



# Man Environment Interaction

Course Title: Human Geography (Minor)

Course Code: Min/Geo-201

Course Instructor: Ms. Amna afzal

# Human-Environment

- ▶ Human-environment relationship is the interplay between people and their environment, including the elements and arrangements by which people use the environment and the limitations the environment puts on human behaviour
- ▶ □ Human beings depend on the environment
- ▶ □ Human beings adapt to the environment
- ▶ □ Human beings modify the environment

- determinism and possibilism are the dominant theories. Till date, they are considered as an irreconcilable paradox among them
- It has been a debate for years that flourished from ancient to modern period
- Among geographers, a great number of them have strongly emphasized the effect of environmental determinist on man's activity. And also a great number are supporting the notion of possibilism
- Relph (1987) said, "the landscapes and places we live are important. Whether we shape them or they shape us, they are the expressions of what we are. Our lives are impoverished precisely to the extent that we ignore them."

# THEORETICAL PERSPECTIVES IN HUMAN ENVIRONMENT INTERACTION

- **Environmental determinism**  
(humans as clay to be molded by a dominant nature)
- **Environmental possibilism**  
that it is not the physical environment that influences man but also human effort has to be considered

# ENVIRONMENTAL DETERMINISM

- This view is highly supported by most geographers and non-geographers from Ancient to modern periods
- In ancient to medieval periods, the concept of geography by itself and determinism was promoted by non-geographer and unscientific scholars with simple interest and observation
- Even the prominent scholars were non-geographers like Hippocrates, Eratosthenes, Strabo, Aristotle, Herodotus, Ptolemy and others
- The belief that the environment causes all cultural development.
- Natural environment is the dominant force in shaping cultures
- Natural environment influences social, political and religious life of mankind

- This "environmentalist or determinist concept" of geography was given by Barrows, who reversed the usual form of "human ecology," as the study of man's adjustments to natural environment (Hartshorne, 1939)
- Doyle (2011) says determinism is a theory or doctrine based on the occurrences in nature, or social or psychological phenomena causally determined by preceding events or natural laws
- From a metaphysical and philosophical position, for everything that happens there are conditions, such that without those conditions, nothing else could happen
- It is also the view that every event has a cause and that everything in the universe is absolutely dependent on and governed by causal laws
- Since determinists believe that all events, including human actions, are predetermined, determinism is typically thought to be incompatible with free will

- Andrew et al. (2003) forward the fundamental argument of the environmental determinists that aspects of physical geography, particularly climate, influence the psychological mind-set of individuals
- The key proponents of this notion include Ellen Churchill Semple, Ellsworth Huntington and Thomas Griffith Taylor

# ENVIRONMENTAL DETERMINISM

## Environment Determinism Ideas:

- **Aristotle (350BC):** People of relatively cold climates have more energy than those of mild climate
- **Flavius Vegetius (Roman Writer):** People of hot climate are relatively weak and lacking in courage vitality and resistance while people of cold climate have vigor and vitality
- **Baron de Montesquieu (1689-1755): The Spirit of Laws**  
The influence of climate on politics [was evident in ancient Greece where the] infertility of the ground in Athens resulted in the establishment of a popular form of government, whereas, the fertility of soils around Sparta was reflected in the establishment of an aristocratic government.
- **Friedrich Ratzel:**  
Natural environment was the prime mover that generated human activities, social paradigms, as well as human adaptations and responses.



# ENVIRONMENTAL DETERMINISM

## Ellen Churchill (1919)

Man is a product of the earth's surface. This means not merely that he is a child of the earth, dust of her dust, but that the earth has mothered him, fed him, set him tasks, directed his thoughts confronted him with difficulties that have strengthened his body and sharpened his wits, given him his problems of navigation or irrigation, and at the same time whispered hints for their solution. She has entered into his bone and tissue, into his mind and soul

## Ellsworth Huntington (1879-1947)

We are slowly realizing that character in the broad sense of all that pertains to industry, honesty, purity, intelligence, and strength of will is closely dependent upon the condition of the body. Each influences the other. Neither can be at its best while its companion is dragged down. The climate of many countries seems to be one of the great reasons why idleness, dishonesty, immorality, stupidity, and weakness of will prevail.



# **CORE THEMES OF ENVIRONMENTAL DETERMINISM**

- **Environment control human action and activities**
- **Human are badly dependent on the natural environment**
- **Human live at the mercy of environmental forces**
- **Human attitude, decision making are influenced by environment**

# EVIDENCE OF ENVIRONMENTAL DETERMINISM

## Climatic Influence

**Human population and settlements:** No large cities in the Antarctica because is too cold, since most of the sunlight is reflected off there due to the tilt of the earth axis and the angle of incoming solar radiation. Hence most human settlements are between the Tropic of Cancer and Capricorn.



## **Access to water**

Human settlements have mostly been around 1% of the world's fresh water.

Most cities are built around major rivers

Most Early civilization were all around major water bodies Mesopotamia (Tigris and Euphrates River), Egypt (Nile River),

## **Agriculture**

Environment tends to heavily influence what kind of agriculture a culture practices.

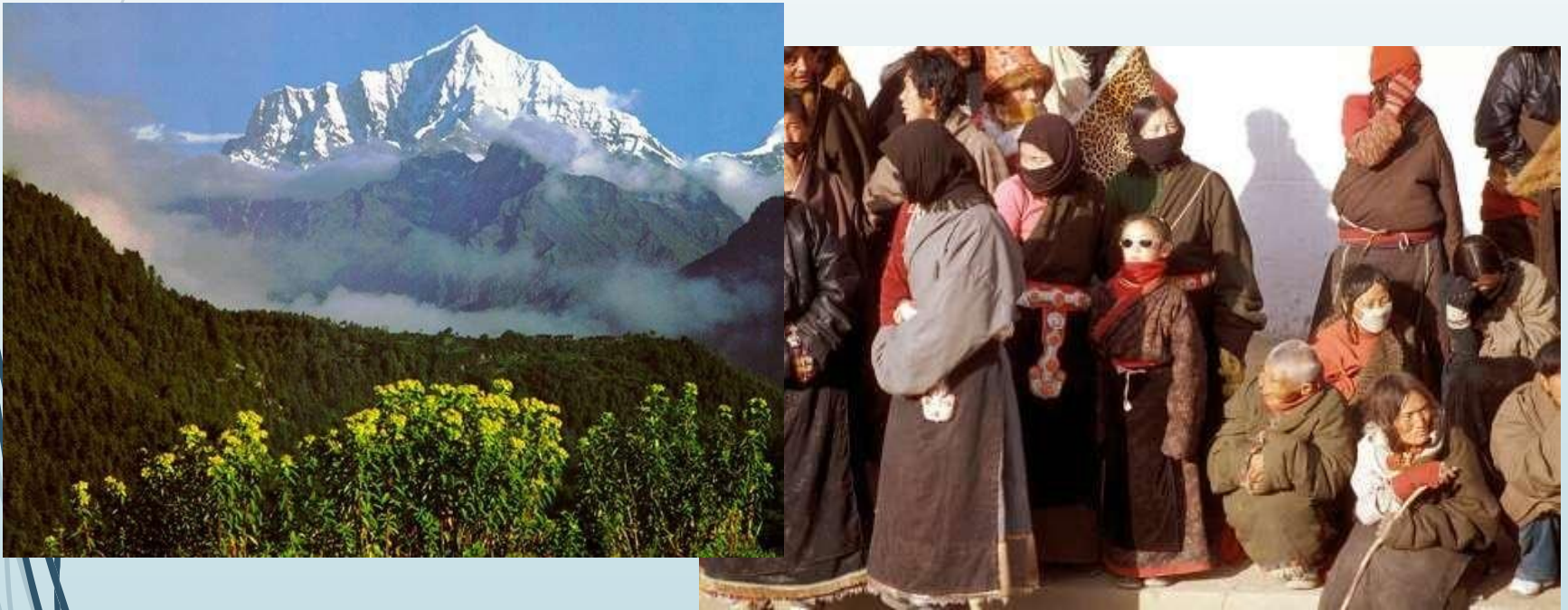
## **Vegetation**

Human culture shaped by environment. Example: Buildings, clothing, jewelry

**People of similar environment tend to have similar cultures.**

**Example:** People who live near coasts focus on fishing and navigating waterways.

o  
Example: Mountainous people are simple, backward, and conservative because they live secluded from others.



People of Tibet



## **the influence of environment on various aspects**

- the livelihood of human being (economic activity like trade, employment and agriculture), culture, civilization, resource, anatomy, behaviour, political and knowledge or intellect, health and religion
- In short, it is basically how far man is affected by his physical environment

# Human livelihood

- The livelihood of the society is an inclusive word that basically infers to the mechanism of people's engagement on various aspects such as trade, job, dressing, and agriculture
- Determinists perceive that the most dominant effect of environment is on the livelihood of human being
- It can also influence the economic activity and livelihood strategy associated with the real life style and mode of their life as well
- Semple and Ratzel argue that environmental manifestations like climatic influences are persistent, often impossible to control.



- And also agriculture and sedentary life in the arid region is possible only with the help of irrigation. For example, “Egypt is the gift of Nile”
- Hartshorne (1939) clearly stated that the environment affects the day to day activity of man. For instance, the valleys, high mountain and grazing lands offer more to pastoral peoples for summer Trans-human around the margins
- Since the lowland breeds of *Bos Taurus* (European cattle) and *Bos indicus* (Zebu cattle) cannot survive outdoor during winter, on scanty natural grazing, the nomadic grazers who live throughout the year around the central areas are restricted to flocks of sheep and goats, which they use together with salt as partly exchange for grains. Also during winter, they move from areas like Zanskar where there is heavy snow

# Health and talent or knowledge

- Selected scholars believe that physical environment also influences the health and talent of people
- Emmanuel Kant said that physical environment affects health. For instance, the people of New Holland (East Indies) have closed eyes and cannot see any distance without bending their heads backward to touch their back. This implies that they are short sighted
- Karl Ritter strongly emphasized that Turkmen people have narrow eye lids because of desert environment. He also said that the environment can affect the mind
- Huntington (1915) argues that the blacks from the Caribbean had dark skin because of the climate, and that the tropics cause a host of climatically specific diseases. Around Cape Horn, there is the risk of having malaria, yellow fever, and heat because Panamanian jungle is just fifty miles away from there. He illustrated that environment also affects the health and longevity of human beings. He explained that people dwelling in cold area (higher altitude) live more than those in low altitude

- Aristotle also believed that we dominate in all aspects like elitist because of our temperate environment, but people in the tropics are absent minded. In this thesis, he argued that Europeans are civilized and developed because of the best temperature (temperate climate)
- Again, he also explained the difference in region in terms of climatic difference. He said the people of middle latitude are endowed with intelligence. In the cold areas, the people are brave, courageous but unintelligent (Singh, 2007)
- The other idea emphasizes that the environment also influences human talent and knowledge. Andrew (2003), a fundamental environmental determinist, argued that the physical geography, particularly climate influences the psychological mind-set of individuals
- According to Emmanuel Kant, the inhabitants of hot lands are lazy and timid; people of temperate regions are more talented and energetic than those of the north and more energetic than those of the south.



# Politics and civilization

- The environment has effect on resource and civilization (modernism and development)
- Aristotle considered the people of the middle latitude to be endowed with the finest attitude and thus destined to rule over others,
- but those in warm climate, especially tropics lack political organization and capacity to rule their neighbours
- He also emphasized that the environment inactivates the political strength of the inhabitants of the area

# Anatomy and strength

- Lastly, scientists have known for years that traits and anatomy, such as eye colour and hair colour are determined by specific genes encoded in each human cell as well as the environment
- the people inhabiting warm climate are weak in body, indolent and passive in their strength and anatomy. Masudi also said that nomads who live in open air are marked by their strength and physical fitness than nomads in hot climate
- Muqaddimah, explained that black skin was due to the hot climate of sub-Saharan Africa and not due to their lineage

# Culture and religion

- Climate is a principal determinant of culture. Culture is an inclusive terms which hosts language, religion, and others. The cultures in the tropics where living is 'easy' and where heat is thought to induce lethargy are inertia to underdevelopment (Frenkel, 1992; Gallagher, 1993)
- environment has notable effect on the culture and custom of the dwellers in general, and with slight effect on their dressing and eating cultures. For instance, the dressing and eating culture of cold and hot areas differs. With regard to eating, the people of the cold region eat more food to get calorie to be able to cope with the environment; but the warm area is not so

# OBJECTIONS TO DETERMINISM

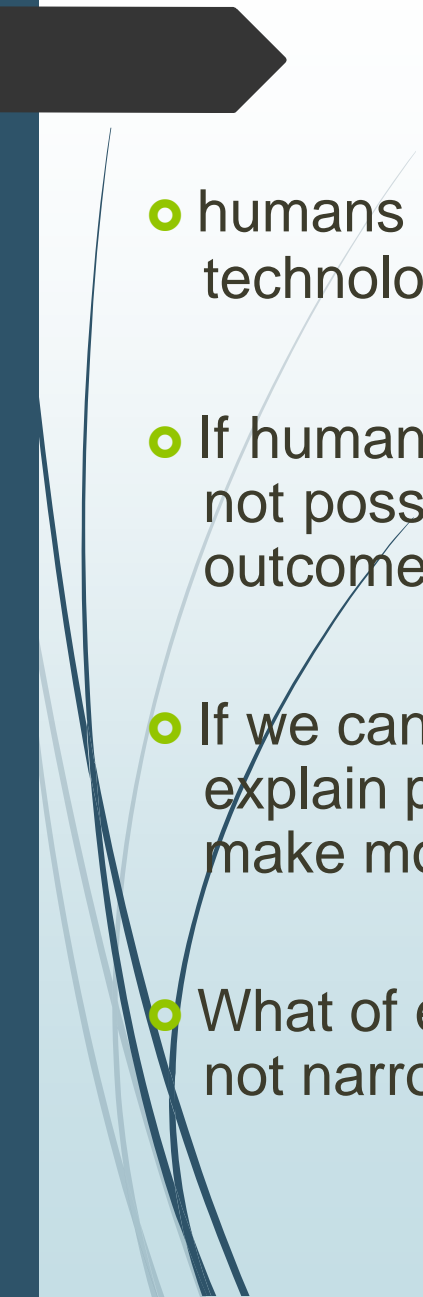
- In contrast, the other wing of geographers and other scientists have had an objection on determinist and try to show their position by forwarding their ideas of environmental possibilism in spite of their profound interest
- The idea of possibilist has been accepted by geographers in the 20th century, in France, in the school of human geography. It stresses the freedom of man to choose the pattern of human activity on earth
- Neeraj (2006) argued that man has reduced the extent to which he is able to use innovation, adaptation or sheer hard work to escape from these bonds. It is not by compulsion but a choice based on the balancing of probabilities.

## OBJECTIONS TO DETERMINISM


- Man is not a robot without will of his own
- Man have been able to create his landscape out of the natural environment: roads, bridges, Settlements etc.
- Transformation of desert land to productive agricultue land in Isreal, Eygpt
- Development of mining complexes in Australian deserts
- Production of hydro-power
- Black skin people have lived in the U.S.A for about four generations without any change in their skin pigmentation. Similarly White skinned people have lived in hot areas of the world for more centuries without necessary becoming black.



- Possibilism is the view that the physical environment provides the opportunity for a range of possible human responses and that people have considerable discretion to choose between them
- Possibilism removes the absolutist causal approach found in determinism and maintains human agency. Infrastructures as both part of the physical and social environment provide a range of human responses
- Infrastructure possibilism at the moment seems to hold a bit more promising than determinism (Roy, 1982)

- 
- A dark grey arrow points to the right from the left edge of the slide. Several thin, light blue lines curve across the left side of the slide, overlapping the arrow and the text area.
- humans are not controlled by their environment, technologies and infrastructures; they are agents of free will
  - If humans are always agents of free does that mean it is not possible to predict any types of behaviour or societal outcomes of a given infrastructure?
  - If we cannot predict any kind of behaviour, how do we explain patterns of doing things, and how do marketers make money?
  - What of education, history, culture, geography, etc? Are they not narrowly determined by environment (Lewis, 1986)?

- They argue that man is not a total slave of his environment. As the determinist says it is fully a puppet to his environment
- The other rationale to falsify the idea of determinist is the agricultural crop dominating most of the land used in Europe, Asia and North America, which is productive due to human effort



**Paul Vidal de la Blanche:** Environment sets limitations for cultural development but it does not completely define culture. Culture is instead is defined by the opportunities and decisions that humans make in response to dealing with such limitations.

1950s Environmental determinism was replaced by environmental possibilism



# POSSIBILISM

- Physical environment offers numerous ways for a culture to develop.
- People make culture trait choices from the possibilities offered by their environment to satisfy their needs.
- High technology societies are less influenced by physical environment.

then..... Las Vegas--



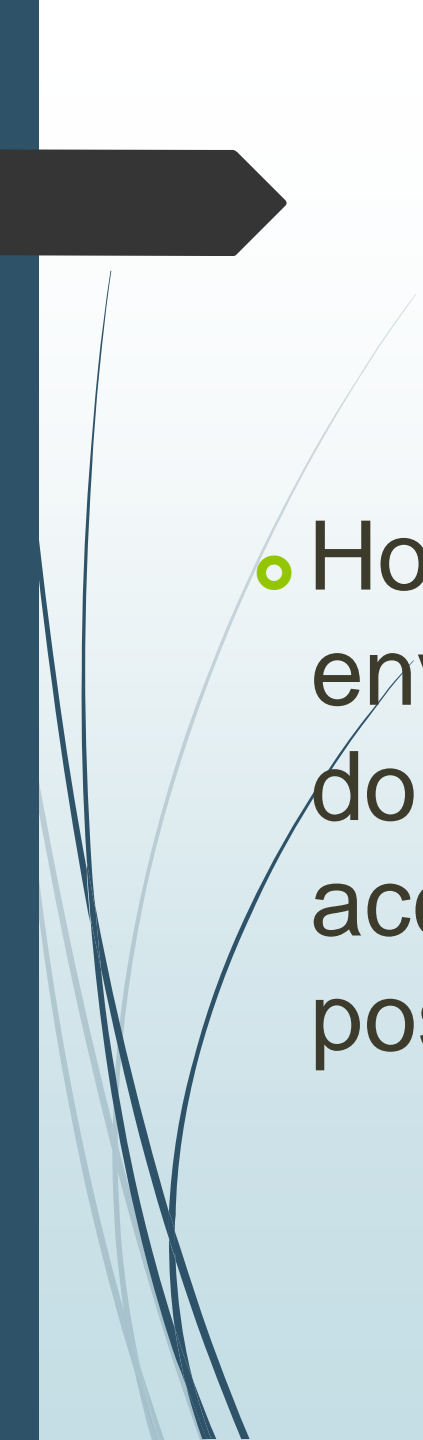
And now!





# CORE THEMES OF ENVIRONMENTAL POSSIBILISM

- Human are free to choose and decide their activities
- Nature do not control human beings
- Nature provides opportunity and possibilities to human

- 
- However, the idea of environmentalist is dominant and widely accepted than that of possibilist.



# Environmental perception

- Perception is subjective, active and creative process in which
- people interpret what they sense by assigning meaning to
- sensory information
- ● Each person's or cultural group's mental images of the
- physical environment are shaped by knowledge, ignorance, experience, values, and emotions
- ● Environmental perceptionists declare-choices people make
- will depend more on how they perceive the land's character than its actual character
- ● People make decisions based on distortion of reality with regard to their surrounding physical

# Environmental perception

Environment perception is passive: culture can bias and distort understanding of environment

Environment perception as active: culture as a guide by helping seek information about the environment based on what we need to know for a current study or project

## Reasons for different perception of environment

**Individualism:** Freedom for individuals to compete for wealth and status.

- No artificial restraints
- Market place reward best and deserving people
- Environment as resilient and robust
- Nature will take care so people can exploit the environment to get ahead



## Reasons for different perception of environment (Grid-Group Theory)

**Fatalism:** Luck and chance determine the fortunes of man

- Environmental forces are unpredictable
- Environmental forces are uncontrollable
- Need luck to survive
- Attempts to change environment is waste of time

**Hierarchy:** Perception/culture based on promotion of order

- Everyone know their place in society
- People on lower rank have to obey those upper rank make laws and look after the interest of people
- Environment resource use should be limited to a specific limit
- Limits determined by upper ranks



## Reasons for different perception of environment

**Egalitarianism:** Perception/culture based on equality and solidarity

- Sharing and brotherhood/Sisterhood
- No one have absolute power over the other
- Shared responsibility and commitment
- Environment is fragile look out for the good of the environment and individual advancement

# Environmental perception

- Geomancy—a traditional system of land-use planning dictating that certain environmental settings should be chosen as the sites for houses, villages, temples, and graves
- an East Asian world view and art
  - affected the location and morphology of urban places in countries such as China and Korea

# Environmental Perception

## Examples:

- If people believe that a flood was **caused by the gods**, they are likely to try to please the gods (e.g. build an altar)
- If other people believe that the flood was a **natural disaster**, then they may work to prevent future damage (e.g. flood walls).



# Cultural Determinism



- This perspective emphasizes **human culture as ultimately more important** than the physical environment in shaping/molding human actions
- Some cultural determinists have seen humans as in opposition to the environment, and **if nature is not controlled, humans will die.**

But modification by the Dutch The dikes hold back the water, creating polders, reclaimed land. Windmills pump out the water

