
(b) science is not a finished enterprise, much is yet to be discovered. Its theories are tentative and the use of these theories is contingent upon their correctness;
(c) scientific knowledge is based upon observations of samples of matter that are accessible to public investigations and are capable of being replicated through independent and competent investigation;
(d) science proceed, on the assumption based upon experience, that time, space, and matter are real, and that nature is not capricious but consistent;
(e) every effect has a cause that can and should be quantified; the formulation as well as the establishment of laws are facilitated through the development of quantitative distinctions; and

(f) there is no method of science but many different possible ways of conducting scientific investigation.

There is no doubt that the fundamental purpose of science is the accumulation and classification of experience, and the systematization of such experience into a relatively small number of broad general laws and principles governing the specific categories into which phenomena can be classified. In the early stages of science, the task is to gather, define, and catalogue experiences in order to obtain an understanding of their inter-relationships. In the later stages of science, the task is to reduce to a minimum the number of laws necessary to express these relationships (Osuala, 2005:17). This view is corroborated by Welsh (1973:21) who points out that the purpose of science is to provide verified information and understanding in which we have confidence, and not merely faith, and that science seeks reliable knowledge on the basis of which we can not only explain what has happened and is happening but also predict, with reasonable success, the likelihood of given classes or types of developments happening in the future.

The phrase “social sciences” depicts a community of disciplines which principally study human behaviour and the society. They include Political Science, Economics, Public Administration, Sociology, Geography, Psychology, Anthropology, etc. As pointed out elsewhere (Obo, 2005:60-71), the essence of the social sciences is captured in their commitment to serve the society and humanity; and they do this by identifying the problems of the society and proffering solutions to them. They are all concerned in one way or another with the study of patterns of human interaction: that is, they share, in a broad sense, a common substantive focus and this common subject matter serves to set them apart from the natural and technical sciences. They also share a common methodological element: a commitment to scientific procedures of study (Welsh, 1973:17 and 21). We shall return to this latter point shortly. Lipset’s view (in Johari, 2005:42) that there “is almost no form of human behaviour which is not treated to some extent by each of the social sciences”, and that “each varies only in its primary area of interest” can hardly be controverted.

Facts and values can pose huge problems for anyone who attempts to define them. Although they are not the same, facts and values interpenetrate and are inherently linked, so that it is impossible to have one without the other. The point about facts is that they are generally agreed upon, and can be verified in ways that are not particularly controversial. That is, facts are empirically verifiable statements of what the world is like (Hoffman and Graham, 2009:xxix – xxx; Welsh, 1973:31).

According to Krech et al (in Eyo, 1980:243), values in their positive aspect refer to beliefs about what objects and actions are good and desirable and, therefore, ought to be; and in their negative aspect, they refer to beliefs about what objects and actions are bad and undesirable and, therefore, ought not to be. Values may refer to interests, pleasures, likes, preferences, duties, moral obligations, desires, wants, needs, aversions and attractions, and many other modalities of selective orientation. They may also refer to the standards or principles of worth, what makes something have value or it may refer to the worthy things themselves, the valuables, as it were (Pepper, in Williams Jr., 1968:283; Kaplan, 1974:84).

It should also be noted that values are both realistic and idealistic in nature. As ideals, values ought to inspire people, animate them and move them around their environment (for knowledge of what is required) so they can reflect on the long term attractiveness and repelling characteristics of the valued objects (Eyo, 1980:244). In the words of Welsh (1973:31), values are “should” or “ought” propositions, indicating what the person making the statement values or prefers. Value judgments are thus normative propositions that cannot be empirically verified.
III. The Untentability of Value – Free Social Science: Excerpts From The Idiographic World

As earlier stated, the social sciences focus mainly on the study of human behaviour and the society; and in the course of their studies, social science researchers endeavour to be as systematic, objective, and painstaking as possible. That is, with the adoption of certain techniques and procedures, the study of society can be conducted scientifically. However, this notion has been the subject of an age-long debate between two main schools of thought. On the one hand, there are some scholars who agree that a scientific and value-free study of social phenomena is possible; while on the other hand, there are those who argue that the idea of a “science of society” is untenable. These varying perspectives represent the nomothetic and ideographic schools respectively.

At the heart of the ideographic perspective is the contention that social science researchers cannot separate their values and biases from their studies, and since this value-neutrality is unattainable, the social sciences cannot be regarded as “scientific”. This view is captured by Bernstein (1979:xiv), who pointed out that it has been argued, for instance, that

> at the core of all social science is the acceptance of a rigid dichotomy between fact and value, and since this rigid distinction is not tenable, the whole of social science collapses.

The point has also been made that the social sciences cannot be “scientific” because of their subject matter. Political science, for example, is not an exact science like physics and chemistry because the material with which it deals is incapable of being treated in the same exact way. While the natural or physical sciences deal with matter, the social sciences deal with man in society. One chemical element is exactly the same the world over; any variations in its composition can be tested and explained. But it is difficult to consider problems of man in the same exact way as we consider problems of matter. Social phenomena are perpetually undergoing change and are more difficult to control. The motives which lead men to act, no less than the consequences of their acts, are so complex and variable that it is difficult accurately to determine the one or confidently to predict the other (Appadorai, 2000:5).

In his analysis of Political Science, Heywood (2007:17-18) identifies three main difficulties which confront any attempt to construct a “science of politics”, one of which he calls “the myth of neutrality in the social sciences”. According to him, whereas natural scientists may be able to approach their studies in an objective and impartial manner, holding no presuppositions about what they are going to discover, this is difficult and perhaps impossible to achieve in politics. He reasons that since family background, social experience, economic position, personal sympathies, etc build into each and everyone of us a set of preconceptions about politics and the world around us, scientific objectivity, in the sense of absolute impartiality or neutrality must always remain an unachievable goal in political analysis, however rigorous our research methods may be.

Focusing also on the study of politics, Duncan (1973:4) has observed that political theories are necessarily impregnated by values from the very beginning and such questions as what is human and what is inhuman, what degrades and what ennobles a man, what is a failure and what is an achievement, and what kind of social order can satisfy a man, are not empirical questions, though empirical evidence certainly bears upon them. In considering such questions, Duncan argued, judgment or preference and description – what is seen – are intimately linked. While examining Sociology, Becker (in Riley, 1974:123) contends that there is no position from which sociological research can be done that is not biased in one or another way. He points out that “we must always look at the matter from someone’s point of view”, and that the scientist who proposes to understand society must get into the situation enough to have a perspective on it.
In his analysis, Singer (in Nna, 2000:96) reinforces the view that the object of study of the social sciences is a huge obstacle against the scientific aspirations of these disciplines. As he puts it,

\textit{compared to students of physical and biological sciences, social scientists have a special difficulty: whereas the phenomena that concern other disciplines either remain in one place, or move only within a restricted space, people are mobile and elusive. And whereas molecules, cells, rocks, and planets have no will of their own, individuals and groups are constantly ‘getting ideas’ and changing their patterns of behaviour, most physical and biological phenomena can be brought into the laboratory and subjected to controlled scrutiny; but people cannot be put under a microscope or waded into a centrifuge.}

It has also been argued that the distinction between fact and value is untenable when purposive human behaviour is being analyzed, since in this context value judgments enter inextricably into what appear to be “purely descriptive” (or factual) statements. Moreover, it is claimed, an ethically neutral social science is in principle impossible, and not simply that it is difficult to attain; for if fact and value are indeed so fused that they cannot even be distinguished, value judgments cannot be eliminated from the social sciences unless all predictions are also eliminated from them, and therefore unless these sciences completely disappear (Nagel, 1961:490).

IV. \textbf{The Reality of Systematic And Objective Social Science: Views From the Nomothetic Camp}

Inspite of the fact that the idea of an objective and value – free social studies has been relentlessly inveighed, there are many scholars who posit that a distinction between fact and value in social science is possible. In fact, some have even questioned the very essence of the anti-social science arguments. As Nisbet (in Riley, 1974:5), for instance, puts it, the most unbelievable thing at the present time is the attack on objectivity in the social sciences. And in the words of Bernstein (1979:XIV),

\textit{some of the criticisms offered against the very idea of a social science modelled on the natural sciences are superficial and occasionally silly. Some critics have written as if this belief were based upon a simple or simplistic fallacy; that for example, all of social science is a naïve positivism, and since positivism has been refuted or at least severely modified, we can simply dismiss the claims of a social science that rests upon such faulty foundations...}

It is important to state that the influence of personal bias in a researcher’s choice of area or object of study is universal: it applies to both social and physical scientists. The claim that a social scientist is making value judgments when he characterizes respondents to questionnaires as uniformed, deceitful, or irrational can be matched by the equally sound claim that a physicist is also making such judgments when he describes a particular chronometer as inaccurate, a pump as inefficient, or a supporting platform as unstable. Like the social scientist in this example, the physicist is characterizing certain objects in his field of research; but, also like the social scientist, he is in addition expressing his disapproval of the characteristics he is ascribing to those objects (Nagel, 1961:494).
While considering Political Science closely, the point has been made that the question of whether the discipline is a science or not is unimportant as the problem is primarily one of definition. It is stated that if the term science is to be applied to any body of systematically organized knowledge based on facts ascertained by the empirical method and described by as much measurement as the material allows, then Political Science is a science just as other social sciences are. But if it is insisted that the term science is to be limited to those disciplines in which the scholar can control the material to be studied and can perform experiments that others can reproduce, given the same conditions and in which predictability is possible, then the label is less appropriate (Ugwu, 2000:17).

The preceding view is strongly supported by Welsh (1973:26), who, while acknowledging the limitations of Political Science as a scientific discipline, points out that the scientific character of a field of study or of any given piece of research, is determined by the methods used, not by the nature of the subject matter being studied. According to him, in principle, any phenomenon, any event, which can be observed is susceptible to scientific treatment, and since human behavior in a variety of political situations can be observed, a science of politics is – in principle – possible.

There is no doubt that human beings are the least controllable, verifiable, law-obeying, and predictable of subjects; but in spite of this, political scientists, for example, have been able to improve the methods of study of their discipline by borrowing for use from the physical sciences, their research skills, tools, techniques, and concepts. Thus, contemporary political scientists, especially the behaviourally inclined, in their research investigations, demonstrate commitment to rigorous empiricism in the collection of data and analysis. There is now extensive use of sample survey for gathering information and statistical methods for quantifying the data, the use of computers, as well as the recording of these on charts, graphs, scales and tables (Anifowose, 1999:14). On his part, Pollock (in Appadorai, 2000:6) maintains that there is a science of politics in the same sense and nearly to the same extent as there is a science of morals. As he puts it,

*those who deny the existence of a political science, if they mean that there is no body of rules or law from which a prime minister may infallibly learn how to command a majority in parliament, would be right as to the fact, but would betray a rather inadequate notion of what science is.*

The point has been forcefully made that politics, like other social sciences, has a scientific character because the scientific method is applicable to its phenomena, viz, the accumulation of facts, the linking of these together in causal sequences and the generalization from the latter of fundamental principles or laws. It is true, the argument continues, that the laboratory method of experiment is difficult with social science; but the whole field of historical facts and the facts of the contemporary world are there for the student to observe, classify, connect, and compare for the formulation of general principles. Take, for instance, the study of revolutions, their causes and cure. The revolutions of history, such as the English Revolution of 1688, the French Revolution of 1789, the Russian Revolution of 1917 and the Chinese Revolution of 1949, are the materials for the student to study and compare. Aristotle was able by a study of the revolutions prior to his day (he studied the history of 158 constitutions) to formulate the generalization that the most general cause of revolutionary movements was the craving of men for equality; and their best preventive, the principle of the mean. It is not only a tribute to the wisdom of Aristotle but to the possibility of the scientific character of political investigation, that this generalization applies to the revolutions since his day (Appadorai, 2000:6-7).
Commenting specifically on Political Science, Lord Bryce tends to admit its shortcomings as a scientific discipline, but he also agrees that a systematic and value–free research is possible in Politics. According to him, in calling Politics a science we mean no more than this: that there is a constancy and uniformity in the tendencies of human nature which enable us to regard the acts of men at one time as due to the same causes which have governed their acts at previous times. He points out that acts can be grouped and connected, can be arranged and studied, as being the results of the same generally operative tendencies. Moreover,

the data of politics are the acts of men. The laws of political science are the tendencies of human nature and are embodied in the institutions men have created. These tendencies are in so far uniform and permanent that we can lay down general propositions about human nature and can form these propositions into a connected system of knowledge (Lord Bryce, in Landau, 1972:19).

From the foregoing, it is clear that those who support a scientific study in social science posit that questions about the possibility of a value–free social science must be answered affirmatively in favour, if not of a value–free social science, at least of one in which the role of values does not preclude objectivity. This is because in gaining propositional knowledge about society, social scientists are not creating or constructing a social world whose structures, relationships, and processes are dependent for their existence on the researchers’ values, beliefs, wishes, sympathies, or prejudices. Rather, they are discovering “what is the case” with respect to the social world, discovering facts whose existence is independent of the researchers’ states of mind. It is for this reason that the knowledge generated by the social sciences has been thought to be applicable to social and political problems, and other facets of the social world that also possess an independent existence. Objectivity and value neutrality, for these philosophers and social scientists, is just the discovering of such facts (Riley, 1974:3).
V. Conclusion

In this essay, we have attempted to redirect attention to the debate on whether it is possible for facts and values to be separated in social science researches. At the centre of this debate is the issue of whether the social sciences are really scientific, or whether there is some feature of social life that prohibits the application of scientific techniques to the study of social phenomena (Chilcote, in Bassey, 2006:18). We have briefly highlighted some of the views on both sides of the polemical divide, and it is obvious that given the vehemence of some of the arguments, the debate may not end in the nearest future.

It has to be clearly stated that in spite of the enthusiasm and optimism of the behaviouralists, the social sciences cannot be placed on the same scientific pedestal with the natural or physical sciences; the reason is that while a very complex phenomenon called man is the object of study of the former, inanimate objects which are easily controllable constitute the subject matter of the latter. It is equally important to point out that man as a social scientist, and man as a natural or physical scientist, both have values and biases; therefore, the influence of values in research is not peculiar to the social sciences. It also applies to the natural or physical sciences. This point cannot be wished away. Indeed,

...men, even scientific men, are not angels. Indeed, the entire system of science is based on a variation of Murphy's Law – the prime assumption that any scientist, no matter how careful he may be, is a risky actor; that he is prone to error; that he is not perfectable; that there are no algorithms which he can apply so perfectly as to expunge any and all biasing effects. Accordingly, all his proposals must be subject to error – correcting procedures... (Landau, 1972:44).
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