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Environmental  
Determinism

Definition

Environmental determinism is a theory that suggests that the physical environment (such as climate, terrain, and resources) has a significant influence on human culture, society, and development. It is often associated with the work of early anthropologists and geographers like Ellen Semple and Paul Vidal de la Blache.

In geography, we find three types of scholars →

- ① Determinists
- ② Possibilists
- ③ Neo-determinists

- ① According to them, nature and natural activities are powerful.
- ② According to them, those who give importance to human and human activities.
- ③ Neo-determinists talk about the balance between these two concepts or adjustment with the nature.

## DETERMINISM

It is associated with the powerful characteristics of nature. The concept gives more importance to nature, natural activities. So the concept which talks about the nature or power of nature is known as the concept of determinism. According to this concept, nature is powerful and it decides about the type of human beings which will be found in a particular region of the surface of earth.

In geography, it is divided into three parts

- (1) Ancient age
- (2) Middle age
- (3) Modern age

## Ancient Age

Aristotle → Aristotle is credited with the most (384-322 B.C) speculative concept of environmentalism of his period. He has written a book 'Politics' and in this book he discussed his

deterministic views. Aristotle tried to conceptualize the varying habitability with differences of latitude. According to him, the parts of the earth close to the equator, the torrid zone, were uninhabitable, that the parts of the earth far away from the equator, the frigid zone, were constantly frozen and also were uninhabitable, and that the temperate zone in between constituted the habitable part of the earth. 'Ekumene', the inhabited part of the earth, was in the temperate zone was not inhabited because of the ocean.

According to him, the people of cold countries are brave but lack of political will (ईर्ष्या), they have not ability to rule their neighbours. The people of ASIA lack courage, so slavery (श्रम) is in their natural state. The people of Greece on the other hand occupy middle position, geographically they are endowed with the finest qualities and they are intended to rule all over the world. Thus Aristotle has attributed (सम्बन्ध) the progress of certain civilization with that of the environmental condition.

• Strabo (64 BC to 20 A.D) → Strabo carried forward Aristotle's standpoint on habitability in his book 'Geography'. He was from Rome. Strabo was associated with the development of Rome because of the climate, location, land features and shape of the Rome. According to him Roman Society was developed because the climate was suitable, its geographical location was also suitable so they had provided opportunities to the people to become leader in the world.

Herodotus → He came ( ) out with the very old idea that "all history must be treated geographically and all geography must be treated historically." This idea was an implicit ( ) recognition of determinism. Herodotus further observed that geography provided the physical backgrounds in relation to which historical events occurred.

Plato (428-348 BC) → He insisted that the observable things on the earth were only poor copies of ideas. He missed the chance to change the whole history of speculation ( ) concerning man-land relations by identifying man as destructive agent. Eudoxus, a contemporary of Plato, however, developed the theory of climate based on increasing slope away from the sun on a spherical surface, and emphasized the importance of climate in the life of man.

Eratosthenes (234 B.C) → He redefined Aristotle's zones of habitability, but he also emphasized ( ) the climatic determinism while describing the ekumene, the inhabited earth. Posidonius contradicted ( ) Aristotle's assertion that the equatorial part of the torrid zone was uninhabitable because of heat. The highest temperatures and the driest deserts, he said, were located in the temperate zone near the tropics and the temperatures near the equator were much less extreme. It is not clear whether he refuted ( ) the contemporary assertion of climatic control on human activities because his brief concerning the habitability of the equatorial region was overlooked.

Ptolemy → He repeated Aristotle's heritage of equating habitability with latitude and the effect of the position of the celestial ( ) bodies on human affairs. With the death of Ptolemy, came to an end the geographic horizons that had been developed both physically and intellectually by the Greeks. But the concept of equating habitability with latitude developed by Aristotle did not die out and was carried forward by successive generations.

### Middle Age

The middle ages were a dark period for the development of science in Europe. The geographical ideas of Aristotle particularly that of his deterministic concepts, were made available in Christian Europe by translation from the Arabic in the twelfth century. The first medieval writer to make use of Aristotle was Albertus Magnus whose book on the nature of places combined astrology with environmental determinism. The Muslim scholars of the Arab world during the medieval period greatly subscribed to the Greek idea of environmental determinism. One of the earliest muslim scholars Ibn-Hauqal insisted on the fact that considerable number of people lived in those latitudes that the Greeks thought to be uninhabitable. Al-Magudi who died about 956 in Egypt was more clear in his assertion on environmental control. He was quite emphatic in describing the effect of environment on the mode of life and 'att' of people. To him "the powers of the earth vary in their natural vegetation and topography". Al-Magdisi, who in 985 prepared a new division of the world into fourteen climatic regions, also described

human activities, particularly in the Tropic and temperate regions, emphasizing the importance of climate on human actions.

Al-Biruni (1030 AD) → He visited India and written a book 'Kitab-ul-Hind' in 1030 AD. He has digressed in detail about the impact of man on Hindu culture while discussing cultural and socioeconomic institution of Contemporary India, he also try to show the powerful characterizing of nature. He further says that highest peaks are present in those regions of India where rocks are very resistance (नोटे) to erosion. In India, we can easily see the effect of nature on the landscape. Nature has forced people to adopt certain economic activity in certain part of the country.

Ibn-Khaldun → He was the last Arab scholar to have contributed to and enriched the medieval muslim deterministic concept. His book "Muquaddimah", in 1377, begins with a discussion of man's physical environment and its influence and with man's characteristics that are related to his culture or way of living rather than to the environment. He repeated the old idea of climatic determinism that the people turned black when they lived too close to the sun and that when black people moved to the temperate zone they gradually turned white and produced white children. He insisted that the nomadic culture was expressive of desert environment. It may be said that he was the first scholar to have turned his attention specially to man-environment relations.

## Renaissance and Determinism

The idea of environmental determinism was revived with full enthusiasm in western Europe during the renaissance.

• Jean Bodin → A scholar of 16th Century who also known for his deterministic views. According to him people of northern lands are brutal (क्रूर), cruel and enterprising (बोल्ड, साहसी) and the people of Southern land are Vengeful (हिंसा मेवगता), cunning (दुष्ट) but gifted with the capacity for separating truth from falsehood. Inhabitants of temperate regions are more talented than those of the north, more energetic than those of the South and they alone possess the prudence (सावधानता) necessary for command.

• Montesquieu → The famous philosopher of France of 18th Century is also known for his views related to influence of climate on the human beings. According to him people in cold climate are stronger physically, more courageous, more frank, less suspicious and less cunning than those of the South who are like old man, timorous (डरपोक), weak in body, indolent (lazy) and passive. Northerners who go to live in South quickly lose their vigour and acquire the passivity of those around them.

Immanuel Kant (1724-1804) → He was not a true determinist. He believed that the geographical synthesis is distorted ( ) when nature is regarded as dominant and man as subsidiary. He provided a short description,

discussing the local geographical conditions as having influence the inhabitants on the coast of New Holland and few more things like the impact of climate on the nature of man's sustainability.

## Modern Age

Ritter → He belief in God as the planner of the universe. He regarded the earth as an educational model for man, where nature had a God-given 'purpose' which was to show the way for man's development. Ritter did not regard the shape of continents as accidental but rather as determined by God, so that their form and location enabled them to play the role designed by God for the development of man. His teleological viewpoint, therefore, seems to be a manifestation of an 'implied determinism'.

• A.V. Humboldt (1769 to 1859) → The famous scholar of Germany who is also known as the founder of modern geography. He has discussed in determinant views in his famous book 'Cosmos'. According to him, earth is divided into different natural regions and people living in different natural regions has different characteristics. He has also discussed how nature enforces certain economic activities to certain part of the world. In a separate section in his book he has also discussed about universe, different celestial bodies and its impacts on the surface of earth. From Cosmos it appears

that he is describing the powerful characteristics of nature. Humboldt provided an 'aesthetic' explanation to develop his concepts of the unity of nature. However, he made a reductionist approach to the idea of determinism.

Frederic Le Play (1879) → He was a French Sociologist of the Century, provided a broad portrayal ( ) of the socio-geographic structure of human societies. He postulated that the development of the European people took place in three very different geographical environments, namely, the steppes, the maritime shores and the forested lands. The Asiatic steppes was the home of stable nomadic families under the control of patriarchy ( ). On the maritime shores of Europe with their fishing resources, the boat and the habitation were patrimony ( ) of the family, which was made up of parents, all unmarried children, and the eldest named son with his family. Forested land covering great areas of much variety, with grass openings, heath and varied soils, was the birth place of the unstable family that had also developed in the urban environments of Europe and had spread to America.

Demolins → He provides an analysis of the social structures of the world's people on the basis of what he calls their 'geographical environment', their resultant type of work and their resultant type of social organization. The basic idea of Demolins

expressed in the preface to the first volume is follows "The primary and decisive cause of the diversity of people and races is the route which has been followed by the peoples. It is the route (environment) which created race and social type. It has not been an indifferent matter for a people which route they followed: that of Great Asiatic Steppes, or of the Tundras of Siberia, or the American Savannas or African forests. Unconsciously and fatally these routes fashioned either the Tatar Mongol type, Eskimo-Lapp, the Red-skin or the Negro. In Europe, the Scandinavian type, the Anglo-Saxon, the French, the German, the Italian and the Spanish are also the result of the routes through which their ancestors passed, before arrival at the present habitat."

Darwin → Darwin ideas, in fact, revolutionized the early nineteenth century hypothesis in determinism. They provided a mechanical explanation to such hypotheses as an alternative to the 'teleological explanation' of Ritter and the 'aesthetic explanation' of Humboldt to the hypothesis of determinism. Darwin themes which include

- (a) change through time or evolution, a general concept of gradual or even transition from lower to higher or more complicated forms
- (b) Association and organism - man as part of a living ecological organism.
- (c) Idea of natural selection and struggle.

• Friedrich Ratzel (1844 to 1904) → A scholar of USA who is known for his deterministic views. He has given his deterministic views in his book 'History of Mankind'. According to him "our growth in intelligence and culture, we call the progress of civilization may better be compared with upward growth of plant rather than the unconfined flight of a bird, we remain even bound to the earth and twig can grow only in the upper direction but its feet must rest on the ground and dust must return to dust".

Here Ratzel tried to correlate the man's development with upward movement of plant. Man's development cannot just like bird who flies in sky who could not contact of the earth surface, it is just like the growth of upper part of plant called twig. He compared man with that of twig whose contact with the earth surface. So man's development should always associated with earth surface. If twig is cut from the plant finally that would come to the earth surface, in the same way people also come to the earth surface. So finally he tried to say the impact of earth on human beings.

The first volume (1882) treats the causes of human distributions, i.e. the dynamic aspect of geography and the second, published ten years later, deals with the facts of distribution, that is, the static aspect of geography. The Darwinian idea of 'selection and struggle' was explicitly used by Ratzel in his political geography.

• Miss Ellen Semple → In the beginning of 20th Century environmental determinism was at its peak in USA and Miss Ellen Churchill Semple who was the leading light on this front is known for her deterministic views. She has written a book "Influence of Geographic Environment" (1911) and in this book she has discussed their deterministic views. According to her, man is a product of the earth's surface, she has entered into his bones and marrow, into his mind and soul. So from this statement Miss Semple trying to explain the influence of earth on human beings. She further says that bitter struggle for existence makes the hill-men industrious, provident and honest. Contrary to this, the people living in the plain region of Europe are energetic, serious and thoughtful. The people of Mediterranean region, where life is easy going, due to temperate and mild climatic conditions are intelligent. So from this statement we again see that Miss Semple again try to explain the influence of earth on human being or the influence of climate on human beings.

• Elsworth Huntington → He was a USA scholar and his book is "Principles of Human Geography". According to him the supreme achievement of civilizations in any region were always bound up with a particular type of climate and the variations in climate leads to change of centres of civilization. Huntington divided the world into

Two climatic zones

- ① Mild (सुखा)      ② Harsh (कठोर)

He further says that all the ancient civilizations eg - Egyptian, Mesopotamian, Indus and Chinese were flourished in the fertile river valleys of mild climate.

According to him, the religious and social characteristics are also determined by the climate related factors. He says that the development of Europe is due to temperate climate conditions where temperature remains around  $20^{\circ}\text{C}$  throughout the year and cyclonic activities are more common. He further says that in tropics due to hot, humid and oppressive weather conditions, the entire region is underdeveloped because the people are lazy, lethargic (सुस्त) and inefficient (अकुशल), so from this statements of him we gain see that he has tried to prove the role of climate is really dominant in the development of civilization or in the character determination of human beings.

Some books written by Huntington are as follows

- (1) The Pulse of Asia in 1907
- (2) Civilization and climate in 1915
- (3) Mainsprings of Civilization in 1945.

Albert Perry Brigham → His book 'Geographic Influence in American History' appeared in 1903. Brigham emphasized ( ) the origin of what he called 'geographic conditions'. He was specially critical of generalisations concerning the influence of climate. He appeared critical of vague and unproved assertions

of climatic influence on racial character, skin colour or man's institutions.

## Criticism of Determinism

(1) The concept of determinism says nature and climate decides the character of human beings. They are of the view that nature in such a dominant position decide the character of human beings.

But why there is no change in the character of Negro people which living in cold country like USA from thousand years. They are characterise by definite hair pattern, colour of skin, morphological structure, shape of nose.

(2) Mediterranean region is famous for citrus fruits but in the beginning citrus fruits were not being produced in that region. It is due to human being effort these fruits or plants carried out from other places and cultivated there. Now they have become the most important crops in mediterranean region. So, nature was not support for the production of citrus fruits but due to human being effort these fruits cultivated in Mediterranean region.

(3) Man with his abilities and wisdom can change nature or climate of a certain region for his benefits eg → He can use Air conditioners to change the temperature condition of a certain region. He can prevent flood by constructing dams or other multi-purpose projects.

Productivity of a land can increased with the use of fertilizers.

(4) Some-times political cause and human beings desire inspite of nature cause the establishment of industries. eg → Kapurthala,