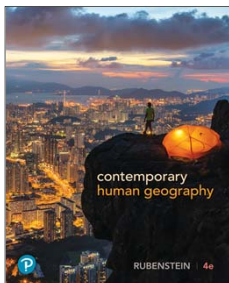


## Contemporary Human Geography

Fourth Edition



### Chapter 1

This is Geography

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### 1.1 Welcome to Geography (1 of 3)

#### • Geography and History

- The word geography is based on two Greek words. Geo means "Earth" and "graphy" means "to write"
- Human geographers ask "Where are people and activities found on Earth?" and "Why are they there?"
- A geographer can take a plane or car to another place on Earth, but a historian cannot travel back to another time in the past.



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### 1.1 Welcome to Geography (2 of 3)

#### • Geographers Explain Where and Why

- A **place** is a specific point on Earth distinguished by a particular characteristic.
- A **region** is an area of Earth distinguished by a particular characteristic
- **Scale** is the relationship between the portion of Earth being studied and Earth as a whole
- **Space** refers to the physical gap or interval between two objects.
- **Connection** refers to relationships among people and objects across the barrier of space.

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### 1.1 Welcome to Geography (3 of 3)



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### 1.2 Ancient & Medieval Maps (1 of 4)

- Geography in the Ancient World
  - The science of geography has prehistoric roots. Some of the major contributors from the ancient eastern Mediterranean include:
    - Pythagoras—proposed a spherical world
    - Aristotle—demonstrated Earth was spherical
    - Eratosthenes—inventor of the word “geography” and accurately calculated the circumference of Earth
    - Strabo—described the known world in a 17-volume work
    - Ptolemy—wrote eight-volume Guide to Geography, codified basics of mapmaking, prepared many impressive maps



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### 1.2 Ancient & Medieval Maps (2 of 4)

- China was another early center of geographic thought
  - “Yu Gong” (“Tribute of Yu”), a chapter in a book called Shu Jing (“Classic of History”), by an unknown author from the 5<sup>th</sup> century B.C., described the economic resources of China’s different provinces
  - Pei Xiu, the “father of Chinese cartography,” who produced an elaborate map of the country in A.D. 267

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### 1.2 Ancient & Medieval Maps (3 of 4)

- Geography's Revival
  - After Ptolemy, little progress in mapmaking or geographic thought was made for centuries in Europe. Maps became more fanciful and less mathematical.
  - But outside of Europe, progress continued, for example: Muhammad al-Idrisi (1100–ca. 1165), a Muslim geographer who prepared a world map and geographic text in 1154, building on Ptolemy's long-neglected work.



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### 1.2 Ancient & Medieval Maps (4 of 4)

- The Age of Exploration and Discovery revived mapmaking, where Columbus, Magellan, and other explorers needed maps to explore. Influential European cartographers included:
  - Martin Waldseemüller (ca. 1470–ca. 1521) was credited with producing the first map to use to label "America"
  - Abraham Ortelius (1527–1598, a Flemish cartographer who created the first modern atlas and the first to hypothesize that the continents were once joined together.



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### 1.3 Contemporary Geographic Tools (1 of 2)

- GPS: Pinpointing Locations
  - **Global Positioning System (GPS)** is a system that determines the precise position of something on Earth.
  - GPS is most commonly used for navigation.
  - **Geotagging** is the identification and storage of a piece of information by its precise latitude and longitude coordinates.

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### 1.3 Contemporary Geographic Tools (2 of 2)

- **VGI: Collecting and Sharing Data**

- **Volunteered geographic information (VGI)** is the creation and dissemination of geographic data contributed voluntarily and for free by individuals.
- VGI is part of a broader trend in **citizen science**.
- A **mashup** is a map that overlays data from one source on top of a map, such as Google Maps or Google Earth.



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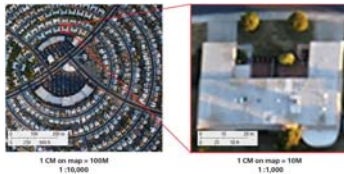
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### 1.4 Interpreting Maps (1 of 3)

- Map Scale

- The level of detail and the amount of area covered on a map depend on its **map scale**, which is the relationship of a feature's size on a map to its actual size on Earth.
- What does a scale of 1:10,000 mean in Figure 1.4.2?



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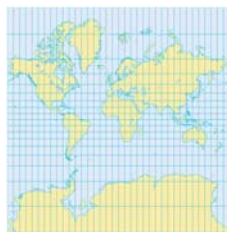
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### 1.4 Interpreting Maps (2 of 3)

- Projections

- Earth's spherical shape poses a challenge for cartographers to make flat maps that are not distorted. Transferring locations on Earth's surface to a flat map is called **projection**.
- One of many attempts to produce low distortions maps is the **Mercator Projection**. Do you think Greenland is really bigger than South America?



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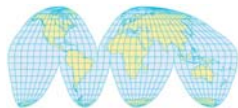
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### 1.4 Interpreting Maps (3 of 3)

- The **shape** of an area can be distorted, so that it appears more elongated or squat than in reality.
- The **distance** between two points may become increased or decreased.
- The **relative size** of different areas may be altered.
- The **direction** from one place to another can be distorted.
- The choice of projection depends on which of these four distortions are most important to the map user. You would not use **Gall-Peters Projection** if you need the shape of the land masses to be undistorted.




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### 1.5 The Geographic Grid (1 of 4)

- The Geographic Grid
  - Latitude and Longitude
    - A **meridian** is an arc drawn between the North and South Poles. The location of each meridian is identified on Earth's surface according to a numbering system known as **longitude**.
    - A **parallel** is a circle drawn around the globe parallel to the equator and at right angles to the meridians. The numbering system to indicate the location of a parallel is called **latitude**.




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### 1.5 The Geographic Grid (2 of 4)

- Distances on the geographic grid are expressed in degrees of longitude and latitude based on the 360 degrees in a circle.
  - Philadelphia, Pennsylvania City Hall has coordinates of 39°57'8" north latitude and 75°9'49" west longitude. The 's are minutes and "s are seconds.
  - GPS typically divides degrees into decimal fractions instead, so the above examples would be 39.9523882° north latitude and 75.1640233° west longitude.
  - The 0° longitude runs through Greenwich and is known as the **prime meridian**.

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### 1.5 The Geographic Grid (3 of 4)

- Telling Time
  - Longitude is the basis for calculating time
  - We assign 15° for each time zone so that there are 24 time zones
  - **Greenwich Mean Time (GMT), or Universal Time (UT)** is the master reference time for all points on Earth
  - The **International Date Line** is an arc that for the most part follows 180° longitude



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### 1.5 The Geographic Grid (4 of 4)

- Most 18<sup>th</sup> century scientists believed that longitude could be determined only by the position of the stars. English clockmaker John Harrison connected longitude to time and invented the first portable clock that could keep accurate time on a ship.
- **What did this invention allow sailors to do?**



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### 1.6 Place: A Unique Location (1 of 2)

- Geographers describe a feature's place on Earth by identifying its location, which is the position that something occupies on Earth's surface.
  - Place Names
    - A **toponym** is the name given to a place on Earth.
    - The U.S. Geological Survey is the final arbiter in the U.S. for names on U.S. maps.
    - Names can be controversial. They can be offensive to certain groups, such as those with racial or ethnic connotations.

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### 1.6 Place: A Unique Location (2 of 2)

• Site

- Site is the physical character of a place, such as topography or elevation.
- Humans have the ability to modify the characteristics of a site.
- Situation is the location of a place relative to other places.



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### 1.7 Region: A Unique Area (1 of 2)

• Cultural Landscape

- A region derives its unified character through the cultural landscape, which is a combination of cultural features such as language and religion, economic features such as agriculture and industry, and physical features such as climate and vegetation.
  - Example: The southern California region can be distinguished from the north California region.

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### 1.7 Region: A Unique Area (2 of 2)

• Formal Region

- Geographers identify three types of regions:
  - **Formal Region**, also called **uniform region**, is an area within which most people share one or more distinctive characteristics.
  - **Functional Region**, also called a **nodal region**, is an area organized around a node or focal point.
  - **Vernacular region**, or **perceptual region**, is an area that people believe exists as part of their cultural identity.



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### 1.8 Scale: From Global to Local (1 of 3)

- Globalization of the Economy
  - Globalization of the economy has been led primarily by **transnational corporations** that conducts research, operates factories, and sells products in many countries.



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### 1.8 Scale: From Global to Local (2 of 3)

- Globalization of the Culture
  - Increasingly uniform cultural preferences lead to uniform “global” landscapes. Fast food, service stations, and retail chains look quite similar in many countries.
- Local Diversity
  - Despite globalization, many cultural differences among places are actually flourishing in many places.
  - The communication revolution actually offers countless channels of programming that people can choose for more “local” content.

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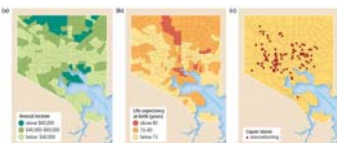
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### 1.8 Scale: From Global to Local (3 of 3)

- Spatial Association
  - Spatial association occurs within a region if the distribution of one feature is related to the distribution of another feature. Examples for Baltimore City are below: **What might you conclude about areas with lower income and lower life expectancy and the propensity of liquor stores?**



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### 1.9 Space: Distribution of Features (1 of 4)

- Distribution Properties: Density
  - The arrangement of a feature in space is known as its distribution. **Density** is the **frequency** with which something occurs in space.
- Distribution Properties: Concentration
  - The extent of a feature's spread over space is its concentration. If objects in an area are close together, they are clustered. If they are far apart, they are dispersed.

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### 1.9 Space: Distribution of Features (2 of 4)

- Distribution Properties: Pattern
  - Pattern is the geometric arrangement of objects in space.
  - Objects form linear distributions, irregular distributions, square patterns, and many others distributions.



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### 1.9 Space: Distribution of Features (3 of 4)

- Distribution Properties: Your Space
  - Concentration is not the same as density. Two neighborhoods could have the same density of housing but different concentrations.



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### 1.9 Space: Distribution of Features (4 of 4)

- Distribution Properties: Your Space
  - Compare major league baseball teams in 1952 versus 2018. This is a good example for understanding the difference between density and concentration.



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### 1.10 Space: Identity & Inequality (1 of 4)

- Distribution of Ethnicity
  - The distribution of ethnicities in the United States varies considerably as all scales, and are also highly clustered in distinctive areas within cities.



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### 1.10 Space: Identity & Inequality (2 of 4)

- Distribution by Sexual Orientation
  - Lesbian, gay, bisexual, transgender, and queer (LGBTQ) people may be attracted to some locations to reinforce spatial interaction with other LGBTQ people. Some countries protect LGBTQ people; other countries criminalize the practice.



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**1.10 Space: Identity & Inequality (3 of 4)**

- Distribution Gender
  - Worldwide, the average income of women is around 50% that of men. At best, women in a handful of countries have achieved near-equality with men.




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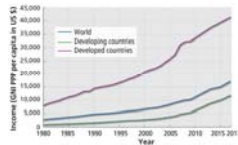
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**1.10 Space: Identity & Inequality (4 of 4)**

- Unequal Access
  - Internet access depends on availability of electricity, proximity to digital subscriber line (DSL), a cable line, or other services, and of course the ability to pay for the services.
  - The increasing gap in economic conditions between regions in the core and periphery that results from the globalization of the economy is known as **uneven development**. The income gap between rich and poor countries is growing.




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**1.11 Connection: Diffusion & Interaction (1 of 4)**

- Expansion Diffusion
  - An innovation originates at a node, known as a **hearth**, and spreads across space from one place to another through a process called **diffusion**. **Expansion diffusion** is the spread of a feature from one place to another.
  - **Hierarchical diffusion** is the spread of an idea from persons or nodes of authority or power to other persons or places. A good example of this is how Honda controls its worldwide operation.




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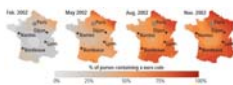
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**1.11 Connection: Diffusion & Interaction (2 of 4)**

- **Contagious diffusion** is the rapid, widespread diffusion of a characteristic when something "goes viral."
- **Stimulus diffusion** is the spread of an underlying principle, such as features from Apple's iPhone adopted by competitors.
- Relocation Diffusion
  - The spread of a feature through physical movement of people from one place to another is termed **relocation diffusion**.




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**1.11 Connection: Diffusion & Interaction (3 of 4)**

- Spatial Interaction
  - **Assimilation** is the process by which a group's cultural features are altered to resemble those of another group.
  - **Acculturation** is the process of changes in culture that results from the meeting of two groups.
  - **Syncretism** is the combination of elements of two groups into a new cultural feature.
  - Interaction takes place through a **network**, which is a chain of communication that connects places. Some airlines, for example, have hub-and-spoke networks.




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**1.11 Connection: Diffusion & Interaction (4 of 4)**

- Spatial Interaction
  - The diminishing importance and eventual disappearance of a phenomenon with increasing distance from its origin is called **distance decay**.
  - The reduction in the time it takes to diffuse something to a distant place is **space-time compression**.




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### 1.12 Connection: Sustainability

- This section will not be covered.

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### 1.13 Humans & Their Environment (1 of 3)

- Adjusting to the Environment
  - 19<sup>th</sup> century geographers argued that the physical environment caused social development, an approach called **environmental determinism**.
  - Modern geographers embrace **possibilism**: the physical environment may limit some human actions, but people have the ability to adjust to their environment.



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### 1.13 Humans & Their Environment (2 of 3)

- Sustainable Ecosystem: The Netherlands
  - A **polder** is a piece of land that is created by draining water from an area.
  - The Dutch has created many polders and dikes that have altered their environment.
  - Today the Dutch have changed their attitude toward these types of massive project, but climate change and the resulting sea-level rise threatens their coastlines.



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### 1.13 Humans & Their Environment (3 of 3)

- Unsustainable Ecosystem: California
  - In normal times, California gets around 70% of its water from surface water sources, the other 30% comes from groundwater. In recent years, precipitation has been lower and California supplied 60% of their water demand by groundwater.
  - Agriculture uses 80% of the water in California.



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