

BEHAVIOURAL GEOGRAPHY

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Component-I (B) - Description of Module

Items	Description of Module
Subject Name	Geography
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1. Introduction:

By the mid-1960s use of statistical techniques in research for precision has been largely accepted by geographers. The duality of systematic versus regional geography was resolved as both were now accepted as important components of the discipline though interdependent and equally useful. It was increasingly realized by the geographers that the models propounded and tested with the help of quantitative techniques, provided poor descriptions of geographic reality as well as the man-environment relationship. Consequently, progress towards the development of geographical theory was glaringly slow and its predictive powers were weak. Theories such as Central Place Theory, based on statistical and mathematical techniques, were found inadequate to explain the spatial organization of society. The economic rationality of decision-making was also criticized as it does not explain the behaviour of man. It was a psychological twist in human geography which emphasized the role of subjective and decision-making processes that mediate the association between environment and spatial behaviour of man. It can be said that the dissatisfaction with the models and theories developed by the positivists, using the statistical techniques which were based on the 'economic rationality' of man led to the development of behavioural approach in geography.


The axiom of 'economic person' who always tries to maximize his profit was challenged by Wolpert. In his paper entitled '*The Decision Process in Spatial Context*', Wolpert (1964) compared the actual and potential labour productivity of Swedish farmers and came to a conclusion that optimal farming practices were not attainable. He concluded that the farmers were not optimizers but, satisfiers. Thus human behaviour was seen to be a product of decision-making and it was a human tendency to have incomplete information, to make imperfect choices and even then be satisfied with sub-optimal options.

2. Behaviourialism in Geography

Behavioural geography banks heavily on 'behaviouralism'. Behaviouralism is an important approach which is largely inductive, aiming to build general statements out of observations of ongoing processes. The essence of behavioural approach in geography lies in the fact that the way in which people behave is mediated by their understanding of the environment in which they live or by the environment itself with which they are confronted.

In behavioural geography, an explanation for the man-environment problem is founded upon the premise that environmental cognition and behaviour are intimately related. In other words, the behavioural approach has taken the view that a deeper understanding of man-environment interaction can be achieved by looking at the various psychological processes through which man comes to know the environment in which he lives, and by examining the way in which these processes influence the nature of the resultant behaviour.

One of the most interesting and applied aspects of behavioural geography was work examining the human perception of environmental hazards. The pioneering work by Robert Kates (1962) on floodplain management is one of the bases of this approach. He states the manner in which human beings perceive the uncertainty and unpredictability of their environment play a significant role in the process of decision-making. He developed a scheme that had relevance to a wide range of human behaviour. This scheme of Kates was based on four assumptions –

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1. Men are rational while taking decisions.
 2. Men make choices.
 3. Choices are made on the basis of knowledge.
 4. Information is evaluated to pre-determined criteria.

Subsequently, Kirk (1952-1963) supplied one of the first behavioural models. In his model, he asserted that in space and time the same information would have different meanings for people of different socio-economic, cultural and ethnic backgrounds living in a similar geographical environment. Each individual of a society reacts differently to a piece of information about the resource, space, and environment. This point may be explained by citing the following example.

The highly productive Indo-Gangetic plains have different meanings for different individuals belonging to a various caste, creed and religion. Jats, Gujjars, Ahirs, Sainis, Jhojas and Gadas living in the same village perceive their environment differently. A Jat farmer may like to sow sugarcane in his field, a Gada and a Jhoja may devote his land to sugarcane, wheat and rice, an Ahir may like to grow fodder crops for the milch animals, and a

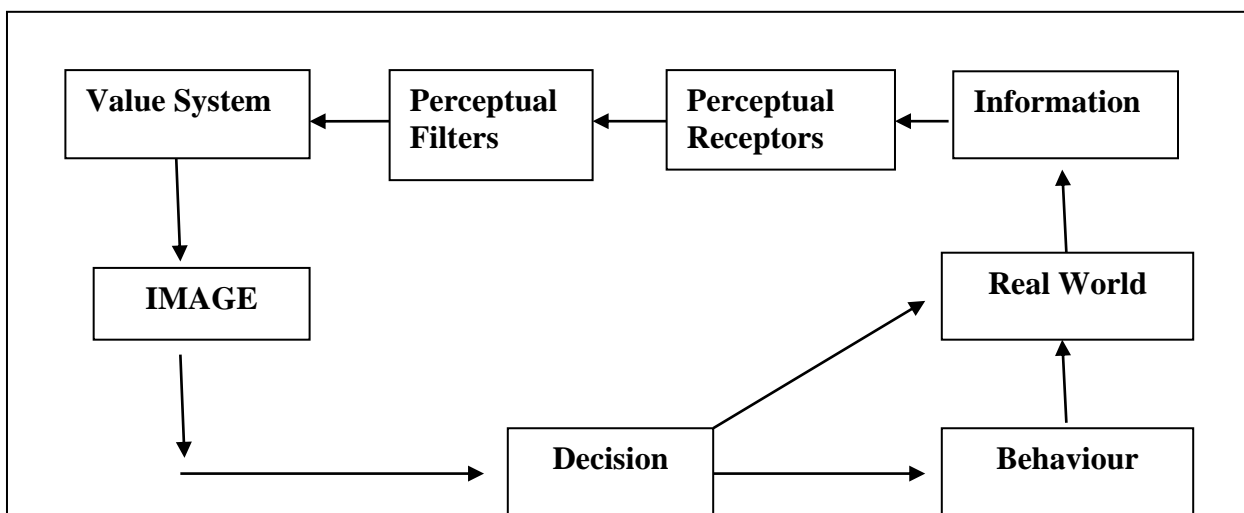
Saini is invariably interested in intensive cultivation, especially that of vegetables. For a Saini (vegetable grower), even five acres of arable land may be a large holding, while a Jat who uses a tractor considers even 25 acres a small holding. The perceived environment of each of these farmers living in the same environment thus differs from each other both in space and time.

The aspect which was most enthusiastically adopted by geographers from behavioural analysis was the concept of *mental maps*. The paper of Peter Gould (1966) was the seminal contribution in this regard. He points out that since decisions on location were guided by the manner in which a human being perceives the environment, it becomes essential for a geographer to have a mental image of how one perceives his environment while making decisions. Therefore, *mental maps* are not just images or maps but an amalgamation of information and interpretation that a person has on a particular thing as well as how he or she perceives that place (Johnston, 1986). This was further developed by Gould (1966), Downs (1970), Downs and Stea (1973), Gould and White (1974) and Saarinen (1979) through their writings.

Gould opines that *mental maps* are not only means of examining a person's area of a spatial preference but also provides insight into the processes which led to that particular decision. He states that *mental maps* may provide a key to some of the structures, patterns and processes of man's work on the earth surface.

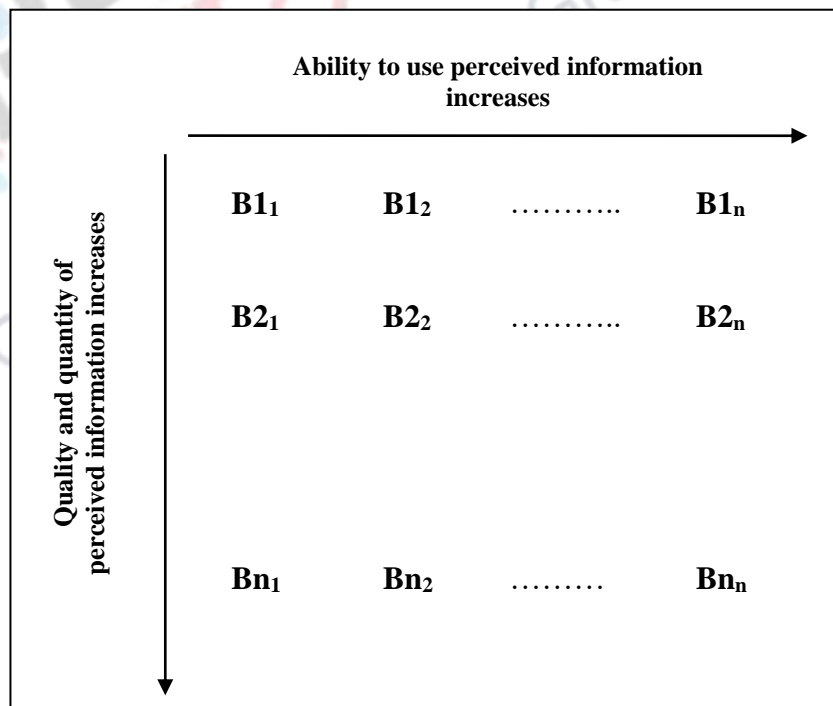
The conceptual framework provided by Downs (1970) has been illustrated in Figure 1. This framework proposes that information from the environment (real world) is filtered as a result of personality, culture, beliefs, and cognitive variables to form an image in the mind of a man who utilizes the environment. On the basis of the image formed in the mind of the utilizer about the environment, he takes a decision and uses the resources to fulfil his basic and higher needs. Downs' framework also suggests that there exist an 'objective' and a 'behavioural' environment.

Figure 1
Environmental Perception and Behaviour (after Downs, 1970)



Pred (1969) presented an alternative to this inductive approach of behaviouralists on theory building on 'economic man'. In his work *Behaviour and Location*, he proposes a *behavioural matrix* (Figure 2) to give a structure in which decisions of locations can be analyzed. The axes of the matrix are quality and quantity of information available and the ability to use that information; man as an economic being is at the right-hand corner. As there is variation in the quantity and quality of the information, the position of man on the axis would also change. His position would reflect his aspiration levels, experience and even norms of the group to which he may belong. His further states, that even same individual would not be in the same position as his decisions may vary over time as spatial patterns are never static in nature.

Figure 2
Behavioural Matrix for Locational Decision Making (after Pred, 1969)



During the 1970s, a range of related personality assessments, such as personal construct theory and the semantic differential were employed, and in this work geography and psychology became close neighbours (Aitken, 1991; Kitchin, Blades and

Golledge, 1997). In particular, this productive interdisciplinary relationship was developed through the annual meetings of the Environmental Design Research Association and in the pages of the new journal, *Environment, and Behavior*. Since that period, behavioural geography has continued to diversify, even if its position has been less elevated than in the 1960s and 1970s when many disciplinary leaders worked in this sub-discipline. More recent research has included analysis of environmental learning, spatial search, developmental issues in spatial cognition and cartography and Golledge's (1993) important work with the disabled and sight-impaired. But some of the lustre has left the field. In part, this may be related to the methodological sensibilities of post-positivist human geography. In part, it is due to the growing conviction of the inherently socialized nature of geographical knowledge, which challenges the individualism of psychological models. In part, it emanates from a suspicion of the adequacy of an epistemology of observation and measurement that may leave unexamined non-observable and non-measurable contexts and ideological formations. Nonetheless, behavioural geography has a continuing legacy, comprehensively itemized and integrated into the massive compilation of Golledge and Stimson (1997).

3. The objectives of behavioural approach were:

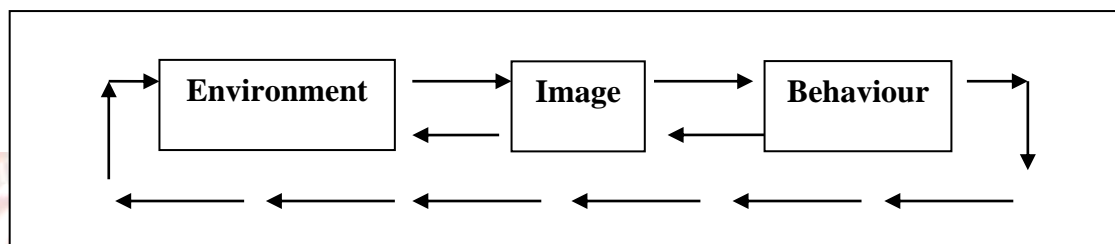
1. To develop models for a human phenomenon which would provide an alternative to the spatial location theories developed under the influence of positivism.
2. To define the cognitive (subjective) environment that determines the decision-making process of humans;
3. To come up with psychological and social theories of human decision-making and behaviour in a spatial framework;
4. To change the emphasis from aggregate populations to the disaggregate scale of individuals and small group
5. To search for methods other than those popular during the quantitative revolution that could uncover the latent structure in data and decision-making;
6. To emphasize on procession rather than structural explanations of human activity and physical environment;
7. To generate primary data about human behaviour and not to rely heavily on the published data; and
8. To adopt an interdisciplinary approach for theory-building and problem-solving.

The fundamental arguments of the behavioural geography to achieve these objectives are that:

- (i) People have environmental images;
- (ii) Those images can be identified accurately by researchers; and
- (iii) There is a strong relationship between environmental image and actual behaviour or the decision-making process of man.

The behavioural paradigm has been shown in Figure 3. In this paradigm, man has been depicted as a thinking individual whose transactions with the environment are mediated by mental processes and cognitive representation of the external environment. In geographical circles, this concept is derived primarily from the work of Boulding (1956) who suggested that over time individuals' developmental impressions of the world (images) are formed through their everyday contacts with the environment and that these images act as the basis of their behaviour.

Figure 3
A Conventional Model of Man-Environment Relationship (after Boulding, 1956)



4. Salient Features of Behavioural Geography

The salient features of behavioural geography are discussed in the following section:

1. The behavioural geographers argued that environmental cognition (perception) upon which people act may well differ markedly from the true nature of the real environment of the real world. Space (environment) thus can be said to have a dual character:
 - (i) As an objective environment—the world of actuality—which may be gauged by some direct means (senses); and
 - (ii) As a behavioural environment—the world of the mind— which can be studied only by indirect means.

No matter how partial or selective the behavioural environment may be, it is this milieu which is the basis of decision-making and action of man. By behavioural environment, it is meant: reality as is perceived by individuals. In other words, people make choices and the choices are made on the basis of knowledge. Thus, the view of

behaviour was rooted in the world as perceived rather than in the world of actuality. The nature of the difference between these two environments and their implications for behaviour was neatly made by Koffka (1935-36) in an allusion to a medieval Swiss tale about a winter travel.

2. Secondly, behavioural geographers give more weight to an individual rather than to groups, or organizations or society. In other words, the focus of the study is the individual, not the group or community. They assert that research must recognize the fact that the individual shapes and response to his physical and social environment. In fact, it is necessary to recognize that the actions of each and every person have an impact on the environment, however, slight or inadvertent that impact may be. Man is a goal-directed animal who influences the environment and in turn, is influenced by it. In brief, an individual rather than a group of people or social group is more important in a man-nature relationship.
3. The behavioural approach in geography postulated a mutually interacting relationship between man and his environment, whereby man shaped the environment and was subsequently shaped by it (Gould, 1980).
4. The fourth important feature of behavioural geography is its multidisciplinary outlook. A behavioural geographer takes the help of ideas, paradigms, and theories produced by psychologists, philosophers, historians, sociologists, anthropologists, ethnologists, and planners. However, the lack of theories of its own is coming in the way of rapid development of behavioural geography.

Therefore, one can say that the behavioural approach in geography is a fruitful one and it helps in establishing a scientific relationship between man and his environment. The broad scope of behavioural geography is remarkable even by the standards of human geography.

5. Criticisms:

There are, however, overall, biases in content towards urban topics and towards developed countries. One of the main weaknesses of behavioural geography is that it lacks in the synthesis of empirical findings, poor communication, inadvertent duplication, and conflicting terminology. In behavioural geography, the terminology and concepts remain loosely defined and poorly integrated, primarily owing to the lack of systematically-organized theoretical basis.

Another shortcoming of behavioural geography lies in the fact that most of its data are generated in laboratory experiments on animals and the findings are applied directly to human behaviour. Koestler (1975) pointed to the danger of this strategy, in that behaviouralism “has replaced the anthropomorphic fallacy—ascribing to animals human faculties and sentiments—with the opposite fallacy; denying man faculties not found in lower animals; it has substituted for the erstwhile anthropomorphic view of rat, a rato-morphic view of man”. In short, behaviouralist theories are elegant but unhelpful when it comes to understanding the real world man-environment interaction.

Behavioural geography has too often put too much emphasis on ego-centred interpretations of the environment. Specifically, scholars are critical of two assumptions on which a great deal of behavioural research in geography is based. The first assumption is that there exist identifiable environmental images that can be accurately measured. It is not clear whether an environmental image can be extracted without distortion from the totality of mental imagery. Moreover, not enough effort has gone into checking and validating the methods by which images are elicited.

The second critical assumption is that there exists a strong relationship between revealed images or references and actual or real-world behaviour. The main objection to this assumption is that it is an unfounded assumption because extremely little research has been undertaken to examine the congruence between image and behaviour.

Another significant deficiency in behavioural geography has been the gap between theory and practice. This has been most noticeable over the question of public policy. In fact, behavioural geographers remain observers rather than participants. There is a serious lack of knowledge of planning theories and methods amongst behavioural geographers, which is an impediment to more active involvement.

It is a barrier that can be removed only by developing the requisite understanding of the planning processes; it cannot be camouflaged by noble sentiments and moral tone. For instance, it will be only rarely that a small survey carried out upon a sample of students will supply the basis for far-reaching policy recommendations, yet the final paragraphs of many such works contain this seemingly obligatory element.

Despite several constraints and methodological limitations, behavioural geography is now widely accepted within the positivist orientation. It seeks to account for spatial patterns by establishing generalizations about people-environment interrelationship, which may then be used to stimulate change through environmental planning activities that modify the stimuli which affect the spatial behaviour of us and others.

The research methods of behavioural geography vary substantially but the general orientation—inductive generalization leading to planning for environmental change—remains. Eventually, it is hoped, a ‘powerful new theory’ will emerge. Golledge argued that substantial advances in understanding spatial behaviour have already been made by studying ‘individual preferences, opinions, attitudes, cognitions, cognitive maps, perception, and so on—what he terms processes variables.

Selected References:

- Adhikari, S. (2010) Fundamentals of Geographical Thought, Chaitanya Publishing House, Allahabad
- Dikshit, R. D (2011) Geographical Thought: A Contextual History of Ideas, PHI Learning Private Ltd, New Delhi
- Martin, G. F and James, P. E. (1972) All Possible Worlds: A History of Geographical Ideas, John Wiley and Sons, New York.

