

Man and Environment Relationship in Geography

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1. Introduction

Geography as a discipline always had the purpose of gaining logical and useful information about the man and his habitat. This has been from the beginning of the philosophical scholarship of man. To establish my point I would initiate from Eratosthenes, the Greek scholar in the third century B.C who coined the term 'geography'. The word 'geography' can be divided into two parts, '**geo**' and '**graphy**.' 'Geo' comes from the Greek word 'go', meaning '**Earth**,' and 'graphy' comes from 'graphein', which means '**to describe**.' What is more important to know that in what spirit did Eratosthenes coined the term geography? For him, geography was a discipline that studies earth as the home of a man (James and Martin, 1972). This sets the roots for the theme of man-environment relationship within the geographical thinking. The theme became so popularise that it still persists; in the words of Broek (1965) '.....to understand the earth as the world of man.....'.

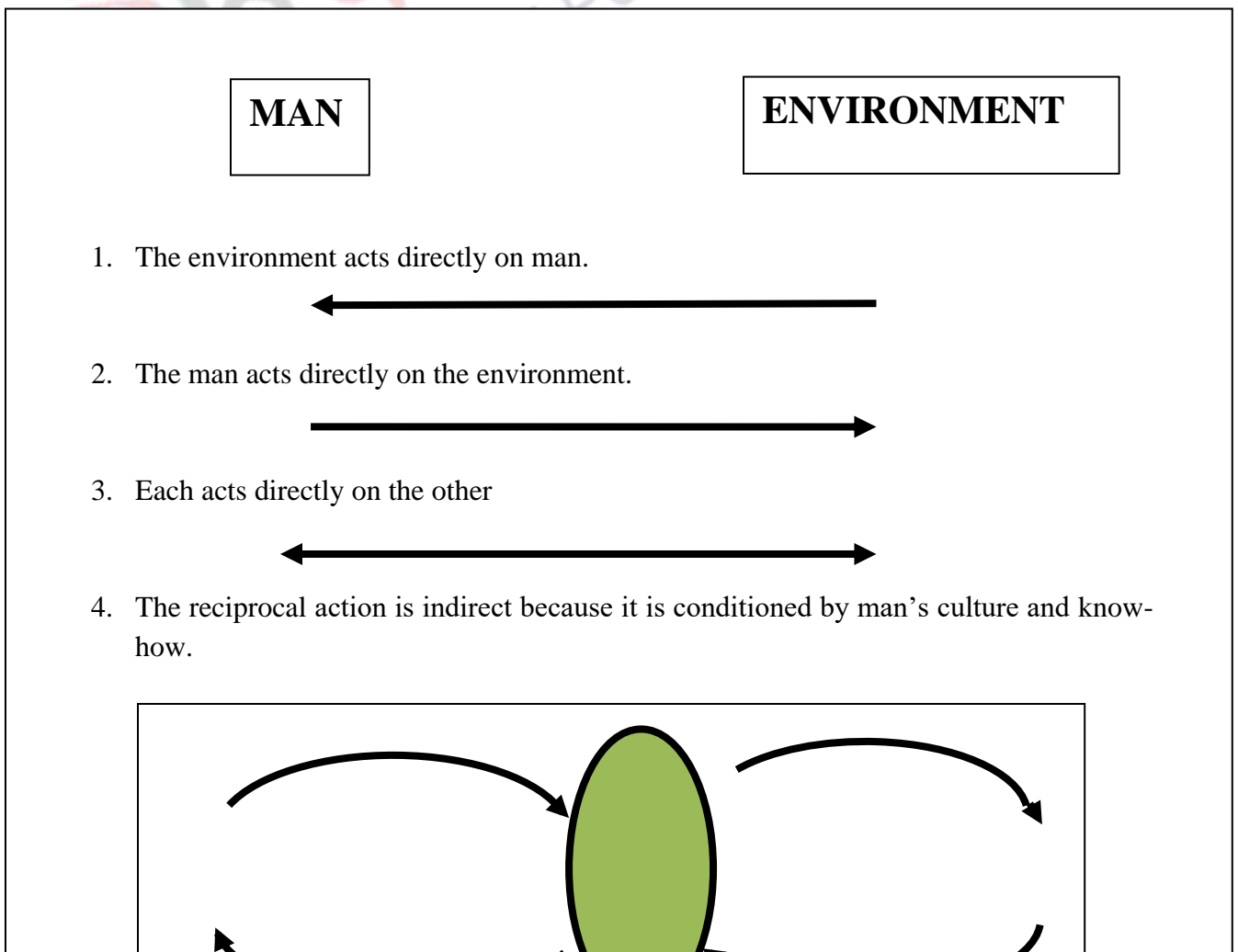
The history of geographical ideas clearly depicts how through ages, the man-environment relationship has been perceived, deliberated upon and established as one of the

focal themes in the geographical thinking. The whole idea is to get more and more logical and useful knowledge of the human habitat and human spread over the earth surface. Before we look into the historical background and doctrines established on this theme we need to have a clear perspective on a man-environment relationship which is discussed in the next section.

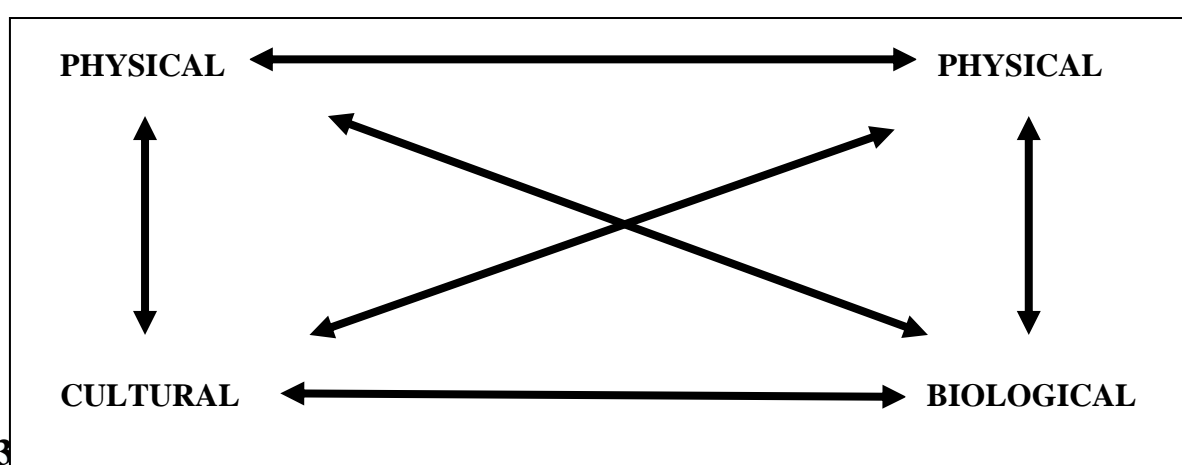
2. Man and Environment Relationship – A Perspective

For the understanding of this relationship, one has set the limits how one defines the environment. The most basic definition was given by Einstein who states that *the environment is everything that isn't me*. In simpler words, everything beyond me is the environment. Thus one should not debate on the dualism of physical and cultural environment rather take both as two equal halves of the same whole. Both physical (biotic, abiotic and energy) and cultural (mentifacts, socio facts, and artifacts) components influence man's actions in adapting to the environment to transforming it for satisfying his needs. The basic premise is that this relationship is not direct or static rather it is dynamic and multifaceted as explained in the diagram given below (Figure 1)

Figure 1
Man-Environment Relationship



5. In reality, the situation is complicated because a large number of factors and their association among themselves influences this relationship.



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In the ancient and middle ages, Greek, Roman, Indian, Chinese and Arab geographers attempted to establish a relationship between man and natural environment. Kant, in the latter half of the 18th century, advocated the impact of environment on the lifestyle and physical constitution and lifestyle the equatorial, hot deserts, Mediterranean, coastal and mountainous regions. According to Kant, the inhabitants of Torrid Zone are exceptionally lazy and timid, while the people of the Mediterranean region living in the mild temperature conditions are industrious, hardworking and progressive.

The environmental causation continued throughout the 19th century. Humboldt asserted that the mode of life of the inhabitants of the mountainous countries of the Andes mountains differs from that of the people of Amazon basin, coastal plains, and islands like Cuba and West Indies. Ritter attempted to establish the cause variations in the physical constitution of body, physique, and health of people living in the different physical environmental conditions.

a. Impact of Darwinism

The idea of defining geography in terms of man and environment relationship developed on scientific lines in the latter part of the 19th century after the publication of *The Origin of Species* (1859) by Charles Darwin. This seminal work gave a new direction to the discipline of geography. The theory of evolution held that all living species have evolved from pre-existing forms. His geological observations and theories had one thing in common: the idea that things in nature change with time.

Most of the writers in the pre-Darwinian period discussed the man-environment relationship as a cause-effect relationship. They did not ponder into the processes involved in this relationship. Ratzel for the first time took up this issue in the first volume of *Anthropogeographie* (1882) which was later developed by his students Semple and Demolins. In France, Blache's ideas dominated so this rigid framework of harmony and relationship was not accepted. But in America, this was carried out by Davis who tried to incorporate this idea of causality into the definition of geography itself. This notion was not accepted by many scholars as they were of opinion that no science can be confined to the study of a specific relationship. Moreover, this causal relationship provides an unsound methodological approach as the intensity of the influence of environment becomes a major problem.

Fluere was deeply influenced by Darwinism and opined that the man-environment relationship should be studied from the physiological point of view and while delineating human regions; he applies Darwin's ideas of natural selection through environmental influence to human groups. Huntington too looked into this theme and applied it to human population while studying it at the global level. Taylor investigated this idea in his studies on race, population, states, and cities. He concluded that these are directly influenced by environmental factors as their development over time is regulated by these conditions. Determinists, therefore, raised certain questions but could not possibly find suitable answers within the geographical framework. Hartshorne tries to seek answers by stating that the whole determinist-possibilist debate within the discipline was unreal and futile which led the whole debate on a philosophical level rather than at an empirical level.

In America, the concepts of Spencer and Darwin, the survival of the fittest and the struggle for life, respectively were positively used in the disciplines of political science and economics to justify laissez-faire. Darwinism, though, had a limited influence on the classical equilibrium economics.

In geography, particularly, political geography, these ideas of struggle and selection were used significantly. Ratzel (1896) applied this concept to his seven laws for the growth of state which later developed as the concept of *Lebensraum*. He states that as plants and animals struggle for their existence, a nation too, clash for their struggle to capture more territory. The organic analogy derived by Ratzel along with the theme of struggle and selection provided a strong model in analytical political geography which had scientific justification in man's political behaviour. Semple tried to omit the concept of organic analogy in her writings but it seemed that she was still touched by it, as these themes penetrated in her writings.

Kjellen (1942) in his work on states was highly influenced by Ratzelian ideas. His *Geopolitik* is an example where he writes that states are biological manifestations not only morally but also organically as they experience lust. He was also supportive of Spencer's writings which are visible in his *Staten sam Lifsfarm* (1944). The over-dependence of political geography on the organic analogy, the ideas of struggle and *Lebensraum* brought disgrace to this branch, especially in the 1930s.

To sum up, Darwin contributed by making science more empirical and inductive in nature; this dismisses the role of teleology also. The biggest contribution of Darwinism in geography is in establishing man's place in nature and at the same time making a study of man a scientific learning.

b. The Deterministic Perspective

In the history of geographical thinking, human – nature dialogue has been studied and analyzed from a number of different perspectives and views. The first amongst these approaches to deliberate on the human-nature relationship was determinism. In the words of Platt (1948) determinism, refers to the idea that everything in human life is caused certainly by preceding events or conditions. The primary initial source of determinists for an explanation was the physical environment, and the theoretical order was centered on the belief that the human activity was solely regulated and controlled by their environment. Determinism, as a paradigm is one of the most significant beliefs, which still continues in one form or other. In the context of this concept, it is believed that due to the difference in the natural environment, the variations in human behavior in different parts of the world can be described. The spirit of deterministic ideology is that the level of development of history, culture, lifestyle and social group or nation is solely ruled by the physical components of the environment at any scale.

Determinists consider humans as a passive agent on whom physical factors are working continuously determining their approach and decision-making process. In short, they believe that most of the activities of man can be elucidated as a response to the environment.

In the context of the effect of natural conditions, the first attempt was made by Greek and Roman scholars explaining the physical characteristics and character traits of different people and their culture. At that time, this effort was not contained only among geographers rather included scholars from different fields like the doctor **Hippocrates**, philosopher **Aristotle**, and Historians **Thucydides**, **Polybius**, and **Herodotus**. In the Greco-Roman era, regional studies were closely tied with the study of history; Thucydides and Polybius saw Athens's natural conditions and geographical position as factors for its greatness. For example, **Aristotle** explained the difference between Northern Europe and Asian people in the context of climate causes, while explaining the greatness of Rome, while mentioning similar incidents of **Strabo**.

Strabo argued that the cold weather in Europe was the reason for their bravery. Aristotle thought that people living in hot weather in Asia were wise but there was a lack of soul and therefore time to time subjected to slavery. Because humans often consider their home as the best place, it is not surprising that Aristotle believed that the best combination of all possible worlds was in the center of space, Greece (Glacon, 1967). Aristotle strongly advocated the progress of some countries is the result of their favorable environmental conditions.

In the Middle Ages, **Montesquieu** explained that in cold weather people are less physically strong, more courageous, clear, less susceptible and less cunning than those in hot weather. He quotes that people in hot weather are terrible, weak in body, dull and inactive. Deterministic approach dominated the writings of Arab scholars. They divided the world into seven terrestrial zones on the basis of climate and highlighted the physical and cultural characteristics of the castes and castes of these regions. **Al-Baruni**, **Al-Masudi**, **Ibn-Hawkal**, **Al-Idrisi** and **Ibn Khaldun** attempted to correlate the environment with human activities and living conditions within the conceptual domain of determinism.

Deterministic reasoning continued in the 19th century when geography itself was related to other sciences. **Carl Ritter**, a German geographer adopted an anti-human approach and laid the philosophical base of determinism in geography. Ritter tried to make a difference in the physical constitution of the body, body, and health of men living in the different physical environment. Many of his students considered geography as "*a study of the relationship between people's density and the nature of their land*". Many geographers of

their school had declared that their main task was to identify the influence of physical cultural geographical conditions and the political fortunes of residents of any area in both East and present. **Alexander von Humboldt**, one of the founders of 'Modern Geography' and a contemporary of Ritter, also said that the life of the residents of a hill country is different from those in the plains.

Friedrich Ratzel, the founder of 'new' determinism, supplemented the 'classical' geographical determinism with the elements of 'Social Darwinism' and developed the state's theory as an organism. He believed in the existence of a qualification and saw the 'man' as the end product of development - a development which was natural selection of type according to the ability to adjust itself to the physical environment of the environment. He along with his disciple **Ellen Churchill Semple** became the most vocal expression of the deterministic approach in geography.

Semple in her book *Influences of Geographical Environment (1911)* writes: *Man is a product of the surface of the Earth*; this book had a widespread, long-lasting use in geographic education (Wright 1966). She dominated the environmentalist period of the discipline in the early twentieth century (Hartshorne 1939) and "trained a large proportion of those who became leaders of the profession during the period between the two World Wars" (James, Bladen and Karan 1983). Her methodological statement cannot be questioned as at one time she points out that the influence of climate on man both as a direct and indirect effect cannot be questioned. She further elaborates that man was a passive subject who bears direct environmental influence at early stages of development.

c. The Possibilistic Perspective

The doctrine of possibilism tries to explain the relationship of a human being with the environment in a different way; it puts human at a higher level and regards it as an active agent. It is a principle which claims that environment provides opportunities and man being an economic man chooses from those possibilities. Febvre (1932) in '*A Geographical Introduction to History*' stated '*there are no necessities, but everywhere possibilities; and man, as the master of these possibilities, is the judge of their users*'.

The roots of possibilism can be traced back to the works of **Plato**, who is considered the master of deductive reasoning. Though his idea went into gloom for hundreds of years; the contrasting doctrine of determinism continued to grow and flourished. It got support in the writings of French scholar of the eighteenth century – **Montesquieu**, who is credited with developing a doctrine analogous to modern paradigm of possibilism. He opined that man

possesses free will and has the ability to choose from a series of opportunities. Similar thoughts were also put forward by another eighteenth-century French philosopher, **Comte de Buffon**. He believed that man was ordered to conquer the earth and even transform it. Their views laid the base for *crypto-possibilistic hypothesis* (Adhikari, 2010).

It was only in the latter half of the nineteenth century that under the leadership of **Vidal De la Blache** (1845 – 1918), a possibilistic view of man-environment developed. The focus of this philosophy was “*Nature has set boundaries and has provided possibilities for human settlement, but the way a person responds to these conditions or adjusts it depends on the traditional way of life.*” Vidal rejected the concept of material determinism and advocated favourability. He even rejected Durkheim’s opinion of human geography as social morphology rather insisted that man was a partner and not a slave of the environment (Dikshit, 2009). He was critical of Darwinian-Ratzelian heritage which proposed environmental determinism and put forth the concept of possibilism. He sought a scheme for understanding the interaction of nature and culture that eschewed both environmental determinism and radical possibilism to seek answers or solution for the dichotomy between the human and the environment.

In the twentieth century, possibilism got stronghold after the publication of Blache’s article in 1913 where he categorically states that geography as a discipline seeks to measure and role of man in modifying the earth surface. This was further strengthened when his book was published in 1921 (English translation in 1926), though posthumously. He observes that nature gives man materials which have their inherent needs as well as limitations thus leading them to limited uses.

Possibilism was further flourished by acclaimed historian **Lucien Febvre** (1878-1956). He puts forward - “*Whatever the men do in their own environment, they cannot completely get rid of themselves completely.*” Febvre emphasized human initiative and motivation against the environment, destroying the environmental deterministic reasoning and as part of the environment of any group, as well as other humans, because they belong to the next group’s cultural surroundings, or the constraints of the environment are influenced by such thinking. He stated that in the view of possibilists, a homogeneous region does not necessarily result in a homogeneous society. This is because people residing in any area have the choice of possibilities time to time and also in the quantity they want.

Bruhnes followed Blache’s ideas and took it to next step, he not only transmitted Blache’s philosophy in France but also disseminated it to different parts of the world. In 1910, his monumental work *La Geographie de L’Histoire* was published.

Barrows, in his presidential address (1922), recommended that relationships in geography should be studied “from man’s adjustment to environment, rather than the reverse”. Hettner (1907) also supported the concept of geography as the study of relationship. Thus, both the physical factors and the human factors (cultural environment) are to be studied in their relations to each other.

d. Probabilism:

The concept of probability was put forward by the O H K. Spate (1957) is the idea that the physical environment does not specifically determine human activities, yet it gives some reaction to others. This word was proposed as a mid-route between Ratzel's complete environmental determinism and a revolutionary prospect of Febvre, Lablache, and Sauer. While the environmental determinants, influenced by the cause and effect of Darwin, said that human activities are controlled by the physical environment, according to the possibilities, the physical environment provides the opportunity for many possible human reactions and enough conscience to choose people is among them.

According to Spate, "human action was not said in the case of all or some kind of compulsion, but rather the balance of the possibilities". For example, there is a possibility that the use of land in the Sutlej-Ganga field decreases intensity from market centers; Population density decreases away from metropolitan centers in all directions; With the settlement of the village, the crop yields less than a few walking distances.

However, there can be exceptions for each of these generalizations, and in many cases, there is a limit to the boundaries that they keep right. Exception and boundary demand details After this concept, probability theory is considered as an essential component of geographic analysis because "a general mode of discussion" was provided for " the scientific study of the scenario". This view, in fact, is completely consistent with the original Vitalian concept. Geologists started using probability theory to determine human and environmental relations and also carried scientific studies of the landscape.

The probability theory was criticized on many grounds. For example, a complete knowledge about the environment cannot be available; The available data about resources and their use cannot be reliable; The perception about resources (environment) differs from humans to community, community to region, and country to country, prospective model's application, due to these constraints, can be difficult and thus the results obtained cannot be authentic Are close to the ground reality.

e. Cultural or Social Determinism:

Cultural or social determinism emphasizes the human element: "Our thoughts determine our actions, and our actions determine the nature of the world's last" (James, 1932: 318). Since there is a difference in human interest, desires, prejudices and group values, therefore there is a difference in the level of cultural landscape and socio-economic development. The amendment of an environment depends on our perception, thoughts and decision-making processes.

This philosophy made by American scholars can be explained in principle, according to which "the significance of man's physical and biological features of his residence is an act of man's own views, objectives, and technical skills". For example, a country that is financed by a hunter's perspective can be poor for an agricultural person; The importance of coal is not the same as those who can not use it. All these truths are self-evident. It is also true that as technology develops, the importance of the environment is not reduced, but the change becomes more complex.

The philosophy of cultural determinism is quite broad among American geographers. For example, Eduard Wellman wrote that "the environment is essentially neutral, its role depends on the level of technology, the type of culture and the other characteristics of the changing society". For example, mountain pass estimation, which is for horses, automobiles, airplanes, will be different for them; Assessment of fertility of soil will not be similar to the perspective of a Japanese farmer, on the other hand, or an Amazonian Indian. Similar natural conditions can say different reactions on human part, and in similar circumstances, different cultures can occur. George Carter is out of three fundamental factors in human geography, he has given more emphasis on cultural forces and wrote that "staying as a primary reason for changing the ideas ..., these are the ideas that determine the human use of the physical world We do". He also said that human beings are the decisive factor.

After World War II, schools of social determinism became very popular in Austria, Holland, and Sweden. Social geography relates to the spatial distribution of society. This, however, is not able to gain a deeper understanding of social relations or landscape. Social groups can be isolated in the context of ethnic, religious, professional and some other characteristics, whereas social change is only mentioned, but seldom is associated with any fundamental economic causes or society's class structure.

The study of the effect implemented by these groups on the scenario reduces in the definition of purely external factors of the cultural landscape (deployment and deployment of homes, land uses, type patterns etc.), which in the form of morphology and Under the

functional changes, boundaries of the same road are infinitely the use of such 'macro-regional' research is usually used in the character. Motivated and cannot provide any basis of scientific findings of real importance. Thus social or cultural determinism does not adequately assess environmental factors, that is, the effect of the natural environment on 'cultural geographical differences'. Thus, social determinism is thus rigorous as the environmental fatalism and therefore cannot be accepted in its raw form.

To sum up, the major debate among the geographical thinkers is whether people are an active or passive agent in the man-nature relationships. The entire debate revolves around two issues – Firstly, resource exploitation is inevitable for the survival of human beings which means that he will take more and return less. Secondly, there is hope that morality will win as human beings will vote for greater gains than meager personal benefits. The doctrine of sustainable development leads towards both these issues as it is based on the theme that development means meeting the needs of the present without compromising the ability of the future generations to meet their own needs (Report on World Commission on Environment and Development, 1987).

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.