

# **Locational Analysis in Human Geography**

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**Locational analysis** also known as **spatial analysis** is an approach to human geography which focuses on the spatial arrangement of phenomena. Its usual methodology is that of spatial science. The main objective of locational analysis was expressed as building accurate generalization, models and theories with productive power (Berry and Marble, 1968).

Locational analysis is based on the philosophy of positivism. The philosophy of positivism underpins the approach, which concentrates on the identification of theories of spatial arrangements and so is closely linked to the discipline's quantitative revolution.

Locational analysis is based on empiricism. Empiricism is a philosophy which accords special privilege to empirical observations over theoretical statements. Specifically, it assumes that observational statements are the only ones which make direct reference to phenomena in the real world, and that they can be declared true or false without reference to the truth or falsity of the theoretical statements. In empirical inquiry, it is assumed that its facts 'speak for themselves'. They presented a strong case for using geometry as the language for the study of spatial form.

### **History and Development**

A number of geographers in U.S.A. advocated the cause of locational analysis in the 1950s, although it has much deeper roots in the work of pioneers who were later adopted by geographers. Bunge (1966), for example, wrote a thesis on Theoretical Geography based on the premises who stated that geography is the 'science of locations'. Others such as McCarty, were strongly influenced by developments in the field of economics, to which they introduced the spatial variable. These links led to the close interrelationship between geographers and regional scientists in the 1960s and 1970, and illustrated by attempts to build economic geography theories of spatial arrangements (Smith, 1981).

Haggett, in his book Locational Analysis in Human Geography (1965), appealed to adopt the geometrical tradition to explain order, location order and patterns in human geography. Such a focus needed: (1) to adopt a system approach which concentrates on the patterns and linkages

within a whole assemblage; (2) to employ models as to understand man and environment relationship; and (3) to use quantitative techniques to make precise statements (generalizations) about locational order. For the spatial analysis they suggested to adopt ‘linear model’, spatial autocorrelation and regression.

Other geographers who contributed substantially to the field of locational analysis are Morril, Col, Chorley, Cox, Harvey, Johnston, Pooler, Sack and Smith.

Morril was strongly influenced by the geometrical traditions adopted by Bunge and Haggett. In his book, ‘The Spatial Organisation of Society’, he argued that people seek to maximize spatial interaction at minimum cost and so bring related activities into proximity—the result is that human society is surprisingly alike from place to place... [because of] the predictable, organized pattern of locations and interactions.

### **Criticism:**

The locational approach in human geography has been criticized on philosophical and methodological grounds by the behaviouralists and humanists. Some of the criticisms against locational analysis are as under:

1. The locational analysis based on positivism ignores the normative questions to explain the man and environment relationship. It was their mistaken belief that “positive theory would lead to normative insight”. The cultural values are quite important in any decision making process. The ideal location for any economic activity may not be acceptable to individuals and the society.
2. The locational analysis did not reflect the reality of decision making processes and so was of little value in predicting locational arrangement.
3. The models developed with the help of locational analysis conceal the complexities of the real world.
4. At present, there is economic interdependence of societies at the global level, which means that spatial interdependence has become much more important and “locally experienced environmental dependencies lost their rationale”.

5. Locational analysis has also been criticized on the ground that it encourages the social order of capitalism in which the owners of the means of production become rich and the poor becomes poorer.
6. The locational analysis has given a chance to the capitalists to optimize their profits. It gives an uncontrolled liberty and license for plunder and miscalled profit.
7. Owing to locational analysis, there is over production and the economy enters the era of over industrialization.
8. It is mainly because of the locational analysis and capitalism that there is a total newness—new technology, new means of transportation, new education, new art, new morals, new media, new amusement, new weapons, new violence, new terrorism, new war and new mode of exploitation.
9. The followers of spatial science (positivists) treat people as dots on a map, statistics (data) on a graph, or numbers in an equation. They consider humans as non-living and other livings (plants and animals).

It is because of the inadequacies of the locational analysis that the ‘behaviouralism’ and ‘humanism’ achieved much significance in human geography.

Whatever the reason for its origin, there is little doubt that locational analysis substantially changed the nature of human geography from the mid-1960s, although there is some doubt that it ever dominated the discipline (Mikesell, 1984). It presented geography as a positivist social science, concerned to develop precise, quantitatively stated generalization about pattern of spatial organization, thereby enriching and being enriched by Location Theory, and to offer models and procedures which could be used in physical planning. By 1978, therefore, Haggett could write that the spatial economy is more carefully defined than before, we know a little more about its organisation, the way it responds to shocks, and the way some regional sections are tied into others.

There now exist theoretical bridges, albeit incomplete and shaky, which span from pure spaceless economics to a more spatial reality.

Twelve years later, he continued to promote the search for ‘scientific generalization’ (Haggett, 1990), while accepting, that in the search for spatial order “the answer largely depends on what we are prepared to look for and what we accept as order”: for only a minority of geographers can now claim that order is the focus of their quest.

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