

# LOCATING POSITIVISM IN SOCIAL SCIENCE RESEARCH: AN APPROACH OR A MOVEMENT?

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**Abstract:** Positivism has remained a major theory of study and debate among scholars of social sciences since its conceptualisation back in the 19<sup>th</sup> century. Though it is mainly treated as an approach to knowledge, its standing and relevance as one has faced questions and criticism from time to time. This paper aims to draw a simplistic chronology of the development of positivism as an approach and while in the process tries to point out its core weaknesses as identified by scholars of different generations. This paper proposes that the fundamental success of positivism lies in its influence as a movement for upholding the scientific rigour in social sciences, replacing the prevailing normative or metaphysical discourses, rather than as an approach itself.

**Keywords:** Positivism, Post-positivism, Knowledge, Science, Empirical, Value

## Introduction:

To begin the intended discussion, it is first necessary to describe what we mean by 'knowledge'. The Cambridge Dictionary defines knowledge as 'understanding of or information about a subject that you get by experience or study, either known by one person or by people generally' or as 'the state of knowing about or being familiar with something'.<sup>i</sup> Another commonly accepted source, Merriam-Webster, defines knowledge as 'the fact or condition of knowing something with familiarity gained through experience or association' or as 'the sum of what is known: the body of truth, information, and principles acquired by humankind'.<sup>ii</sup> It is clearly observable that the emphasis lies on three-four keywords; association, experience, the body of truth, and generality. This is a common man's approach to the word, knowledge, nonetheless. In the case of a researcher, it takes a difficult turn. The reason being a whole bunch of thought has been dedicated to deciphering the meaning and sources of it. Our point of discussion, positivism, is one of them. Though it is mainly concerned with how to gain knowledge or how to reach 'the truth' in an acceptable way.

The study of society and social phenomena used to be done mostly on the basis of speculation, logic, and theology and, in some cases, rational analysis, till the middle of the nineteenth century. This prevalent practice took a blow when the French philosopher August Comte labeled these processes of gaining knowledge about social phenomena as inadequate. He proposed the *Positive Method*, in 1848, in the arena of social science research. He observed that social science should not be studied through logic or theological principles or metaphysics but rather in society itself and in the structure of social relations. He described his method as scientific and he strongly believed that his scientific method, named positivism, was the most appropriate as well as efficient tool for learning truths about society. This method dismissed any speculation or normative thinking and instead promoted empiricism (gathering real-life data and conclusions based on analysis of those data gathered by sensory experiences) in the field of social sciences.<sup>iii</sup>

Comte's position on knowledge that it can be derived only from sensory experiences was criticised by some branches within the positivist school and obviously by others standing outside it. A branch, known as logical positivists, challenged Comte's original position and expanded the domain of the school while criticising it. On the other hand, two major schools of thought emerged outside the positivist domain which not only criticised the positivist assumptions but also provided two different approaches to knowledge; these branches are called Scientific Realist school and Interpretivist school. Marxist scholars also criticised Comte's stand sharply. But weathering all these criticisms, empiricism came to be accepted widely during the 1950s and 1960s (for example Behavioural Revolution in the field of Politics and International Relations).

## Background of Positivism:

In the larger context of western philosophy, positivism defines a system that restricts itself to a set of data gathered by experiences and excludes anything which is *a priori* or metaphysical in nature.<sup>iv</sup> To be more precise, the term refers principally to the thought of the French philosopher Auguste Comte (1798–1857). Both as a philosophical ideology and a movement, its distinctive features are first found in the works of Comte, who also named and systematized the discipline of sociology. Later on it was developed by a host of European thinkers and over the course of time it came to be known as, during different stages of development, empiriocriticism, logical positivism, and logical empiricism, finally merging, in the middle of the 20th century, into the tradition known as analytic philosophy.<sup>v</sup>

One can trace the roots of positivism to the French Enlightenment, which stresses reason over any arbitrary formulation, and also to the 18th-century British empiricism, especially in the works of Hume and Bishop Berkeley, which values only the role of sensory experiences. Comte was also influenced by, to a great extent, the Enlightenment Encyclopaedists (such as Diderot, and d'Alembert). In his social thinking, he was overwhelmingly influenced by the founder of French socialism, Claude-Henri, Comte de Saint-Simon, whose disciple he used to be in his early years and from whom the very term *positivism* stems.<sup>vi</sup>

## Basic tenets of Positivism:

Positivism can usually be defined by the following three distinctive features:

- (1) Scientific methods (i.e. the testing of hypotheses derived from pre-existing theories or making theories in an inductive process by gathering data) may be applied to the study of social life,
- (2) Knowledge is generated through observation only (empiricism); and
- (3) Facts and values are distinct which makes objective inquiry possible even in social sciences.

Positivism maintains that reliable knowledge about the social world is limited to what can be observed and that social phenomena can be explained and predicted by discovering regularities and patterns. These assumptions of positivist school are different at the core from other ways or approaches of knowledge. A research is a process of seeking truth and it can be conducted only by applying the principles of empiricism, positivists believe.

Halperin and Heath point out four tenets of positivism, namely:

1. Naturalism,
2. Empiricism,
3. The goal of social science as to explain and predict social phenomena by means of laws, and
4. The possibility of making distinction between values and facts.

The first principle stresses the idea that there is no fundamental difference between social and natural worlds. Thus, seeking knowledge in both the worlds may go by identical processes. This paves the way for using scientific tools in analysing social phenomena. The second principle, empiricism, maintains that knowledge about society can be attained only through sensory experiences. To elaborate, what cannot be observed, cannot be the basis of knowledge. The third tenet is best explained by the German logician Carl Gustav Hempel as he argues that if the discovery of laws is necessary in the physical or natural sciences, then laws must be necessary also in social sciences. Given the social world is like natural world, it should be regular, systematic and law-governed like that too. There are regularities in social and political processes; and we can explain social events and phenomena by means of law-like generalizations that have the same status as natural scientific laws. The fourth principle stresses the idea that statement of facts and normative statements can be easily differentiated. Statement of facts are necessarily based on sensory experiences and observations while normative statements come from value systems, beliefs, norms etc. In social science research, if it tries to attain truth, it is a must that the scientific ways be followed and there is no space for values in it. Positivism also champions causation strongly.<sup>vii</sup>

## Later developments:

Two important groups—the Vienna Circle and the Berlin Society for Empirical Philosophy—have extended and rejigged the domain of classical positivism as a call of time in the early twentieth century. A.E. Blumberg and Herbert Feigl later, in 1931, coined the term Logical Positivism to mark their departure on some key issues from the classical stand. Logical positivism began as a movement within philosophy, inspired by developments of twentieth century logic and mathematics. The vision was to incorporate logical reasoning and mathematics as

sources of knowledge in addition to empiricism that was already there. It championed an idea of combining induction (based on empiricism) and deduction (in the form of logic) as methods of reasoning in any social inquiry.<sup>viii</sup> Ernst Mach, Ludwig Boltzmann and Moritz Schlick led the movement. The Vienna Circle also adopted the 'verification principle', which stated that no statement was meaningful unless it meets the standard of being verified, following Wittgenstein's influence.<sup>ix</sup>

The primary task of logical positivism, which it assigned to itself, was to clarify the meanings of basic concepts and affirmations and not to run wild in trying to answer unanswerable questions (such issues concerning the nature of ultimate reality or of the Absolute).<sup>x</sup> In German-speaking countries, a particularly ambitious, idealistic and absolutist type of metaphysics was still prevalent among the academic circles (following the legacy of Hegel) even during first few decades of 20<sup>th</sup> century. The scholars affiliated to the positivist tradition of thought believed a correction was necessary. They viewed metaphysics as a miserably unproductive way of trying to do what creative and performing arts were already doing pretty effectively. These activities, they held, are expressions of visions, feelings, and emotions and, as such, are perfectly legitimate as long as they make no claims to genuine representation of reality. On the other hand, what logical positivism positively recommended was a logic and methodology and the validation procedures of knowledge and of evaluation.<sup>xi</sup>

### ***Post-positivism***

Post-positivism (also called post-empiricism) is an extension of positivist tradition of thought which came into being by way of critique and amends to classical positivism. While positivists propose independence between the researcher and her object of research or *the researched* as such, post-positivists argue that that independence does not ensure value neutrality and theories, hypotheses, background knowledge and judgement of the researcher can still influence what is being observed. The most significant departure of the post-positivists from the original position is their acceptance of value imposition and recognition of the possible effects of biases even when a study is being pursued in a thoroughly objective manner. They also accept qualitative methods, as well as quantitative ones, as valid source of knowledge.<sup>xii</sup>

Critical Realism is one of the most common form of post-positivism, though with some basic differences. We sometimes forget to remember this fact that the positivists are also realists. The difference lies in the stand that the post-positivists believe observations are fallible and theories are open to be revised over time.<sup>xiii</sup> Positivists believe that objectivity has to reside within the individual scientist. Scientists are to be held accountable for putting aside their biases and beliefs while seeing the world as it 'really' is. Post-positivists reject this very idea of any individual researcher seeing the world as perfectly as it is. It believes every individual is somewhat biased, even if she tries best to avert that biasness, and as a result all observations are affected to some extent (be it theory-laden or value-laden).<sup>xiv</sup>

Post-positivism is not to be taken as a rejection, rather it was a reaction and advancement with reform of classical positivism to face the critiques of Karl Popper and Thomas Kuhn thrown upon it. It kept the basic assumptions positivism intact while extending the horizon to meet up the challenges of an ever-changing human society.

### **Criticism:**

Positivism's greatest weakness is its treatment of natural and social worlds alike. In an attempt to establish neutrality and universality in social sciences like that of natural sciences, positivism forgets to draw the line and as a result messed itself up as an analytical tool. In a rush to make social sciences more scientific, it evades some basic distinctions between the social and natural worlds which have been shown by Mash and Furlong. First, social structures do not enjoy independent existence of which they are product of or of the activities they shape. Second, social structures are not independent of its agents' view either; these agents frequently alter the behaviour of the institutions to which they belong and they do so by reflecting upon it. This kind of association is absent in the natural world. Third, as social structures are shaped by its agents' actions, they will therefore change depending upon a host of factors such as time and location. Positivists' failure to identify these differences and as a result not responding to these issues make their position quite vulnerable and they had to face biting criticism for it.<sup>xv</sup>

The second weakness of positivism is related to its claim of certainty, almost to the level of fantasy. As Crotty says, "articulating scientific knowledge is one thing; claiming that scientific knowledge is utterly objective and that only scientific knowledge is valid, certain and accurate is another".<sup>xvi</sup> The claims made by positivists in the realm of social sciences faced a major blow, in the 1940s, from the fields of natural sciences which they tend to look up as ideal with regard to knowledge. With the advancement of Quantum Physics, first propagated clearly

by Heisenberg and Bohr, it became evident that it was impossible to accurately determine certain qualities of subatomic particles, and that the observation of particles in fact alters them, making it more difficult to draw any conclusive argument. This development raised questions both about the ability to accumulate accurate information and the independence of researcher from the subject.<sup>xvii</sup>

There is another major loophole of positivism as identified by Quine; where he argues that there is discrepancy between the theory and practice of the scientific method. According to him, any sensory experience must be mediated through the concepts that we use to analyse it and as such there is no way of describing experiences without first interpreting it.<sup>xviii</sup>

### ***Critique by Karl Popper***

We have said that logical positivism introduced the idea that social inquiry should combine both inductive and deductive methods. It also recognized and upheld 'verification' (of statements or propositions) as the primary goal of any social science enquiry. Both of these tenets of logical positivism became the target of a critique by Karl Popper in the book named 'the Logic of Scientific Discovery' published in 1959 (Though originally published in German in 1934, the book became popular and central to the debate during upsurge of the positivist methodology in social sciences in 1950s, like the behavioural revolution in Political Science). Popper's critique had a tremendous impact on the ongoing debate about methods and approaches to knowledge in general and in social-scientific thoughts in particular.

The main contention of Popper was that induction must be rejected entirely. By the same breath, he rejected verifiability as the basis of establishment of truth. In fact, the argument he advanced for rejecting induction also provided grounds for rejecting verifiability as a basis for founding truth claims. According to him, since it takes only single exception to nullify a truth claim, empirical observation alone cannot generate laws as such. Popper concludes that, rather than endeavouring to discover laws through induction, what scientists should be doing is testing theory deductively. This critique of induction leads him to reject another principle of logical positivism; that of verifying hypotheses. Popper argues that, since a single exception to the rule destroys inductively produced theory, then conclusive verification of a hypothesis is impossible.

In rejecting induction as a viable method, Popper was also refuting the idea that observation provides the basis for generalizations or the formulation of scientific theories. As theories cannot be derived from observation (induction), according to Popper, he concludes that social inquiry must proceed deductively. It must go through a process in which observations are not the basis of theories, but are derived from them and can be used to test or falsify them. According to Popper's notion of falsifiability, a research must seek to falsify hypotheses. It should reject those which are falsified and should continue to test those that are not; until the point those become so thoroughly tested that we can consider them to be confirmed, though the possibility remains that someday some other research may falsify or significantly modify them.<sup>xix</sup>

### **Conclusion:**

Positivism has been the driving factor that brought scientific rigour in the study of social sciences. From ancient times till the middle ages, ideas and philosophies developed on the nature and function of society and its institutions were largely based on speculative (or say normative) studies. Predictions and generalizations almost always took the shape of ideologies. Thus, anything said or prophesied about human nature, human relationships and institutions and their interrelations were always debated and there was no concrete evidential support for none of the competing beliefs. Positivist ideas halted this practice and systematized the study of man and his environment called society.

Both ontologically and epistemologically it brought fresh air to the study of social sciences. It changed the outlook of man about how he saw the world around him and why. Any development of society has to be based on objective study of the existing norms and value systems. The rate of qualitative changes in society till the middle of the 20<sup>th</sup> century and after, tells us the importance of role of objective knowledge about society bears in such changes. Of course, positivism is a fruit of the Enlightenment Movement, but it is also a vehicle of the same movement. Leaving abstract and non-verifiable 'truths' behind, it gave social science research a new dimension and meaning which ultimately culminated in new forms of knowledge that pushed for positive social changes in the last two centuries.

Though positivism played a great role in bringing changes in social science theories and practice, its obsession with scientism had put it in a wrong foot when compared with other approaches to knowledge. The main drawback, as pointed out by critics and discussed above in this paper, was blurring the border between natural and social sciences and pushing social sciences unnecessarily towards the practices of natural science. No doubt the rigorous testing procedures of natural sciences is always welcome in testing hypotheses in social

sciences as well; but it also has to be kept in mind that the substance and context of the two are very different. That's why both of them cannot be treated with same framework of laws and procedures. During the later stages, positivist school of thought obviously tried to answer these critiques and accommodate these asymmetries as much as possible maintaining its fundamental principles intact. But the obsession is still at play at large, even today. It has acknowledged the values of qualitative studies and accepted its methodology, still its persistence on tools, models or conjectures says a lot about its commitment.

To conclude, we can say that positivism is more successful as a movement (as to the nature of knowledge and the ways and means to acquire it) than an approach in itself. As an approach it has been successful and has been the starting point of social research for quite a long time. Though at the same time it faced criticism for the way it tried to deal with society, its institutions and causal relationships among them. But as a movement, it is undoubtedly the harbinger of scientific discussion about the nature, type and forms of knowledge; setting the stage and preceding the way we see modern social science today.

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