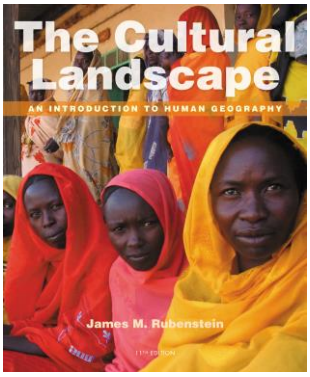
AP Human Geography: Chapter 1 Lecture Notes

Slide 1

Chapter 1 Lecture

The Cultural Landscape

Eleventh Edition



Basic Concepts

Matthew Cartlidge
University of Nebraska-Lincoln

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Key Issues

- How do geographers describe where things are?
- Why is each point on Earth unique?
- Why are different places similar?
- Why are some human actions not sustainable?

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Learning Outcomes

- 1.1.1: Explain differences between early maps and contemporary maps.
- 1.1.2: Describe the role of map scale and projections and making maps.
- 1.1.3: Explain how latitude and longitude are used to locate points on Earth's surface.
- 1.1.4: Identify contemporary and analytic tools, including remote sensing, GPS, and GIS.

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Learning Outcomes

- 1.2.1: Identify geographic characteristics of places, including toponym, site, and situation.
- 1.2.2: Identify the three types of regions.
- 1.2.3: Describe two geographic definitions of culture.
- 1.3.1: Give examples of changes in economy and culture occurring at global and local scales.
- 1.3.2: Identify the three properties of distribution across space.

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Learning Outcomes

- 1.3.3: Describe different ways in which geographers approach aspects of cultural identity, such as gender, ethnicity, and sexuality.
- 1.3.4: Describe how characteristics can spread across space over time through diffusion.
- 1.3.5: Explain how places are connected through networks and how inequality can hinder connections.

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Learning Outcomes

- 1.4.1: Describe the three pillars of sustainability.
- 1.4.2: Describe the three abiotic physical systems.
- 1.4.3: Explain how the biosphere interacts with Earth's abiotic systems.
- 1.4.4: Compare ecosystems in the Netherlands and southern Louisiana.

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- The word, geography, was invented by ancient Greek scholar, Eratosthenes.
- Geo means earth
- Graphy means to write.
- Therefore, Geography can be thought of the discipline charged with the task to write about and to describe the phenomena spatially distributed on Earth.

How Do Geographers Describe Where Things Are?

- *Geography* is the study of where things are found on Earth's surface and the reasons for the locations.
- Human geographers ask two simple questions…
  1. Where are people and activities found on Earth?
  2. Why are they found there?

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- A map is an abstract representation of the Earth's surface set to a scale that is accommodating to the user.
- Maps help one to understand the reasons for the spatial distributions by comparing maps showing various features or activities.

Maps

- A *map* is a two-dimensional or flat-scale model of Earth's surface, or a portion of it.
- *Cartography* is the science of mapmaking.
- Maps serve two purposes…
  1. As a reference tool to identify an object's absolute and relative location.
  2. As a communications tool to convey the distribution of human activities or physical features.

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Improvements to world map later made by Ptolemy. After Ptolemy, advancements in cartography primarily made outside of Europe by Chinese and Islamic world.

Mapmaking revived during the Age of Exploration and Discovery.

Early Mapmaking

- Earliest maps were reference tools—simple navigation devices to show a traveler how to get from Point A to Point B.
- First world map prepared by Eratosthenes(276–194 B.C.)

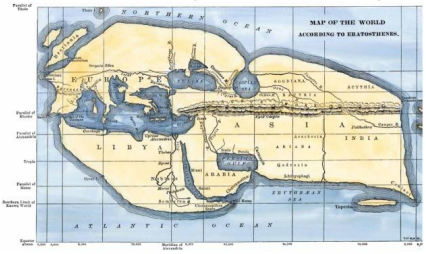

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FIGURE 1-4 WORLD MAP BY ERATOSTHENES , 194? b.c. This is a nineteenth-century reconstruction of the map produced by Eratosthenes.

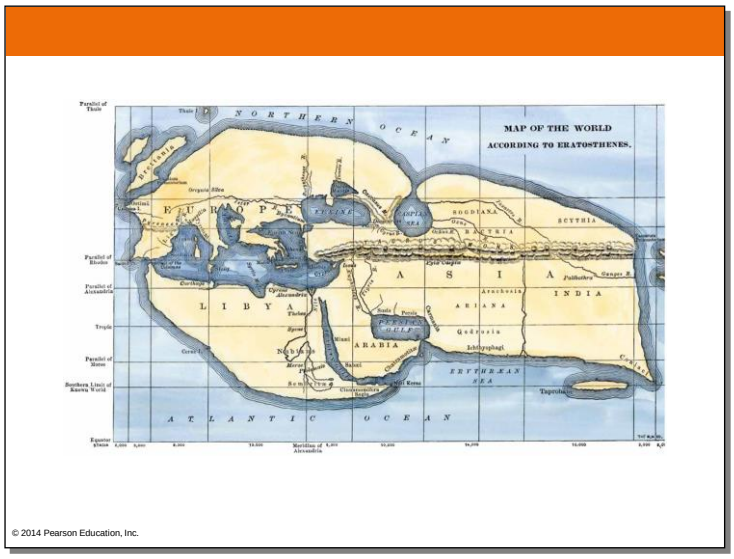

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FIGURE 1-5 WORLD MAP BY AL-IDRISI, 1154 Al-Idrisi built on Ptolemy's map, which had been neglected for nearly a millennium.

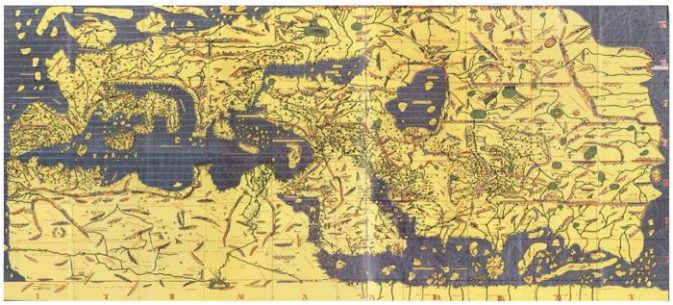

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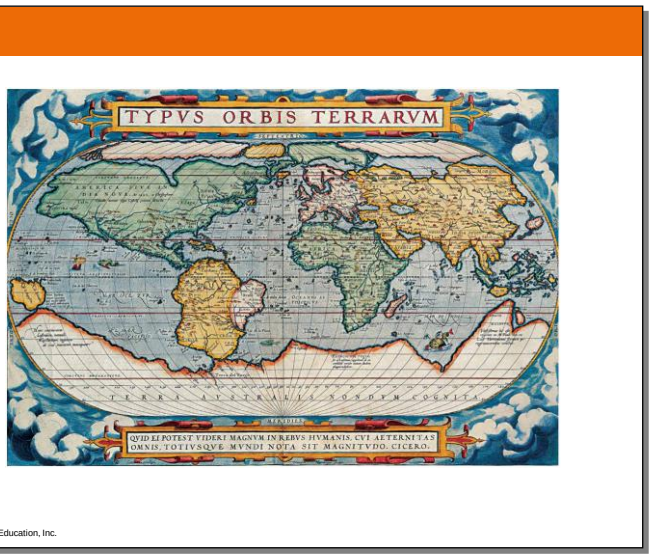
FIGURE 1-6 WORLD MAP BY ORTELIUS, 1571 This map was one of the first to show the extent of the Western Hemisphere, as well as Antarctica.



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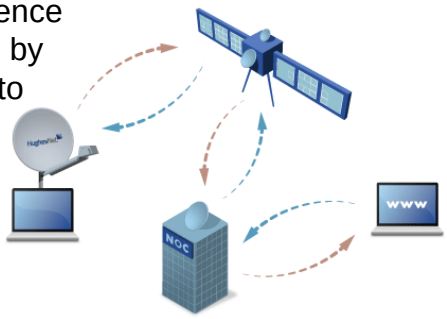
Contemporary Mapping

- Shift from simply a tool that provides location reference to a tool used by geographers to communicate complex geographic phenomena.



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- First decision a cartographer faces is how much of Earth's surface to depict on the map.
- Ratio or Fraction scale- If you measure the distance between Point A and Point B as 1 inch, then their distance apart on Earth's surface is 24,000 inches.

Map Scale

- Level of detail and the amount of area covered on the map depend on its *map scale*.
  - Relationship of a feature's size on a map to its actual size on Earth
- Map scale is presented in three ways…
  1. Ratio or Fraction Scale: Ex. 1:24,000 or 1/24,000
     - Number on left is one unit of distance, while number on right represents same unit of distance on Earth's surface.

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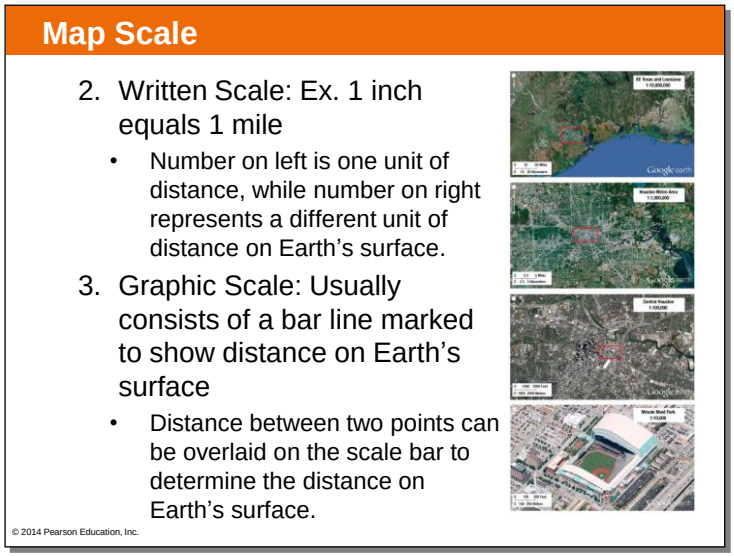

- **FIGURE 1-8 MAP SCALE The four images show (top) southeast Texas (second), the city of Houston (third), downtown Houston, and (bottom) Minute Maid Park. The map of southeastern Texas has a fractional scale of 1:10,000,000. Expressed as a written statement, 1 inch on the map represents 10 million inches (about 158 miles) on the ground. Look what happens to the scale on the other three maps. As the area covered gets smaller, the maps get more detailed, and 1 inch on the map represents smaller distances.**

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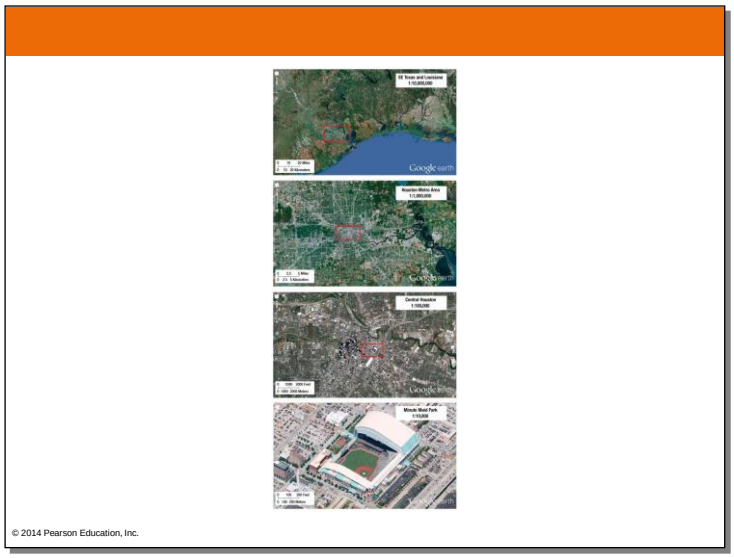

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Projection

- Scientific method of transferring locations on Earth's surface to a flat map is called *projection.*
- Earth's spherical shape causes distortion when drawing it on a flat piece of paper.
  - Four types of distortion
    1. *Shape* of an area can be distorted.
    2. *Distance* between points may become increased or decreased.
    3. *Relative size* of different areas can be altered.
    4. *Direction* between points can be distorted.

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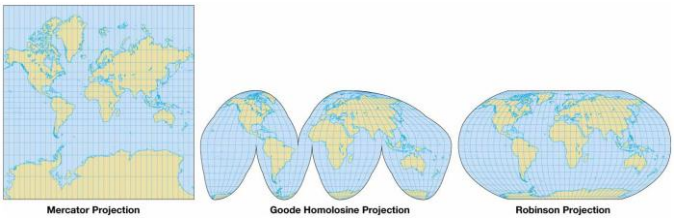
Figure 1-9 PROJECTION (left) Mercator projection, (center) equal area projection, (right) Robinson projection. Compare the sizes of Greenland and South America on these maps. Which of the two landmasses is actually larger?



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Geographic Grid

- Geographic grid is a system of imaginary arcs drawn in a grid pattern on Earth's surface.
  - *Meridians* are arcs drawn between the North and South poles. Each is numbered, according to a system known as *longitude.*
    - Values range from 0º (*prime meridian)* to 180º east or west longitude.
  - *Parallels* are arcs drawn parallel to the equator and at right angles to meridians. Each is numbered, according to a system known as *latitude.*
    - Values range from 0º (equator) to 90º north or south.

- Longitude values are assigned east or west based on whether they are east or west of the prime meridian.
- Latitude values are assigned north or south based on whether they are north or south of the equator.

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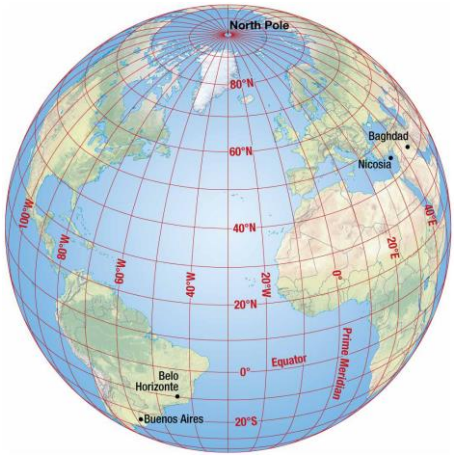
FIGURE 1-10 GEOGRAPHIC GRID Meridians are arcs that connect the North and South poles. The meridian through Greenwich, England, is the prime meridian, or 0° longitude. Parallels are circles drawn around the globe parallel to the equator. The equator is 0° latitude, and the North Pole is 90° north latitude.



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Geographic Grid

- Points on Earth's surface can be communicated by referencing points of latitude and longitude intersection.
  - Ex. Denver, Colorado's location is 40º north latitude and 105º west longitude.
- Further accuracy can be achieved by dividing each degree into 60 minutes and each minute into 60 seconds.
  - Ex. Denver, Colorado's state capital building is 39º42'2" north latitude and 104º59'04" west longitude.

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Telling Time

- Earth as a sphere is divided into 360º of longitude.
  - Divide 360º by 24 time zones (one for each hour of day) equals 15º.
    - Each 15º band of longitude is assigned to a standard time zone.
- *Greenwich Mean Time (GMT)* is…
  - Located at the prime meridian (0º longitude).
    - Passes through Royal Observatory at Greenwich, England
  - Master reference time for all points on Earth.

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Telling Time

- The *International Date Line* is…
  - Located at 180º longitude.
    - Position deviates from 180º longitude at times to accommodate various nearby nation-states.
  - Point you move the clock back 24 hours (one day), if you are heading eastward toward America.
  - Point you move the clock ahead 24 hours (one day), if you are heading westward toward Asia.

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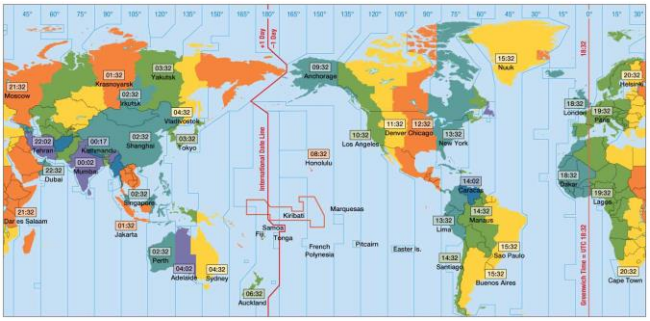

FIGURE 1-11 TIME ZONES The United States and Canada share four standard time zones:
• Eastern, near 75° west, is 5 hours earlier than GMT.
• Central, near 90° west, is 6 hours earlier than GMT.
• Mountain, near 105° west, is 7 hours earlier than GMT.
• Pacific, near 120° west, is 8 hours earlier than GMT.
The United States has two additional standard time zones:
• Alaska, near 135° west, is 9 hours earlier than GMT.
• Hawaii-Aleutian, near 150° west, is 10 hours earlier than GMT.
Canada has two additional standard time zones:
• Atlantic, near 60° west, is 4 hours earlier than GMT.
• Newfoundland is 3½ hours earlier than GMT; the residents of Newfoundland assert that their island, which lies between 53° and 59° west longitude, would face dark winter afternoons if it were in the Atlantic Time Zone and dark winter mornings if it were 3 hours earlier than GMT.

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Contemporary Tools

- Geographic *Information Science (GIScience)* involves the development and analysis of data about Earth acquired through satellite and other electronic information technologies.
- Collecting Data: Remote Sensing
  - Acquisition of data about Earth's surface from a satellite orbiting Earth or from other long distance methods is known as remote-sensing.

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Contemporary Tools

- Collecting Data: Remote Sensing Cont'd.
  - After sensors scan Earth's surface, the individual pixels are transmitted to a receiving station on Earth where a computer assembles each of them into an image.
    - Map created using remotely sensed data is essentially a grid of rows and columns of pixels; each representing the radiation being reflected on Earth's surface at a specific point.

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Contemporary Tools

- Pinpointing Locations: GPS
  - *Global Positioning System (GPS)*
    - System that accurately determines the precise position of something on Earth
    - GPS in the U.S. includes three elements
      1. Satellites placed in predetermined orbits
      2. Tracking stations to monitor and control satellites
      3. Receiver that can locate at least four satellites, figure out its distance from each, and use the information to calculate its precise location
    - Applications
      - Turn-By-Turn directions in vehicles
      - Navigational aid to pilots and ship captains
      - Provide location for social media applications in a smartphone

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- Each layer is representative of one dataset, such as roads, rivers, school locations, and zones used by city planners.
- The term mashup comes from the hip-hop practice of mixing two or more songs.
    - Applications include showing the locations of businesses and activities near particular street within a neighborhood or in a city.

Contemporary Tools

- Layering Data: GIS
  - A *geographic information system* (GIS) is a computer system that captures, stores, queries, analyzes, and displays geographic data.
  - Data are stored in layers.
  - Layers can be compared to show relationships among different kinds of information.
  - Data can be overlaid in one GIS from a variety of different sources through a process known as a *mashup.*

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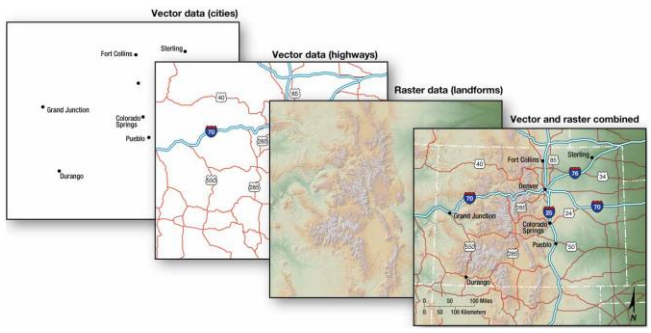
FIGURE 1-13 GIS Geographic information systems store information about a location in layers. Each layer represents a different piece of human or environmental information. GIS involves two types of data: vector and raster. Vector data consists of points (such as forcities) and lines (such as for highways). Raster data consists of areas, such as particular landforms.



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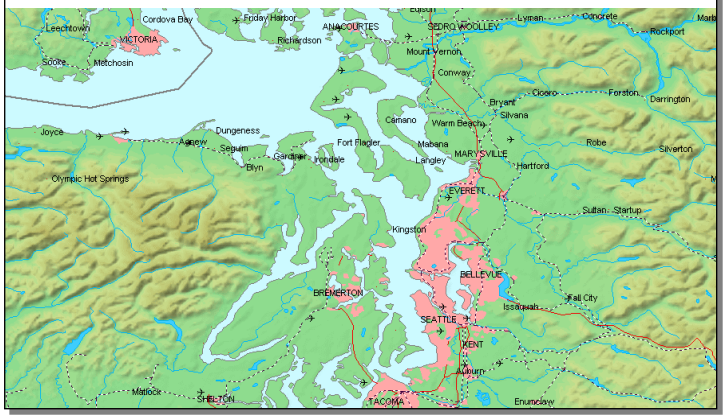
Describing the features of a place is an essential building block for geographers to explain similarities, differences, and changes across Earth.
Geographers describe a feature's place on Earth by identifying its *location*, the position that something occupies on Earth's surface.

Why Is Each Point on Earth Unique?

- A *place* is a specific point on Earth distinguished by a particular characteristic.



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- Situation is most important for finding an unfamiliar place and for understanding a place's importance, or, in other words, connection to other places, such as Interstate highways or rivers.

Why Is Each Point on Earth Unique?

- Location can be identified in three ways.
  1. Place Names
     - A *toponym* is the name given to a place on Earth.
       - Names derived from people of prominence, religious affiliation, physical features, or origins of its settlers
  2. Site
     - *Site* is the physical character of a place.
       - Characteristics include climate, water sources, topography, soil, vegetation, latitude, and elevation.
  3. Situation
     - *Situation* is the location of a place relative to other places.

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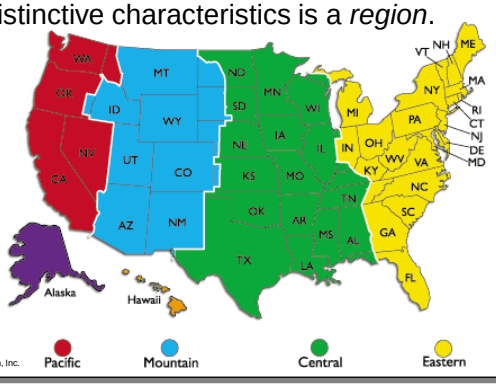
Most often applied at two scales
Spanning political states
Constrained within one political state.
A region derives its unified character through the *cultural landscape*—a combination of cultural, religious, and physical features.
"Culture is the agent, the natural area the medium, the cultural landscape is the result." – Carl O. Sauer, American Geographer

Why Is Each Point on Earth Unique?

- Region: A Unique Area
  - An area on Earth defined by one or more distinctive characteristics is a *region*.



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- Montana is an example of a formal region.
- The North American Wheat Belt is a formal region in which wheat is the most commonly grown crop, but other crops are grown there as well.

Why Is Each Point on Earth Unique?

- Region: A Unique Area
  - Geographers identify three types of regions.
    1. Formal Region (aka uniform region or homogeneous region)
       - An area in which everyone shares in common one or more distinctive characteristics
         - » Ex. Common language, economic activity, or climate
         - » Characteristic may be predominant rather than universal.

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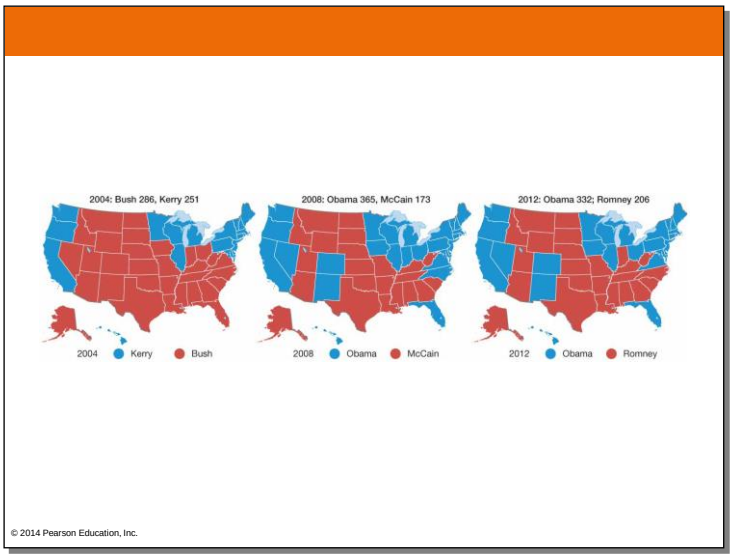

Figure 1-17 FORMAL REGIONS The three maps show the winner by region in the (left) 2004, (center) 2008, and (right) 2012 presidential elections. The extensive areas of support for Democrats (blue) and Republicans (red) are examples of formal regions. (left) In 2004, Democrat John Kerry won most of the states in the Northeast, Upper Midwest, and Pacific Coast regions, while Republican George W. Bush won the remaining regions. (center) In 2008, Democrat Barack Obama won the election by capturing some states in regions that had been won entirely by the Republican four years earlier. (right) In 2012, Democrat Obama won reelection because he carried nearly the same states as four years earlier.

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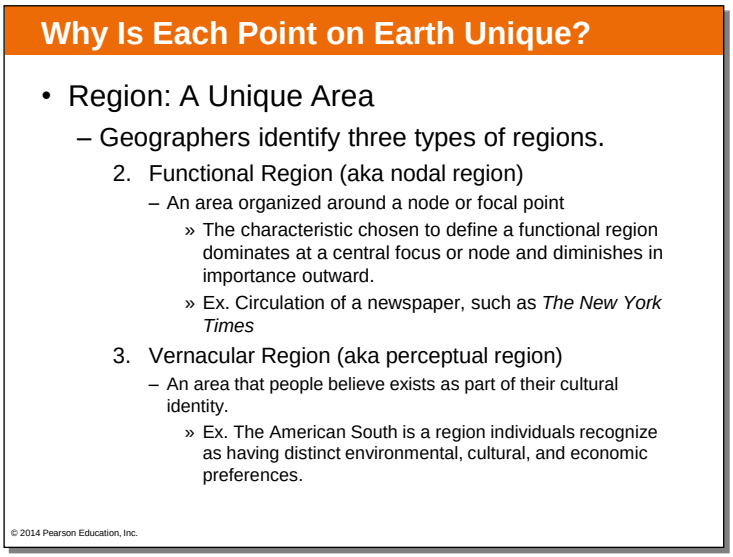

- Functional Region –
    - New technology is breaking down traditional functional regions, because the Internet and satellite dish television reach patrons farther and farther away from a central node.
- Vernacular Region –
    - A useful way to identify perceptual regions is to get someone to draw a mental map, which is a internal representation of a portion of Earth's surface, as one perceives it.

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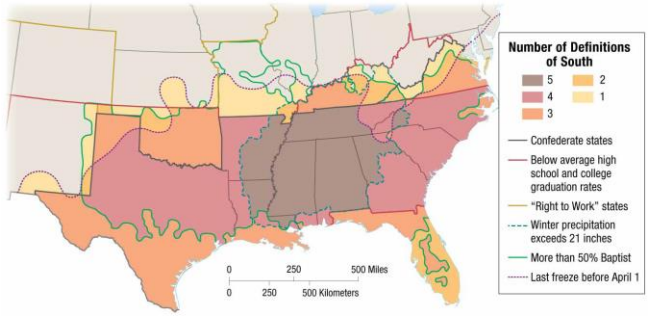
Figure 1-19 VERNACULAR REGIONS The South is popularly distinguished as a distinct vernacular region within the United States, according to a number of factors, such as mild climate, propensity for growing cotton, and importance of the Baptist Church.



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Geographers study both definitions of culture.
Culture: What People Care About
Geographers study why the customary ideas, beliefs, and values of a people produce a distinctive culture in a particular place.
Especially important cultural values derive from a group's language, religion, and ethnicity.
Culture: What People Take Care Of
The second element of culture of interest is production of material wealth, such as food, clothing, and shelter that humans need in order to survive and thrive.

Why Is Each Point on Earth Unique?

- Regions of Culture
  - *Culture* is the body of customary beliefs, material traits, and social forms that together constitute the distinct tradition of a group of people.

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- Geographers can answer questions, such as why some areas have high cancer rates, by looking for spatial associations with the distributions of cultural traits.

Why Is Each Point on Earth Unique?

- Regions of Culture
  - Geographers study both definitions of culture.
    - Culture: What People Care About
      - » Geographers study why the customary ideas, beliefs, and values of a people produce a distinctive culture in a particular place.
      - » Especially important cultural values derive from a group's language, religion, and ethnicity.
    - Culture: What People Take Care Of
      - » The second element of culture of interest is production of material wealth, such as food, clothing, and shelter that humans need in order to survive and thrive.

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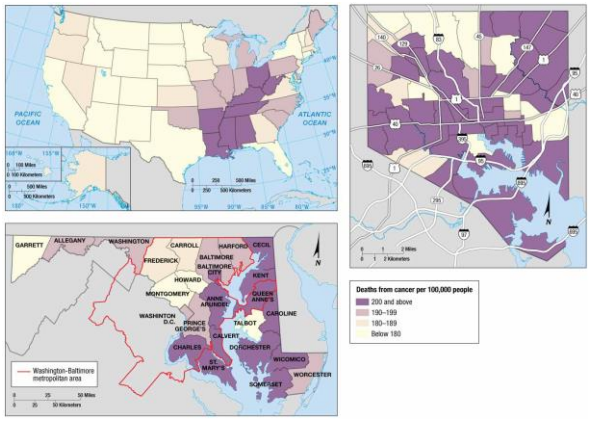
Figure 1-21 SPATIAL ASSOCIATION On the national scale, the Great Lakes and South regions have higher cancer rates than the West. On the scale of the state of Maryland, the eastern region has a higher cancer rate than the western region. On the urban scale, southern and western neighborhoods of Baltimore City have higher cancer rates than northwestern ones. Geographers try to understand the reason for such variations.



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- Globalization means that the scale of the world is shrinking, not literally in size, of course, but in the ability of a person, object, or an idea to interact with a person, object, or idea in another place.

Why Are Different Places Similar?

- Scale, space, and connections help geographers explain why similarities among places and regions do not result from coincidence.
- *Scale* is the relationship between the portion of the Earth being studied and Earth as a whole.
  - *Globalization* is a force or process that involves the entire world and results in making something worldwide in scope.

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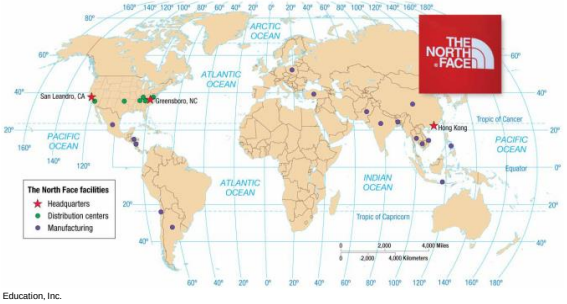
- Every place in the world is part of the global economy, but globalization has led to more specialization at the local level.
  - In a global economy, transnational corporations remain competitive by correctly identifying the optimal location for each of its activities.

Why Are Different Places Similar?

- Globalization of Economy
  - Globalization of the economy has been created primarily by transnational corporations, sometimes called multinational corporations.



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A *transnational corporation* conducts research, operates factories, and sells products in many countries, not just where its headquarters and principal shareholders are located.
Recession that began in 2008 has been called the first global recession.
Home buyers in the U.S. to sales clerks in Japan were all caught in a web of falling demand and lack of credit.

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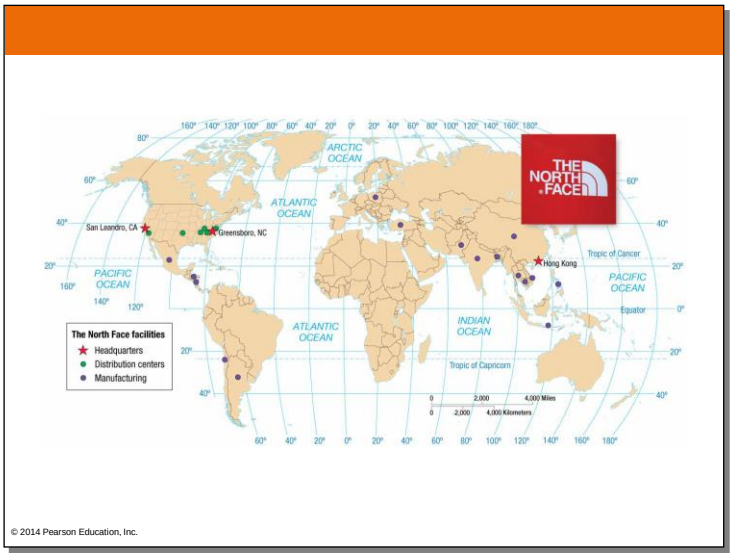

FIGURE 1-22 GLOBALIZATION OF ECONOMY Most North Face clothing is manufactured in Latin America and Asia. The company's headquarters is in San Leandro, California, the headquarters of its parent VF Corporation is in Greensboro, North Carolina, and manufacturing is managed from its Hong Kong office.

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Fast-food restaurants, service stations, and retail chains deliberately create a visual appearance that locations differ as little as possible.
Produces a sense of familiarity for the consumer in what may be an unfamiliar place overall, such as when traveling away from one's hometown.

Figure 1-23 GLOBALIZATION OF CULTURE McDonald's has more than 32,000 restaurants in 117 countries. To promote global uniformity of its restaurants, the company erects signs around the world that include two golden arches.

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Why Are Different Places Similar?

- Space: Distribution of Features
  - *Space* refers to the physical gap or interval between two objects.
  - Geographers think about the arrangement of people and activities in an attempt to try to understand why they are in such a distribution.
    - The arrangement of a future in space as long as its *distribution*

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Density- frequency with which something occurs in space
Involves the number of a feature and the land area
Concentration- extent of a feature's spread over space. Closely spaced together is known as *clustered*. Relatively far apart is known as *dispersed*.
Pattern- geometric arrangement of objects in space

Why Are Different Places Similar?

- Space: Distribution of Features
  - Geographers identify three main properties of distribution across Earth.
    1. **Density**- frequency with which something occurs in space
    2. **Concentration**- extent of a feature's spread over space
    3. **Pattern**- geometric arrangement of objects in space

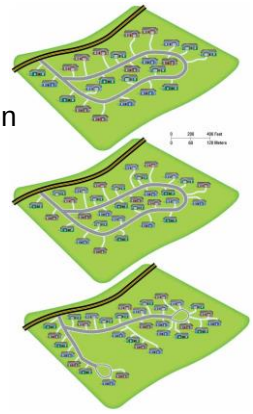

Figure 1-24 DISTRIBUTION OF HOUSES The top plan for a residential area has a lower density than the middle plan (24 houses compared to 32 houses on the same 82-acre piece of land), but both have dispersed concentrations. The middle and lower plans have the same density (32 houses on 82 acres), but the distribution of houses is more clustered in the lower plan. The lower plan has shared open space, whereas the middle plan provides a larger, private yard surrounding each house.

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FIGURE 1-25 DISTRIBUTION OF BASEBALL TEAMS The changing distribution of North American baseball teams illustrates the difference between density and concentration.

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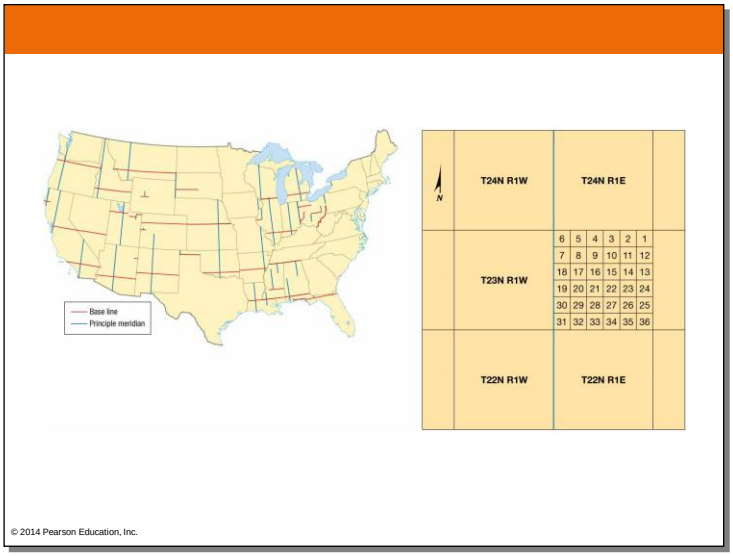

FIGURE 1-26 PATTERN: TOWNSHIP AND RANGE (left) To facilitate the numbering of townships, the U.S. Land Ordinance of 1785 designated several north–south lines as principal meridians and several east–west lines as base lines. (right) As territory farther west was settled, additional lines were delineated. Townships are typically 6 miles by 6 miles.

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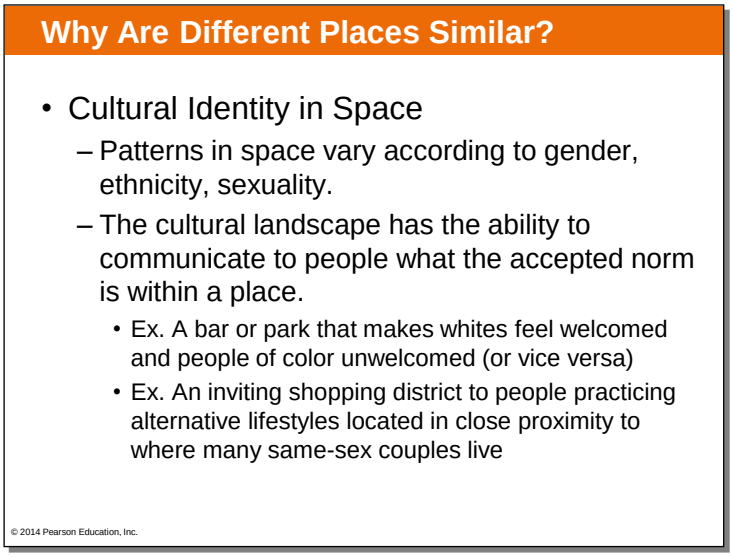

AP Human Geography: Chapter 1 Lecture Notes

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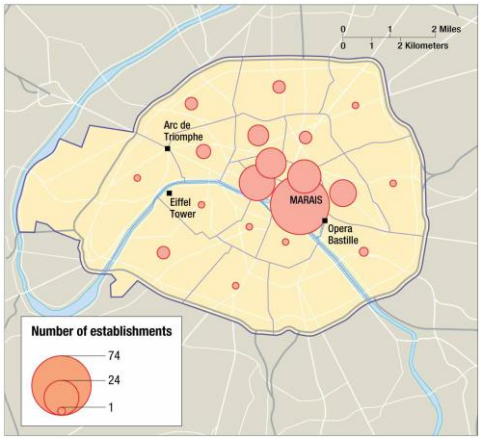
- Humanistic geography is a branch of human geography that emphasizes the different ways that individuals perceive their surrounding environment.

FIGURE 1-29 GAY-ORIENTED BUSINESSES IN PARIS In Paris, 140 businesses appealing primarily to gays were identified through four 2004 guidebooks for gay travelers and residents. Gay-oriented businesses were found to be highly clustered in the Marais district of central Paris.



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Why Are Different Places Similar?

- Cultural Identity in Space
  - Branches of geography seek to better understand the dynamics of gender, ethnicity, and sexuality by looking at the matter through different lenses.
    - *Behavioral geography* is a branch of human geography that attempts to understand the psychological basis for individual human actions.
    - *Humanistic geography* is a branch of human geography that emphasizes the different ways that individuals perceive their surrounding environment.
    - *Poststructuralist geography* emphasizes the need to understand multiple perspectives regarding space.

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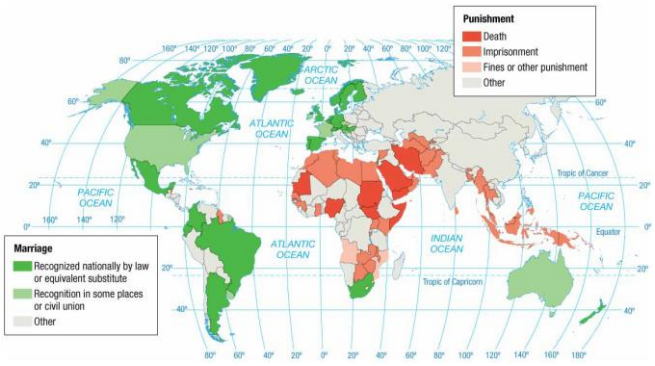
FIGURE 1-30 SEXUAL DIVERSITY IN SPACE The International Lesbian, Gay, Bisexual, Trans and Intersex Association maps the distribution of laws that discriminate on the basis of gender. The harshest laws against male–male or female–female relationships are found in sub-Saharan Africa and Southwest Asia and North Africa. Laws supporting male–male or female–female marriage or equivalent substitute are found primarily in Europe and Latin America.



AP Human Geography: Chapter 1 Lecture Notes

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- Connection refers to relationships among people and objects across the barrier of space.
- Diffusion is the process by which a characteristic spreads across space from one place to another overtime.

Why Are Different Places Similar?

- Connections between Places
  - People, ideas, and objects move via *connections* through one of three types of *diffusion*.
    1. Relocation Diffusion
       - Spread of an idea through physical movement of people from one place to another
         - » Ex. Language brought to a new locale by a migrant
    2. Expansion Diffusion
       - Spread the feature from one place to another in an additive process
         - » *Hierarchical diffusion*: spread of an idea from persons or nodes of authority or power to other persons or places
         - » *Contagious diffusion*: rapid, widespread diffusion of a characteristic throughout the population

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- Connection refers to relationships among people and objects across the barrier of space.
- Diffusion is the process by which a characteristic spreads across space from one place to another overtime.

Why Are Different Places Similar?

- Connections between Places
  3. Stimulus Diffusion
     - Spread of an underlying principle even though a characteristic itself apparently fails to diffuse.
       - » Ex. Innovative features of Apple's iPhone and iPad have been adopted by competitors.

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- The increasing gap in economic conditions between regions in the core and periphery that results from the globalization of the economy is known as on *uneven development*.

Why Are Different Places Similar?

- Spatial Interaction
  - The farther away someone is from you, the less likely you two are to interact.
    - Trailing-off phenomenon of diminishing contact with the increase in distance is called *distance decay.*
  - Electronic communications have almost removed barriers to interaction between people who are far apart.
    - Access to the technology is of interest to geographers.
      - Core: North America, Western Europe, and Japan
      - Periphery: Africa, Asia, and Latin America

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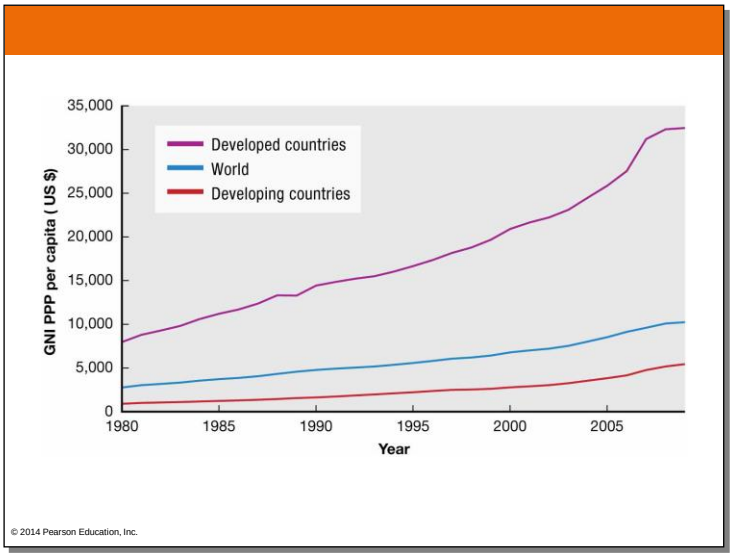
FIGURE 1-35 INCOME GAP BETWEEN RICH AND POOR COUNTRIES Income has increased much more rapidly in developed countries than in developing ones.



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- A resource is a substance and the environment that is useful to people, economically and technologically feasible to access, and socially acceptable to use.
- *Sustainability* the use of Earth's renewable and nonrenewable natural resources in ways that ensure resource availability in the future.

Geographers observe two major misuses of resources:

Humans deplete nonrenewable resources.

Humans destroyed otherwise renewable resources through pollution of air, water, and soil.

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Why Are Some Human Actions Not Sustainable?

- Sustainability and Resources

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Why Are Some Human Actions Not Sustainable?

- Earth's Physical Systems
  - Geographers classify natural resources as part of four interrelated symptoms.
    - *Abiotic* system is one composed of nonliving or inorganic matter.
      - Atmosphere: thin layer of gas surrounding Earth
      - Hydrosphere: all water on and near Earth's surface
      - Lithosphere: Earth's crust and layer just below the crust
    - *Biotic* system is one composed of living organisms.
      - Biosphere: all living organisms on Earth

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Why Are Some Human Actions Not Sustainable?

- Interactions in the Biosphere
  - People are now the most important agents of change on Earth.
  - Human modification of the abiotic systems has ongoing ramifications.
    - Examples
      - Atmosphere contains pollutants, humans have trouble breathing.
      - Without water, humans waste away and die.
      - Excessive extraction of resources from lithosphere limits availability of materials for building and fuel for energy.
      - Excessive erosion or depletion of nutrients limits biosphere's ability to provide food for humans.

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Why Are Some Human Actions Not Sustainable?

- Modifying the Environment
  - Few ecosystems have been as thoroughly modified as those of the Netherlands and Florida.

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Figure 1-44 SUTAINABLE ECOSYSTEM: THENETHERLANDS (left) The Dutch people have considerably altered the site of the Netherlands through creation of polders and dikes. (right) A polder in North Holland has been created by pumping the water from the site into the canal.

Netherlands

Much of the Netherlands would be underwater, if it weren't for *polders*- a piece of land that is created by draining water from an area. Dutch have become world leaders in reducing the causes of global warming and industrial pollution.

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Figure 1-45 UNSUSTAINABLE ECOSYSTEM: SOUTH FLORIDA To control flooding in central Florida, the U.S. Army Corps of Engineers straightened the course of the Kissimmee River, which had meandered for 160 kilometers (98 miles) from near Orlando to Lake Okeechobee. The water was rechanneled into a canal 90 meters wide (300 feet) and 9 meters deep (30 feet), running in a straight line for 84 kilometers (52 miles).

Florida

Unsustainable modifications made to ecosystem, as a result of draining portions of the Everglades and water pollution from cattle grazing.

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Summary

- Geography is most fundamentally a spatial science exhibited by its emphasis on mapping.
- Every place on Earth is in some respects unique, although regions of likeness can be drawn because of the diffusion of people, objects, and ideas.
- A substance is merely part of nature until a society has a use for it. If its price disregards its costs to the environment, then it is often an unsustainable practice.