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POSITIVISM: THE BEGINNING OF EMPIRICISM IN GEOGRAPHY

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Abstract

The positivist philosophy pioneered by the French philosopher *August Comte* in the 1830s, stood in sharp contrast to normative questions that drew its domain from religion and metaphysics. This was due to the abstract nature of metaphysics and religion and their deviation from reality. Positivism advocated *empiricism* in which all knowledge is based on direct and empirically verifiable experience of reality. It stressed on the usage of unified scientific methods acceptable to all sciences. The philosophy witnessed a slight departure from its classical ideas in the 1920s with the formation of the *Vienna Circle* by the *logical positivists* who claimed that some knowledge could be gained even without relying on experience through formal logic and mathematics.

The positivist philosophy was introduced in geography by *Schaefar*through his *'spatial organization paradigm'* that eventually led to the development of geography as a spatial science concerned with spatial structure and spatial interaction of natural and human phenomena. Nonetheless, the use of empiricism in geography consequent of positivism, has been criticized on the ground that empiricism may not always be used in investigating human behaviour that otherwise might involve normative questions like values, beliefs, emotions etc.

Key Words: Positivism, empiricism, Vienna Circle, logical positivism, spatial science.

Introduction

Positivism may be described as a philosophical movement that emphasized on science and scientific methods as the only source of knowledge and, stood in sharp contrast to the tradition that prevailed prior to the French Revolution relying on religion and metaphysics. The origin of positivism as a well-established philosophy may be attributed to the French philosopher **August Comte** in the 1830s.

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The reason behind the rejection of metaphysics were:

i. Its abstract nature being far deviated from reality; and,

ii. for being more concerned with the emotional than with the practical.

Hence, metaphysics was rejected by Comte as an *'immature science.'* He advocated the replacement of metaphysics by a scientifically based positivist outlook.

August Comte delivered a series of lectures which were later compiled and published as a book titled *'The Course of Positivist Philosophy.'*According to him, positivism was based on five basic guidelines:

i. All scientific knowledge should be based on direct and empirically verifiable experience of reality*(phenomenology).*

ii. There should be a unified scientific method *(le certitude)* that is acceptable to all the sciences.

iii. This is possible only when there is a common objective *(le precis)* of formulating scientific theories that could be subjected to empirical testing and used for proposing universal laws.

iv. Such theories should have the utility *(le utile)* to be used as an instrument of social engineering.

v. Finally, positivist theories should follow the doctrine of *'le relative'* meaning that scientific knowledge can never be complete and should be ever progressing with time.

Comte was of the opinion that the development of any society takes place in three stages:

i. Theological, when everything is described as God's will.

ii. Metaphysical.

iii. Positive, in which efforts are made to find some sort of causal relations between the observed phenomena.

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In a nutshell, the basic tenets of positivism may be described as----

i. Positivism may be described as *'empiricism'* (the word derived from the Greek word *'empeire'* meaning experiences) based on empirical questions dealing with real conditions and experience.

ii. It is essentially therefore, *anti-idealistic*, and stands in sharp contrast to mental constructs or *'normative questions'* that are abstract in nature and not based on scientific evidence.

iii. Since positivism did not believe on normative questions, it did not accept authority and hence, was *'anti-authoritarian'* and the word positivism was therefore treated as an abusive term.

The 1920s witnessed some sort of departure from the classical Comtean ideas when, a group of scientists created the *'Vienna Circle'* and identified themselves as the *'logical positivists.'* They were of the opinion that some knowledge could also be gained without relying on the experience through pure mathematics and formal logic. German physicist and philosopher, **Moritz Schlick** was the founder of this group while another German philosopher **Rudolf Carnap** was a prominent member. Logical positivism included three interrelated precepts:

i. *Scientism*, meaning that empirical methods alone were the methods of acquiring knowledge.

ii. *Scientific Policies* meaning that only positivism was the key to social engineering since it could provide rational solutions to all social problems.

iii. *Value-Freedom* meaning that knowledge gained through positivist methods were neutral, objective and unbiased and thus free from normal and political binding.

Logical positivists distinguished between---

i. *Analytical Statements* whose truth could be verified through tautologies that constituted the domain of formal sciences like logic and mathematics.

ii. *Synthetic Statements* which could be established empirically through testing of hypotheses.

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Positivism in Geography

Due to the influence of *Darwinianism*, the latter half of the 19th century witnessed a great deal of efforts to develop geography into a *nomothetic science.* This inspired the geographers to investigate regarding the governing laws of Nature as well as laws determining social arrangements. This made geography positivism-led initiated by **Schaefer** that sought to explore models of spatial structure. Schaefer put forward his *'spatial organization paradigm'* and conceived geography as a spatial science. **William Bunge** in his *'Theoretical Geography'* (1962) also described geography as a science of spatial relations. This led to the development of the concept of *'space'* as the central theme of geography. Accordingly, two major approaches were identified in geographical discourses---

i. *Spatial Interaction* which referred to the interaction between different spatial units that themselves depended on the interaction between humans and Nature within a particular area.

ii. *Spatial Structure* referring to the geometric pattern of any phenomenon on the earth's surface since geometry was considered as an important tool for geographical studies.

Thus, inspired by positivism, geography pioneered by **Walter Isard (1956)** developed into *'regional science'* with main concern for regional problems and combining in it, geography, economics and planning. The *'locational analysis'* by **Peter Haggett** put forward by him in his book *'Locational Analysis in Human Geography'***(1965),** was also an outcome of positivist thinking. Subsequently, geography also came to be known as *'spatial science.'* In fact, the *Central Place Theory* of **August Losch (1954),** the *Gravity Model* by **Stewart and Warntz (1959)** or the **Diffusion Theory of Hagerstrand (1953)** were all reflections of positivist philosophy.

The concept of *'system'* comprising of an array of entities having scientific relationship amongst themselves as well as the environment was also believed to be intrinsically related to positivism. *'Geomorphology and General Systems Theory'***(1962)** by **Richard J. Chorley** or

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'Explanations in Geography' **(1969)** by **David Harvey** were important contributions towards this direction. The *system analysis* in geography comprising of three fundamental aspects of structure, function and development or the *model and analogue theory* consisting of a structured conceptualization of reality, were all inspired by positivism. Hence, it may be asserted that the positivist philosophy, initiated empiricism in geography so that it could be treated at par with all other formal science.

Critique

Positivism was subject to criticism as well. The critique of positivism in geography mainly emanated from two sources:

i. Its acceptance of empiricism and statistical techniques for inferring about reality.

ii. Its acceptance of the assumption regarding the unification of the sciences.

New philosophies and theoretical framework developed like structuralism or realism that offered greater insightful exposure of human societies since they transcended beyond *'how'* on which the positivists focused to *'why'* in investigating particular patterns of physical or social regularities. The rejection of normative questions like beliefs, values, emotions, attitudes etc by the positivists in analysing human behaviour was also criticized since it provided a very parochial approach to the study of any field of social science.

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