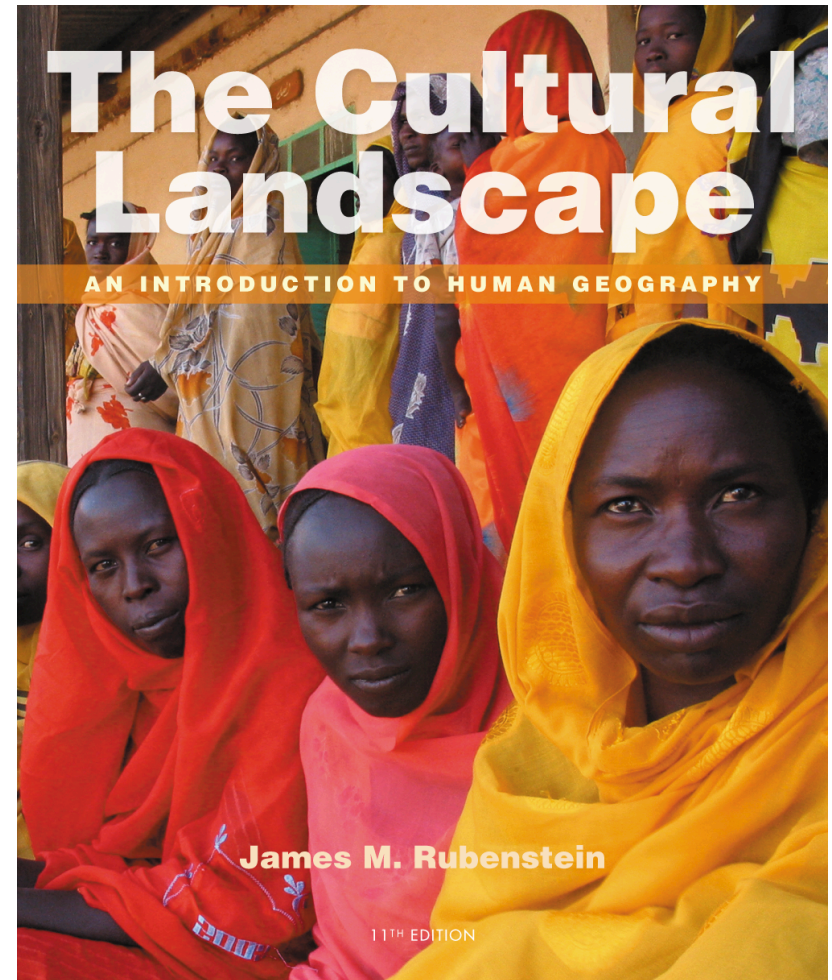


The Cultural Landscape

Eleventh Edition

Basic Concepts

Matthew Cartlidge
University of Nebraska-Lincoln



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?

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.

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.

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.

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.

- In the 1980s the National Geographic Society created the **Five Themes of Geography**
 - **Location**-absolute (latitude and longitude) and relative location.
 - **Place**-the distinctive physical and human characteristics of a place.
 - **Human-Environmental Interaction**-how people interact with their environment.
 - **Movement**-the mobility of people, goods and ideas-the patterns and change in human spatial interactions-accessibility & connectivity of places.
 - **Regions**-an area that displays a selected criteria-one or more distinctive characteristics.

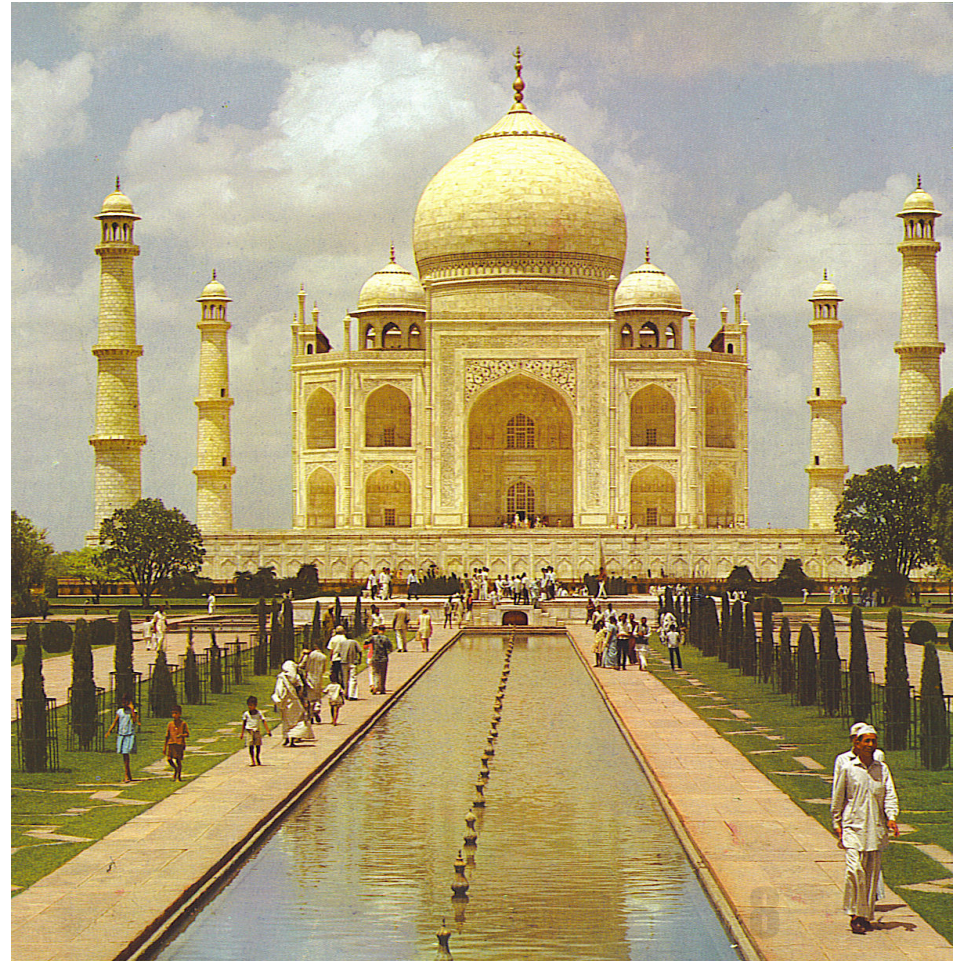
The Two Types of Geography

- **Physical Geography**

- Topography
- Climate (Koppen)
- Flora and Fauna
- soil

- **Human Geography**

- Culture
- Population
- Economic
- Political
- Urban
- Agriculture



KI 1 - How Do Geographers Describe Where Things Are?

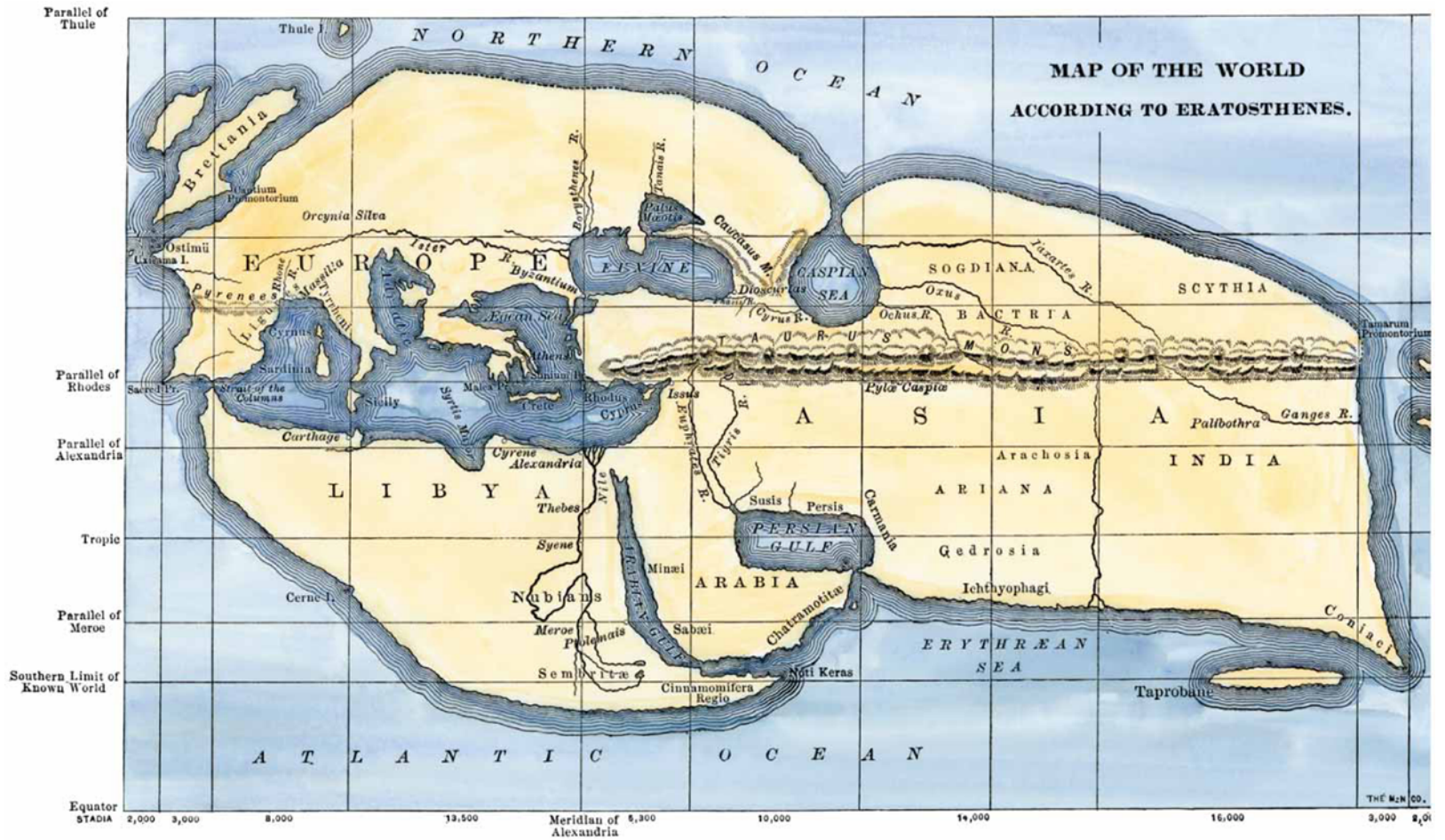
- *Geography* is the study of where things are found on Earth's surface and the reasons for the locations.
- Human geographers ask two simple questions...
 1. Where are people and activities found on Earth?
 2. Why are they found there?

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.

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.)
 - 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.







TYPVS ORBIS TERRARVM

QVID EI POTEST VIDERI MAGNVM IN REBVS HVMANIS, CVI AETERNITAS OMNIS, TOTIVSQUE MVNDI NOTA SIT MAGNITVDO. CICERO.

Contemporary Mapping

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

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.

Map Scale

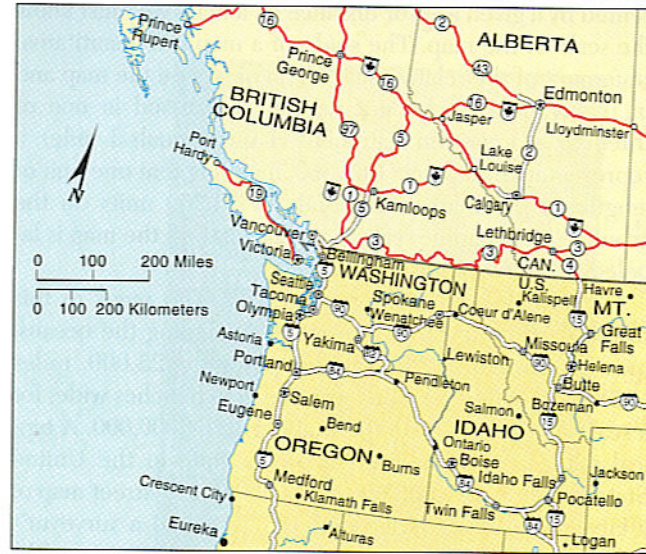
2. **Written Scale:** Ex. 1 inch equals 1 mile
 - Number on left is one unit of distance, while number on right represents a different unit of distance on Earth's surface.
3. **Graphic Scale:** Usually consists of a bar line marked to show distance on Earth's surface
 - Distance between two points can be overlaid on the scale bar to determine the distance on Earth's surface.



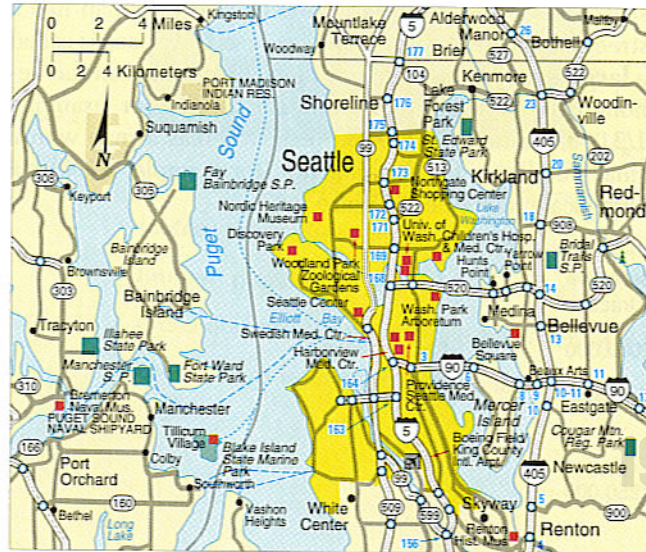
Scale

- The relation of a feature's size on the map to actual size.
- Small scale or small fraction maps show a large area on the earth such as $1/1,000,000$.
 - More distortion
- Large scale or large fraction maps show a small area on the surface such as $1/25,000$ or $1/1000$.

Seattle, Washington, at Different Scales



(a)



(c)

Seattle, Washington, at Different Scales



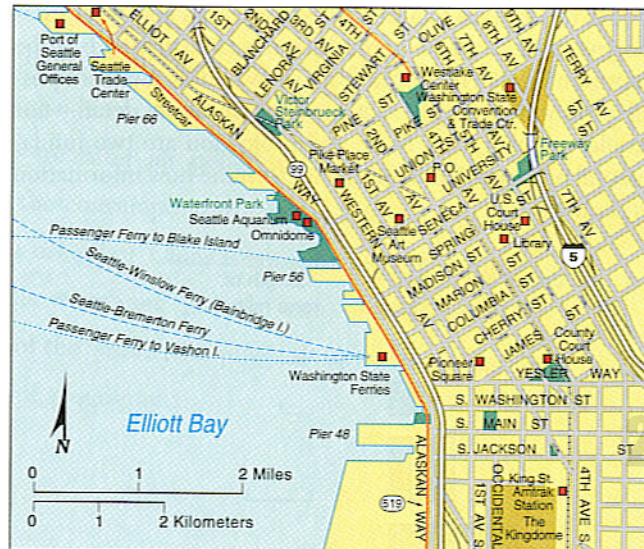
(a)



(b)



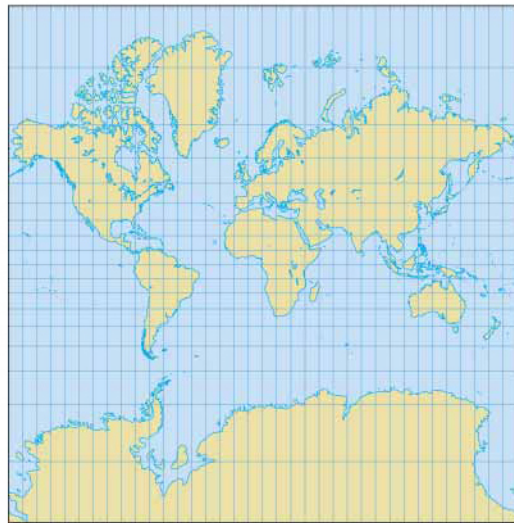
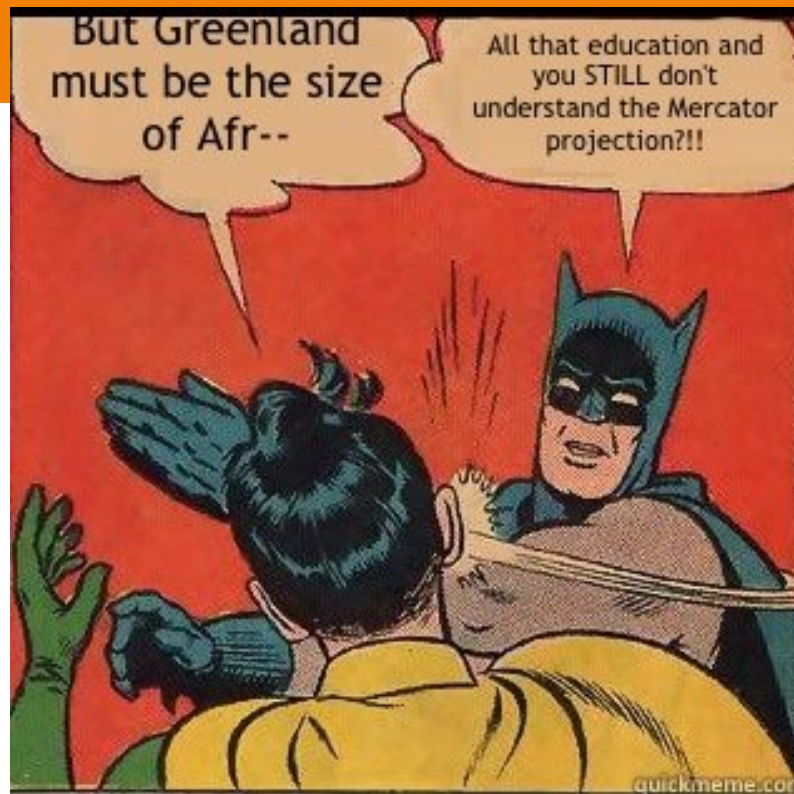
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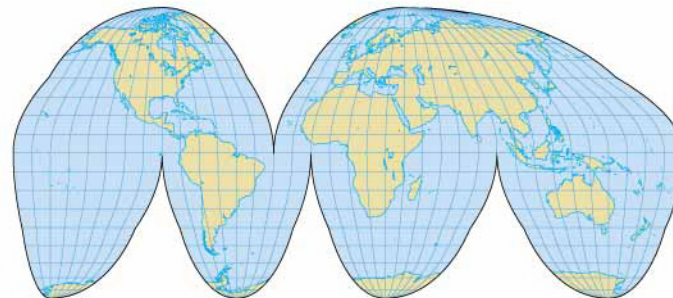
(d)

Projection

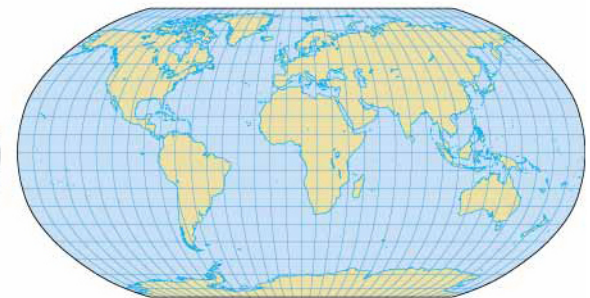
- Scientific method of transferring locations on Earth's surface to a flat map is called *projection*.
- Earth's spherical shape causes distortion when drawing it on a flat piece of paper.
 - Four types of distortion
 1. *Shape* of an area can be distorted.
 2. *Distance* between points may become increased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



Mercator Projection



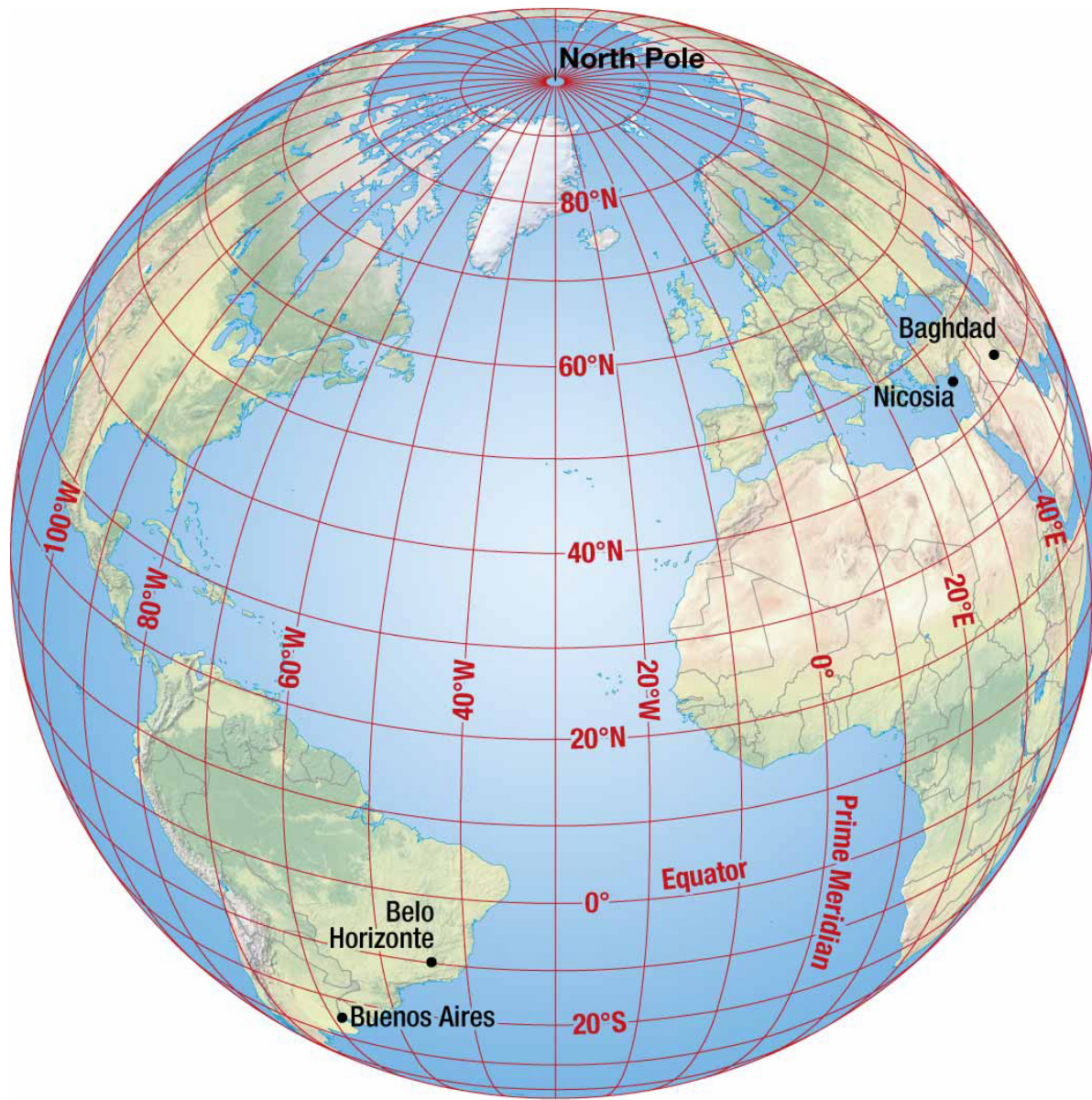
Goode Homolosine Projection



Robinson Projection

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 0° (*prime meridian*) to 180° 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 0° (equator) to 90° north or south.



Geographic Grid

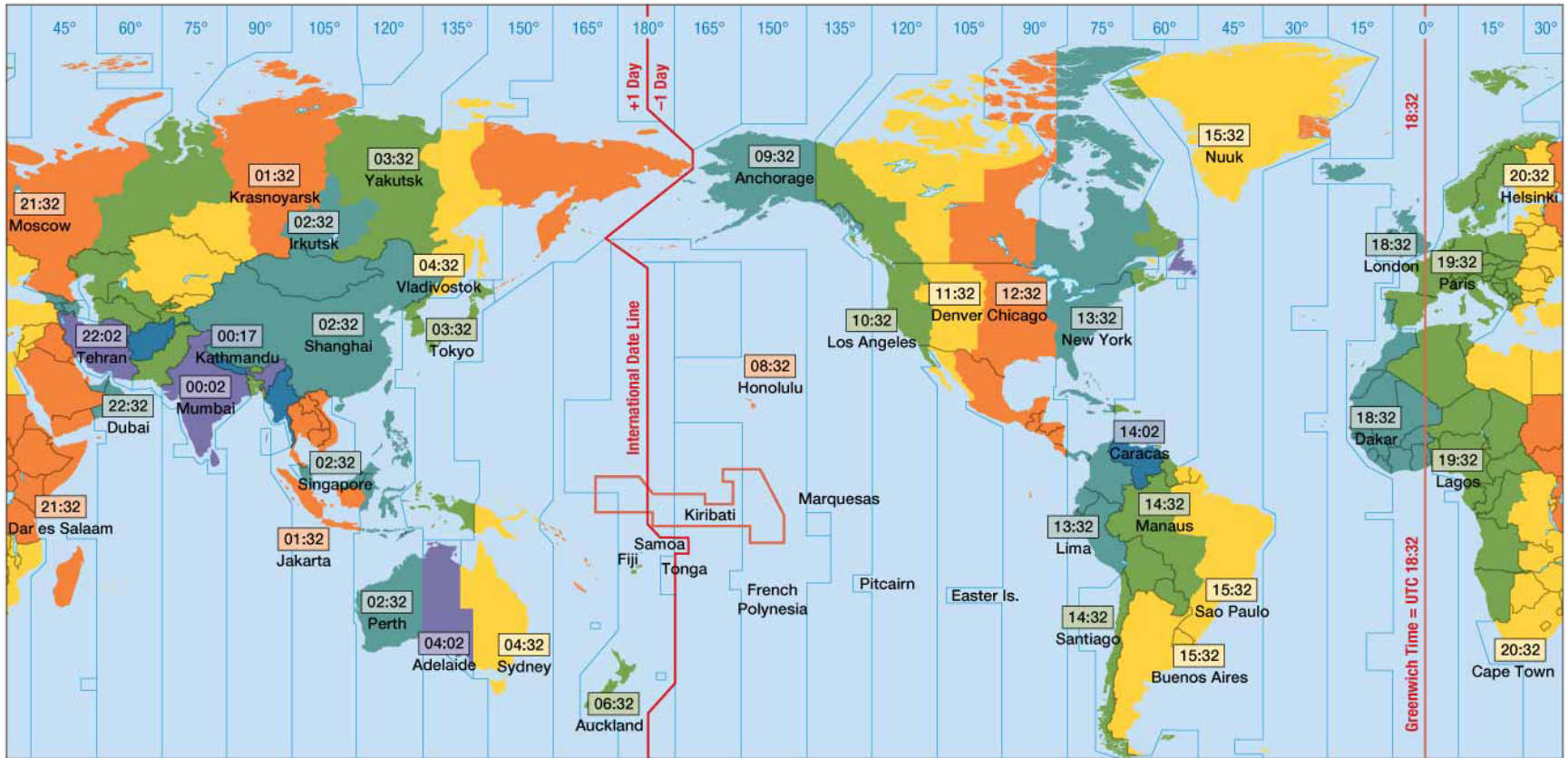
- Points on Earth's surface can be communicated by referencing points of latitude and longitude intersection.
 - Ex. Denver, Colorado's location is 40° north latitude and 105° west longitude.
- Further accuracy can be achieved by dividing each degree into 60 minutes and each minute into 60 seconds.
 - Ex. Denver, Colorado's state capital building is $39^{\circ}42'2''$ north latitude and $104^{\circ}59'04''$ west longitude.

Telling Time

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

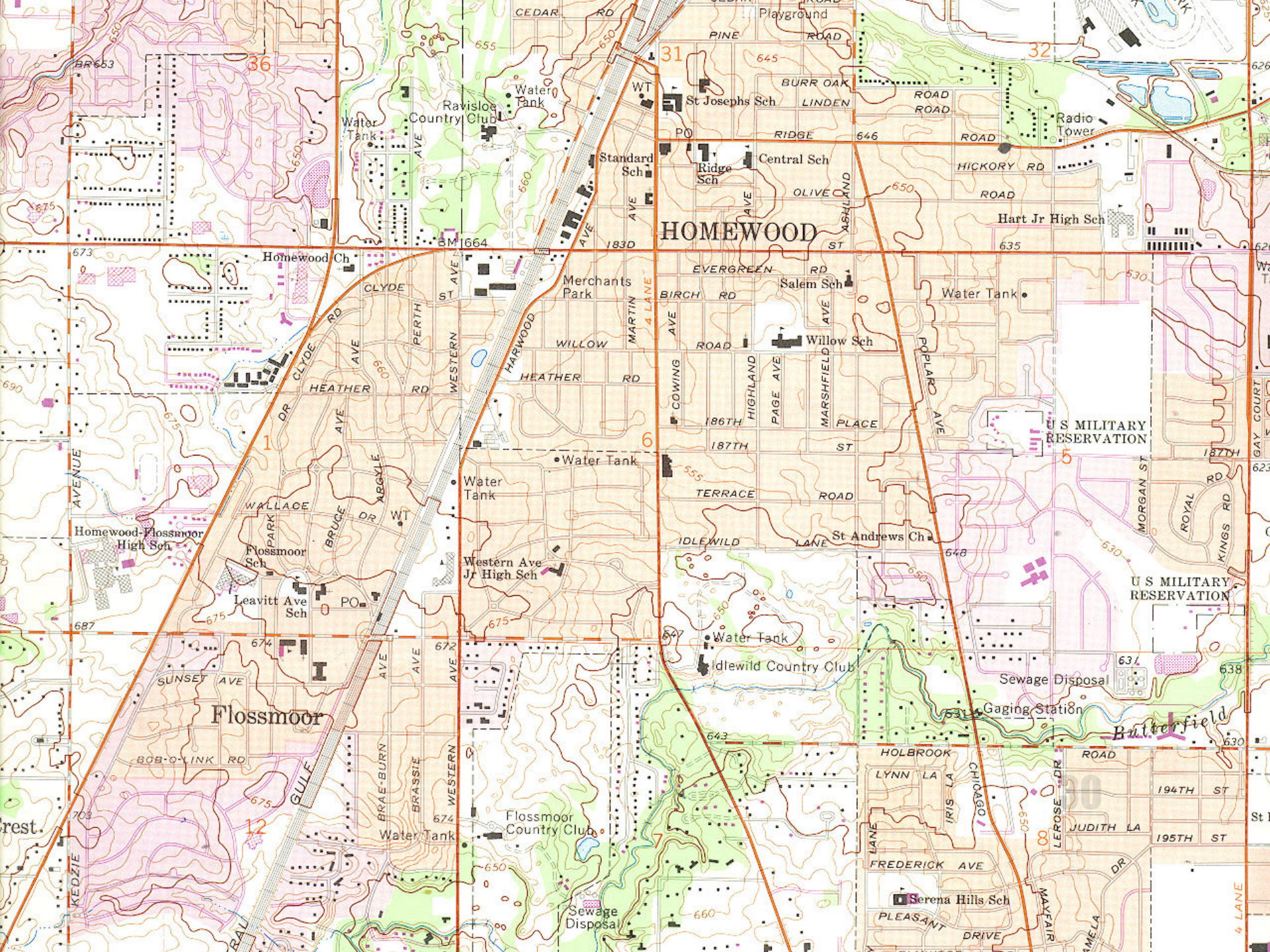
Telling Time

- The *International Date Line* is...
 - Located at 180° longitude.
 - Position deviates from 180° 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.

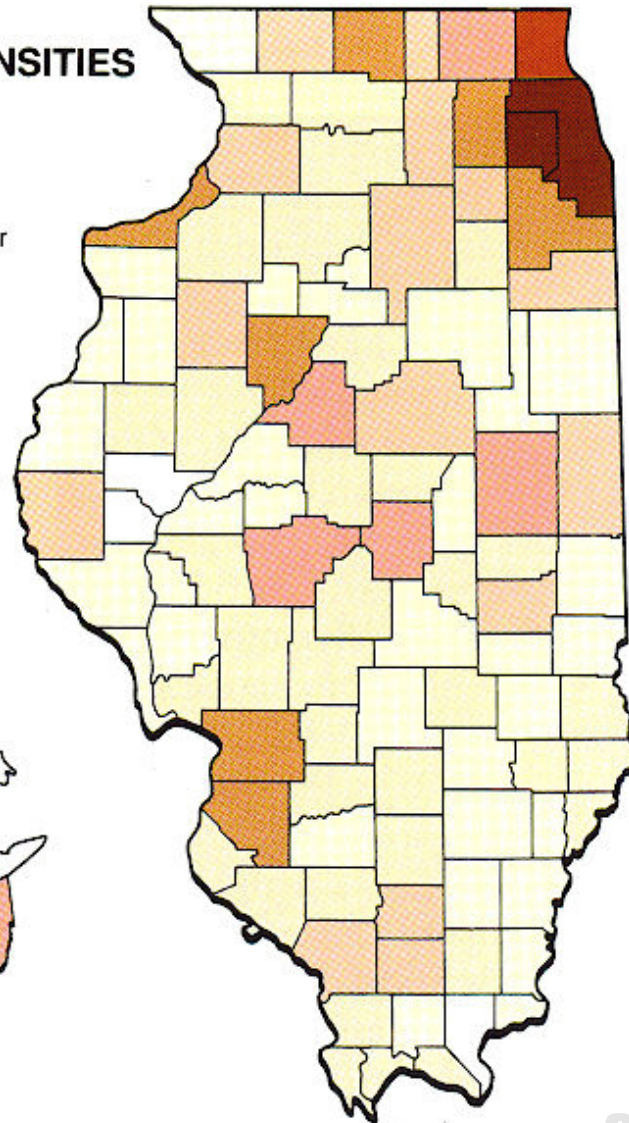
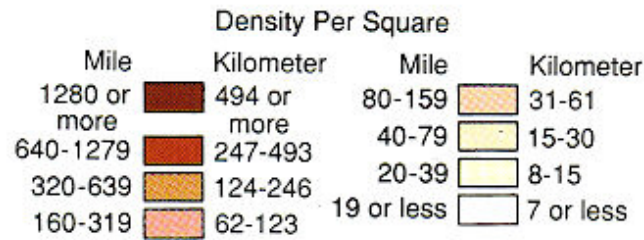


Thematic Maps – Not in Book

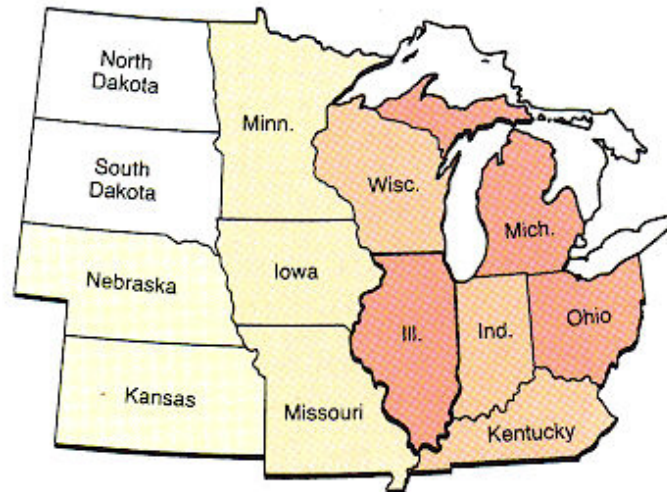
- **Isoline Maps**-use lines of equal value to represent data like elevation, barometric pressure or temperature
- **Choropleth Maps**-a thematic map in which a variable is depicted with shading patterns or colors.
- **Proportional Symbol Map**-a thematic map in which the size of the symbol varies in proportion to the intensity of the mapped variable.
- **Dot Map**-a thematic map in which a dot represents some frequency of the mapped variable.
- **Cartogram**-a thematic map using relative size of political units to convey a value.



POPULATION DENSITIES Illinois Counties



POPULATION DENSITIES Midwestern States

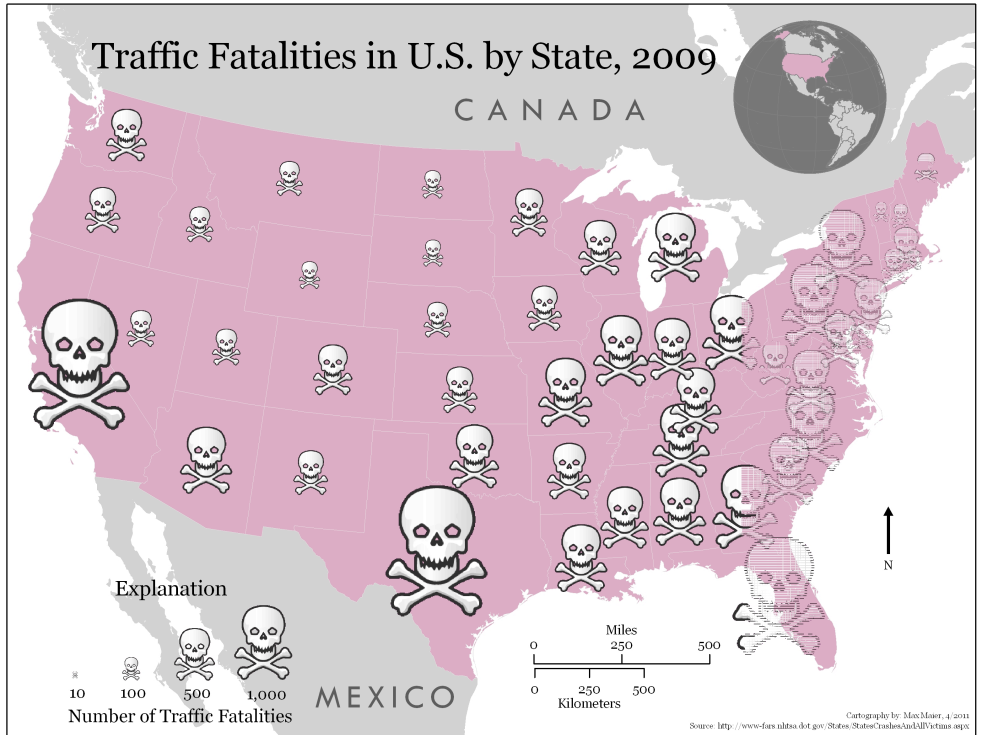


(a)

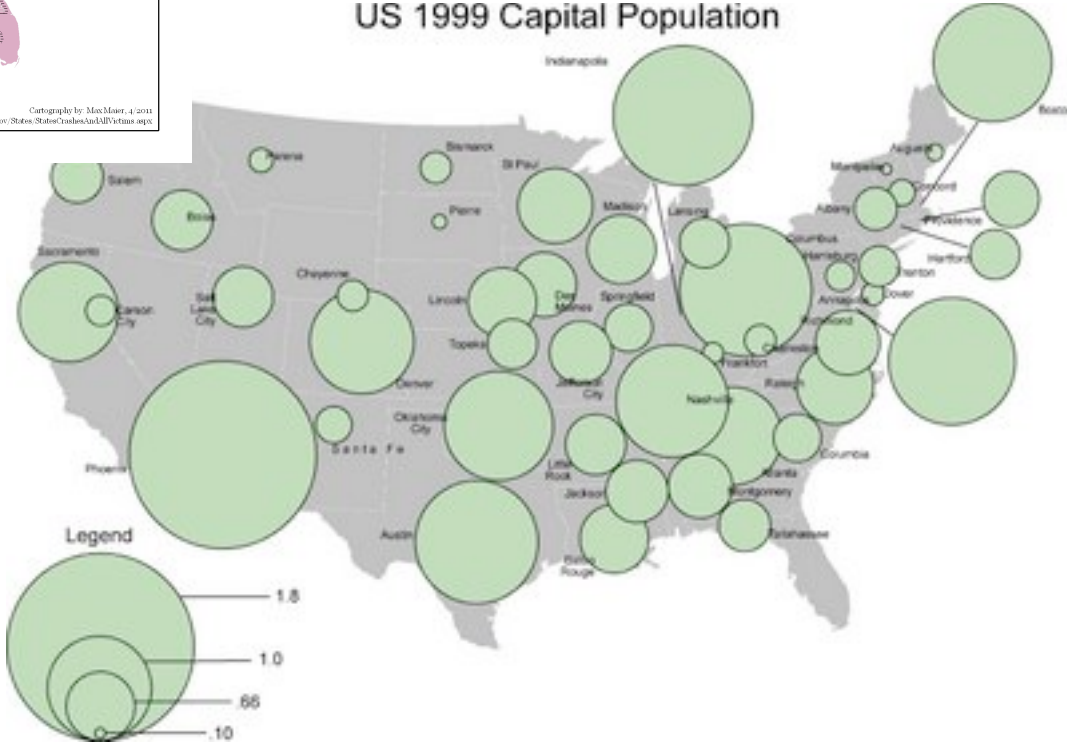
(b)

31

Choropleth maps

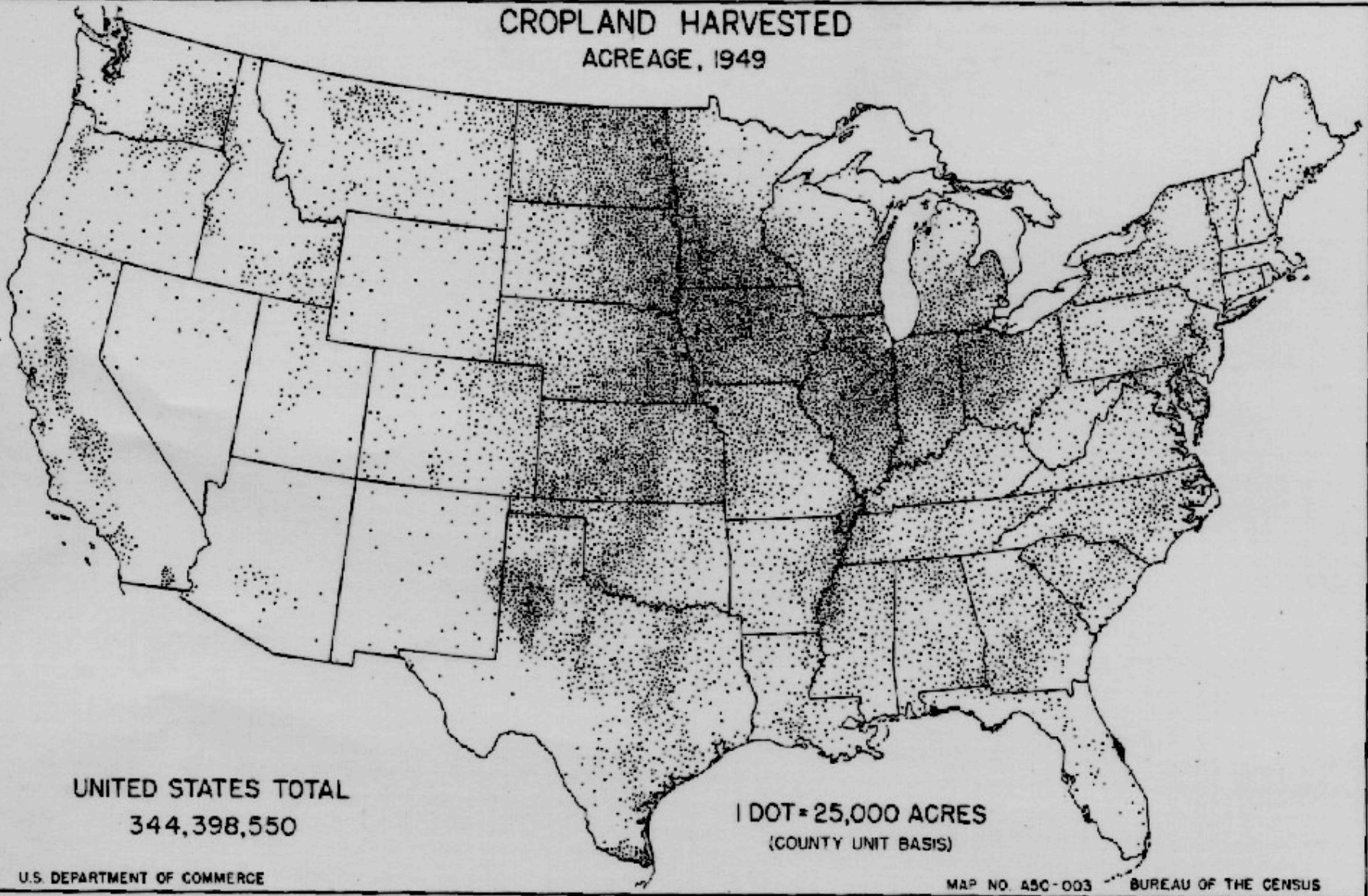


US 1999 Capital Population



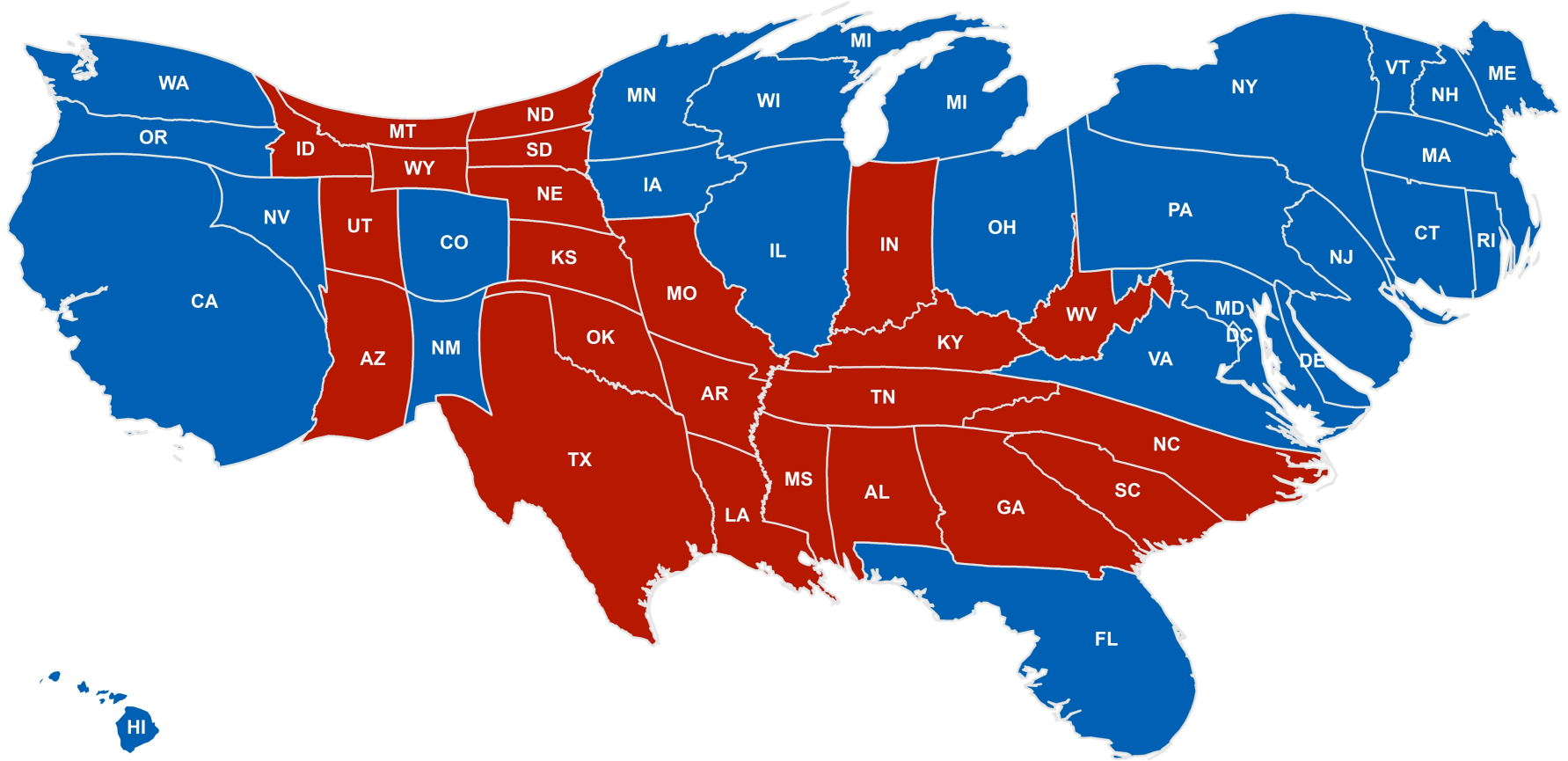
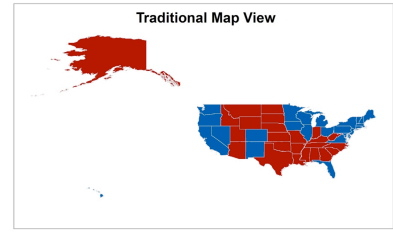
Proportional Symbol Map

CROPLAND HARVESTED
ACREAGE, 1949



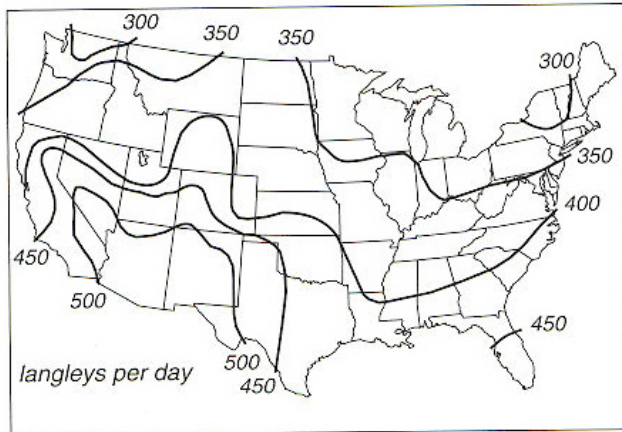
Dot Map

Cartogram of 2012 Electoral Votes

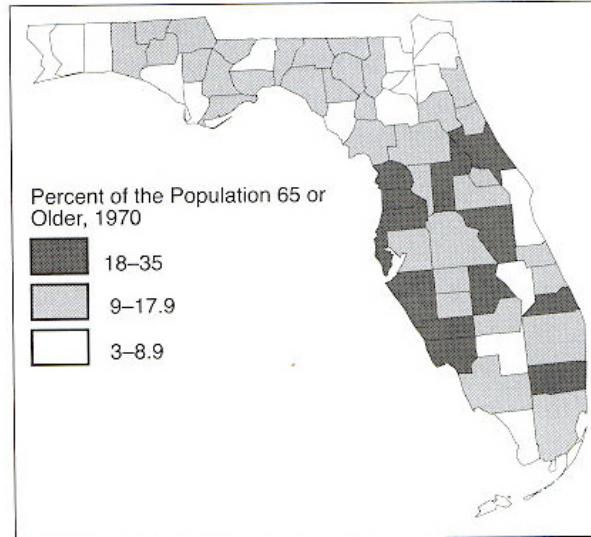


Credit:
Song Gao (UCSB)

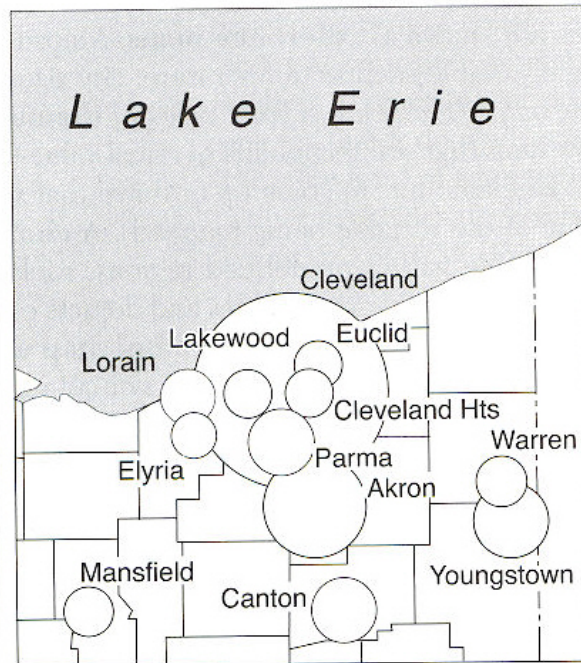
Cartogram



Isoline:
Average Daily Solar Radiation

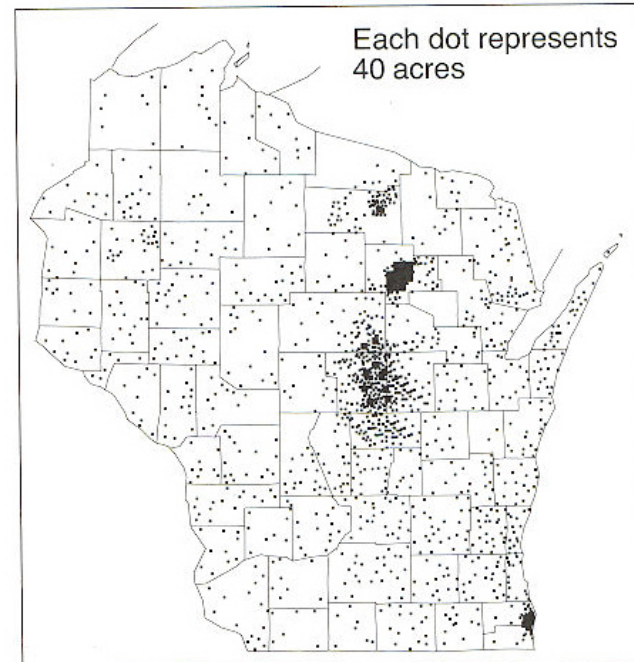


Choropleth: Florida Senior Citizens



Proportional Symbol:
NE Ohio Population

250,000
150,000



Dot: Wisconsin Acreage in Potatoes

Contemporary Tools

- Geographic *Information Science* (*G/Science*) 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.

Contemporary Tools

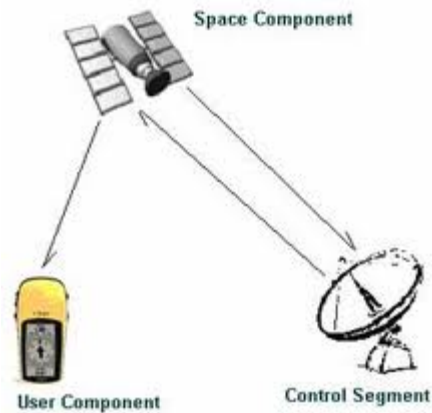
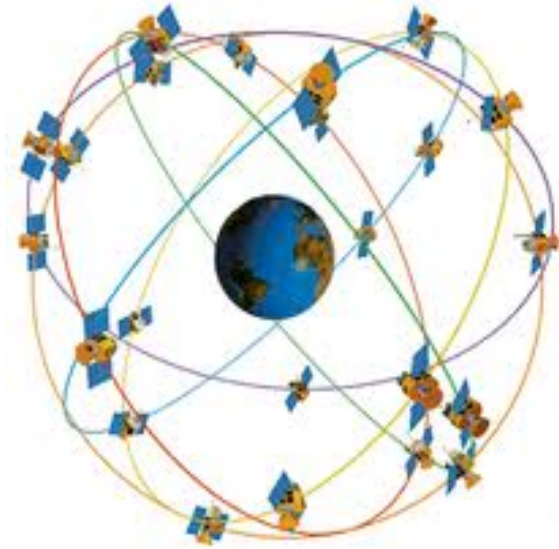
- Collecting Data: Remote Sensing Cont'd.
 - After sensors scan Earth's surface, the individual pixels are transmitted to a receiving station on Earth where a computer assembles each of them into an image.
 - Map created using remotely sensed data is essentially a grid of rows and columns of pixels;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

Contemporary Tools

- Pinpointing Locations: GPS – gives us an Absolute or Mathematical Location (Latitude and Longitude)
 - *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
 - Provides location for social media applications in a

GPS

- GPS uses satellites to find exact locations. Does it make maps obsolete?

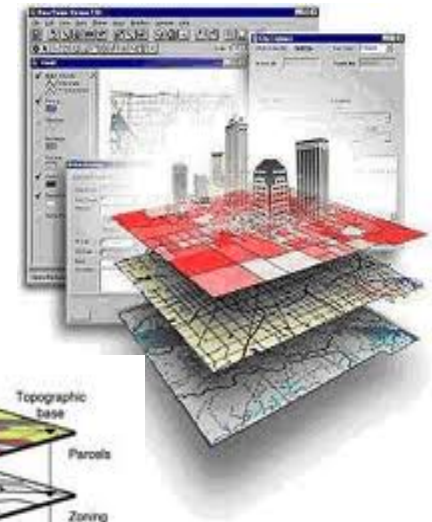
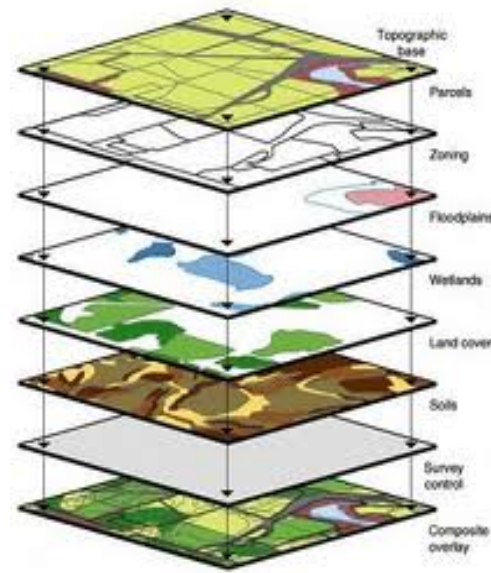
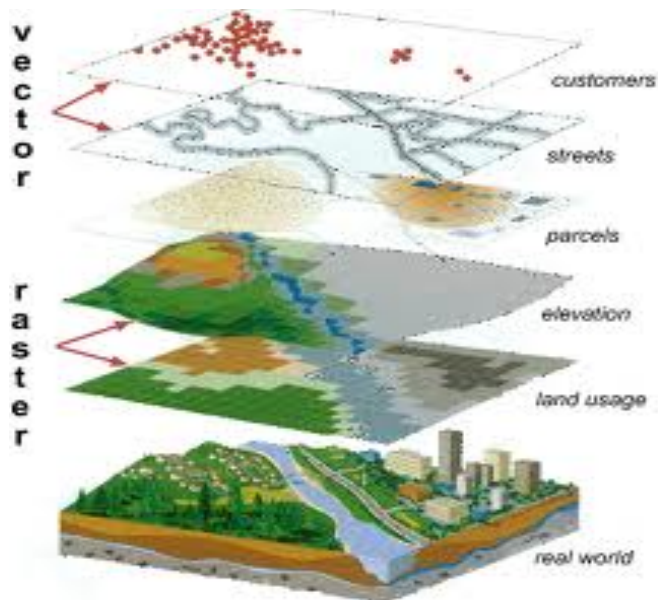


Contemporary Tools

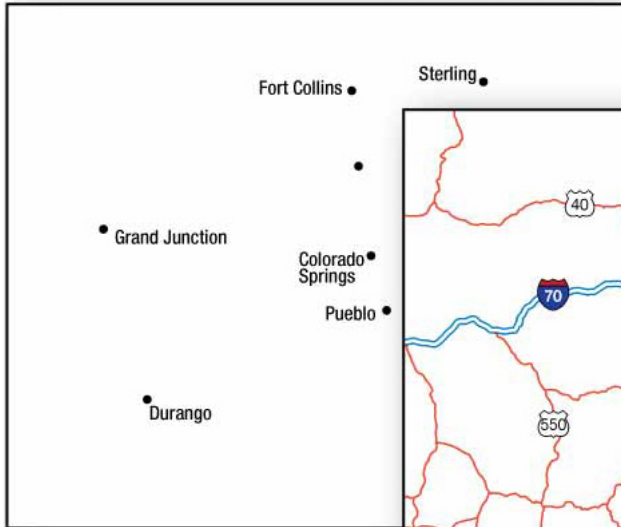
- Layering Data: GIS
 - A *geographic information system* (GIS) is a computer system that captures, stores, queries, analyzes, and displays geographic data.
 - Data are stored in layers.
 - Layers can be compared to show relationships among different kinds of information.
 - Data can be overlaid in one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

GIS

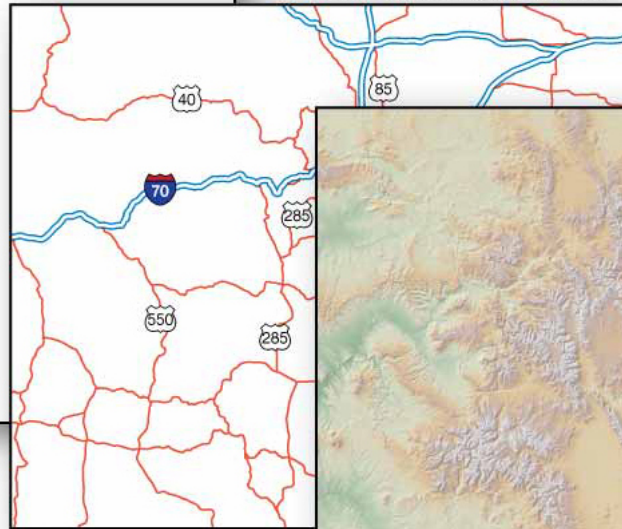
- Geographic Information Systems
- Layers of maps to describe many levels of information on a location.



Vector data (cities)



Vector data (highways)



Raster data (landforms)



Vector and raster combined



KI 2 Why Is Each Point on Earth Unique?

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

- 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.

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*.
 - Most often applied at two scales
 1. Spanning political states
 2. 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 Sauer**, American Geographer

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. Political organization, common language, economic activity, or climate
 - » Characteristic may be predominant rather than universal.

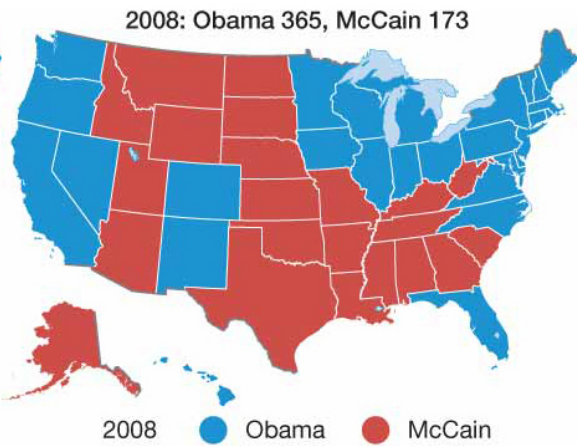
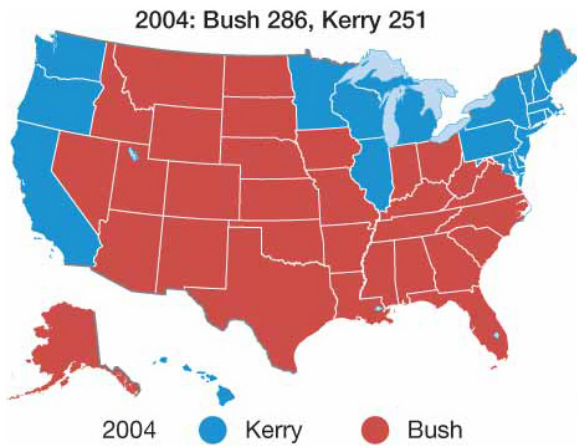
Formal Region



Formal Regions = Areas in which certain characteristics are found throughout the area

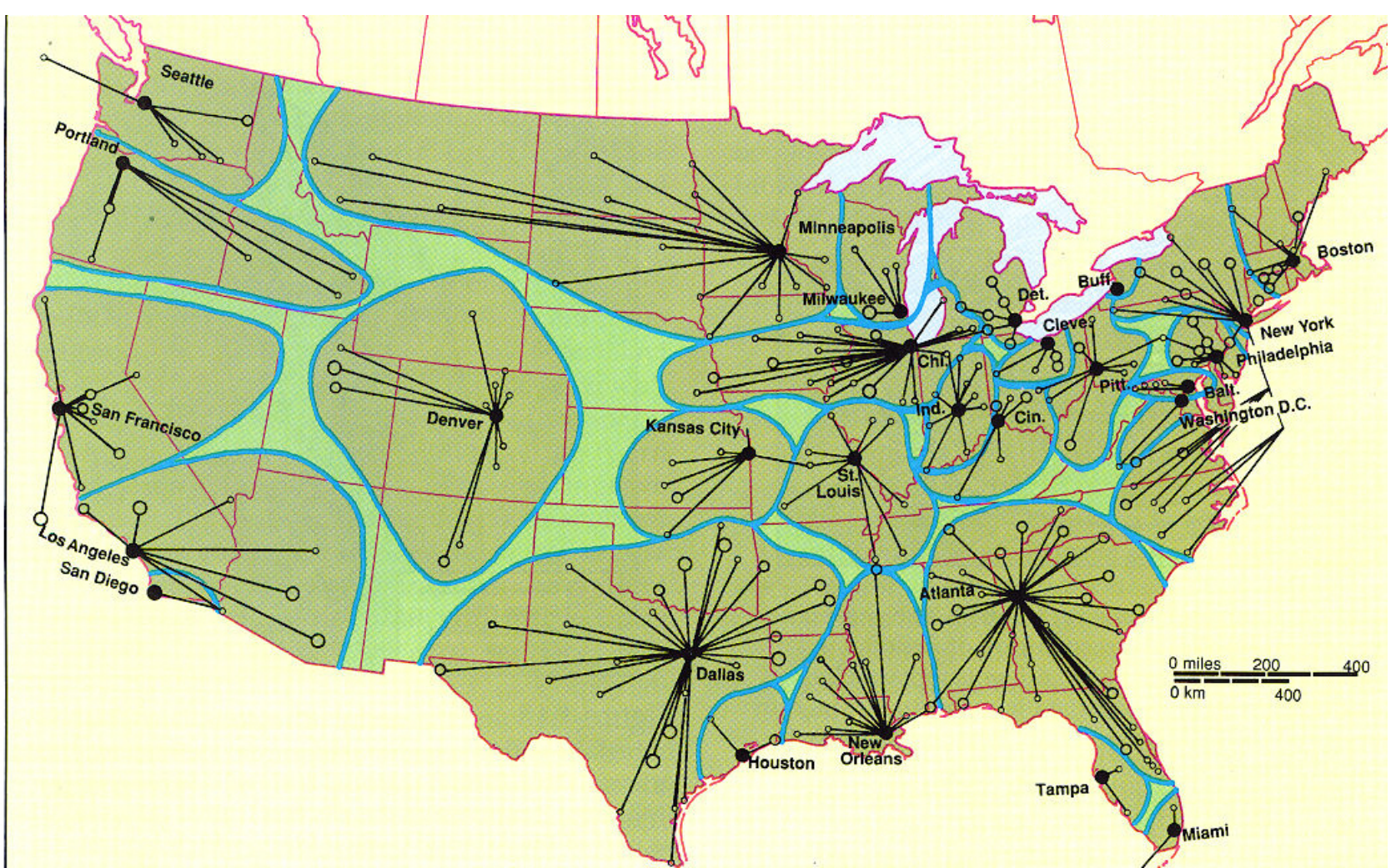
- Formal Regions such as countries, states, and cities all share the same laws, government, etc.
- Would you know if you stepped in or out of Chicago, Illinois?



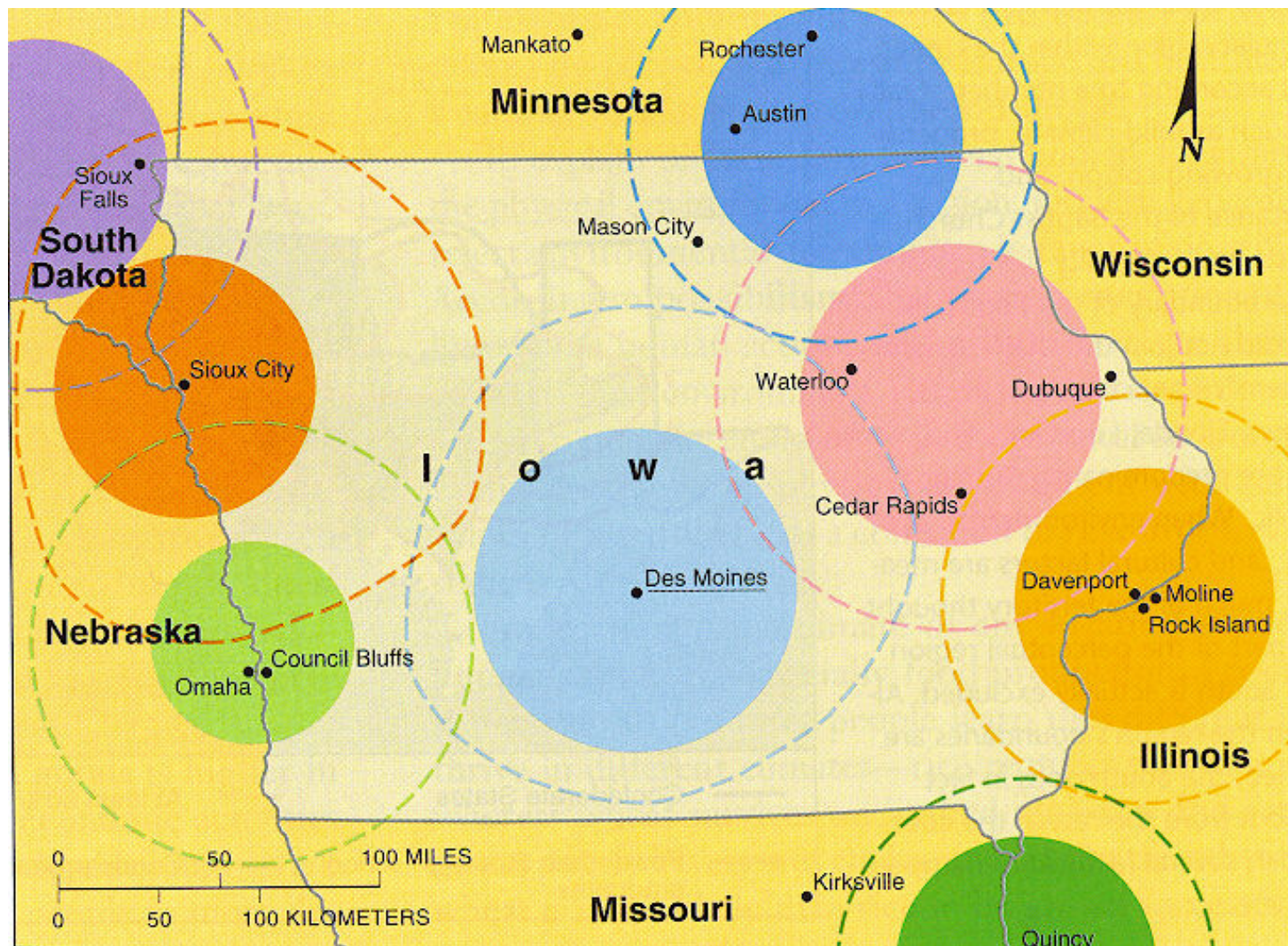


Why Is Each Point on Earth Unique?

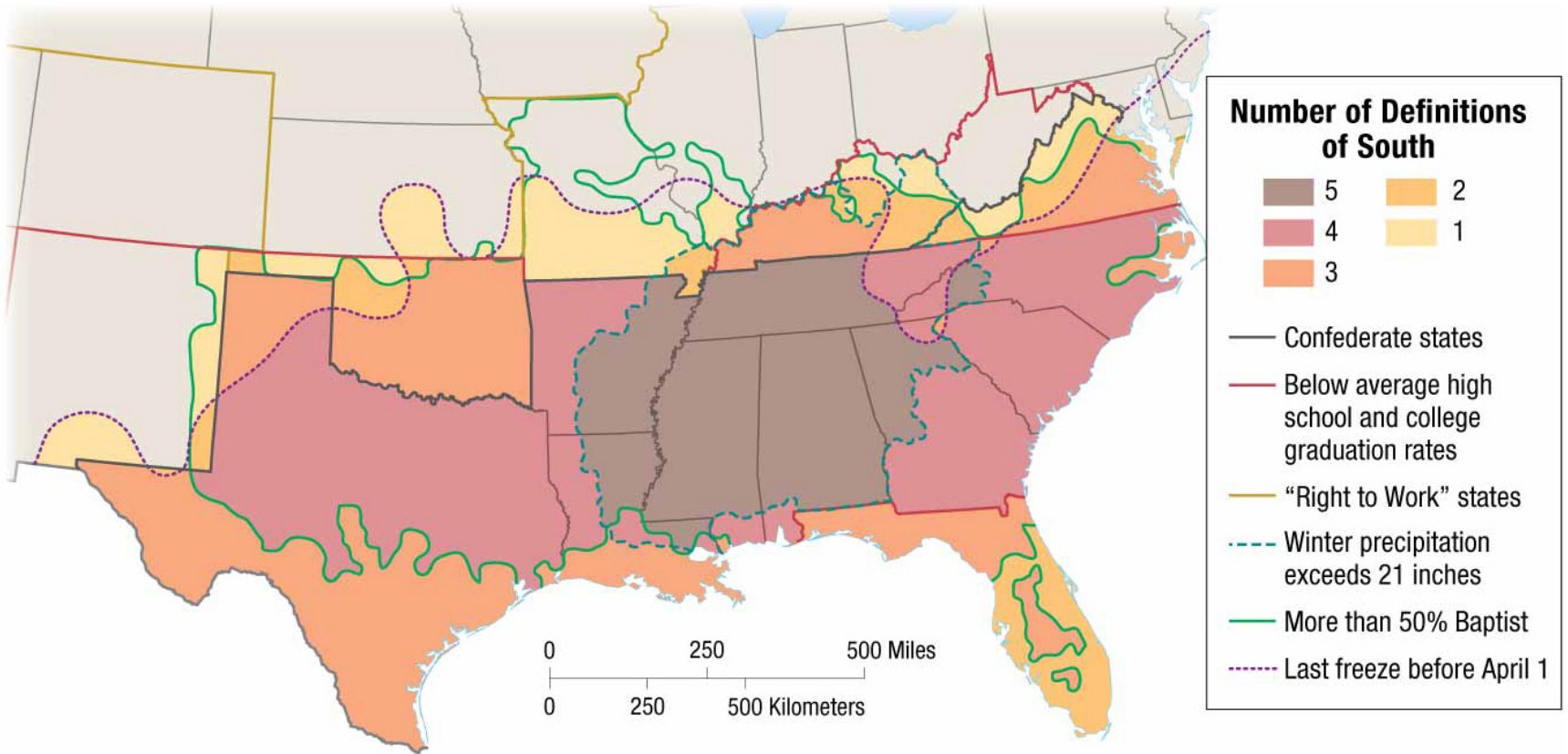
- Region: A Unique Area
 - Geographers identify three types of regions.
 2. Functional Region (aka nodal region)
 - An area organized around a node or focal point
 - » The characteristic chosen to define a functional region dominates at a central focus or node and diminishes in importance outward.
 - » Ex. Circulation of a newspaper, such as *The New York Times*
 3. Vernacular Region (aka perceptual region)
 - An area that people believe exists as part of their cultural identity.
 - » Ex. The American South is a region individuals recognize as having distinct environmental, cultural, and economic preferences.



- This functional regions on this map are based on the linkages between large banks of major central cities and the correspondent banks that they serve in smaller towns.



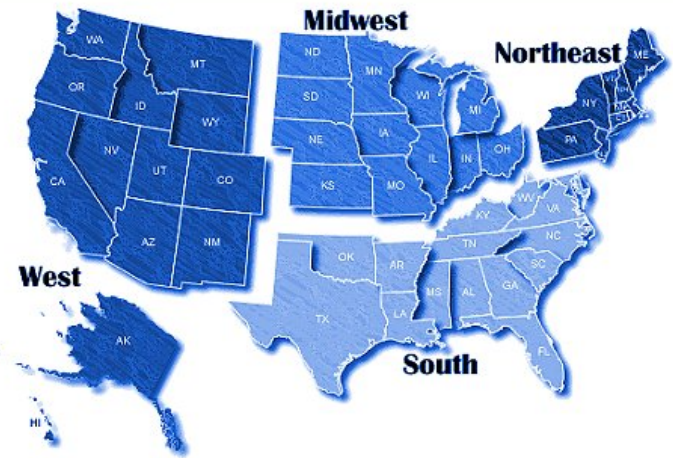
- The state of Iowa is a **Formal Region**.
- The colored circles represent the percentage of households served by a TV station and are **Functional Regions**



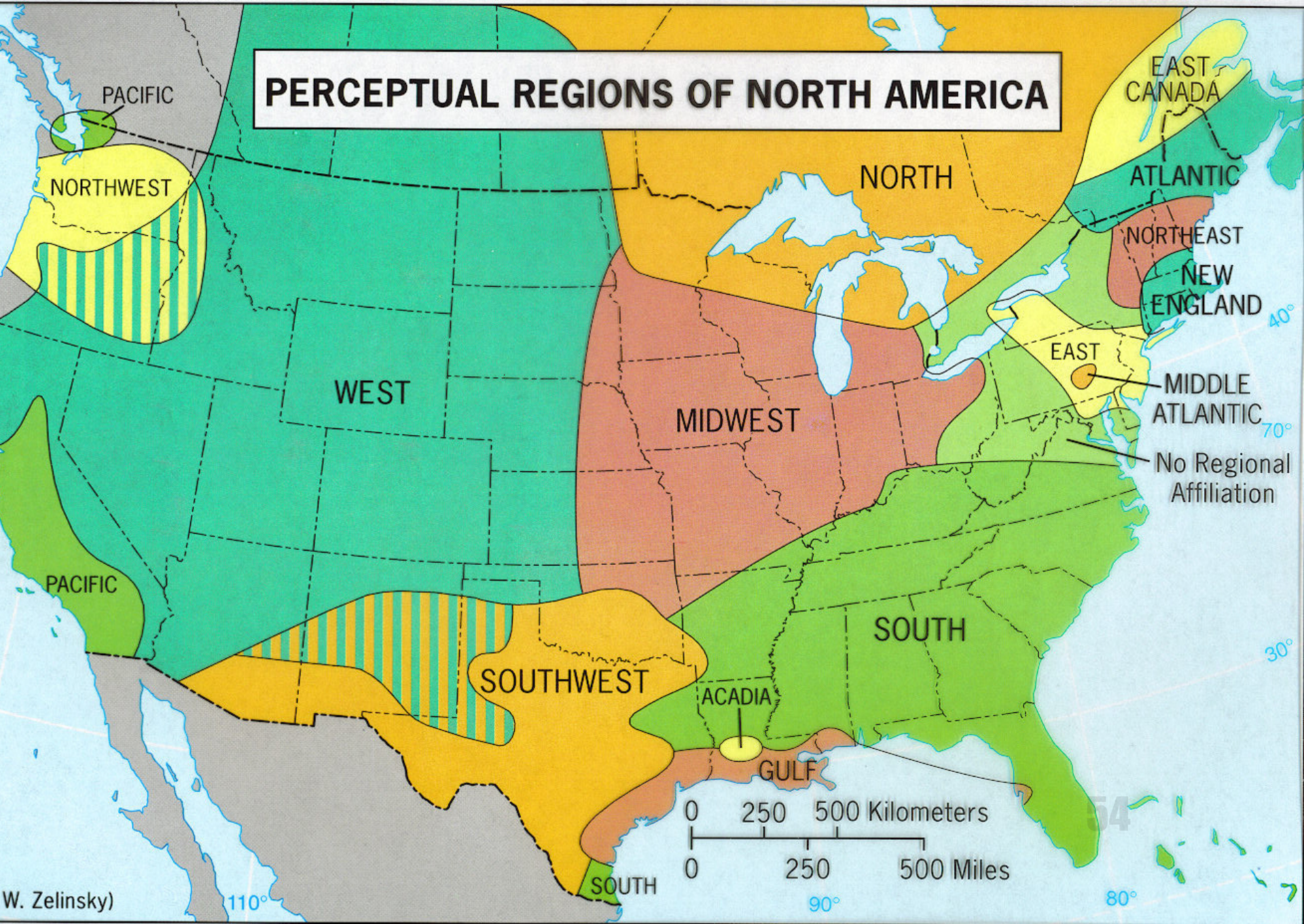
Perceptual Regions

- Perceptual Region = Area defined by people's feelings and attitudes
- Where is "The Midwest"?
- Is Nebraska in the Midwest?
- Is TEXAS in the Midwest?
- Depends on each person's feelings or attitudes.

DIGITAL CORVETTES

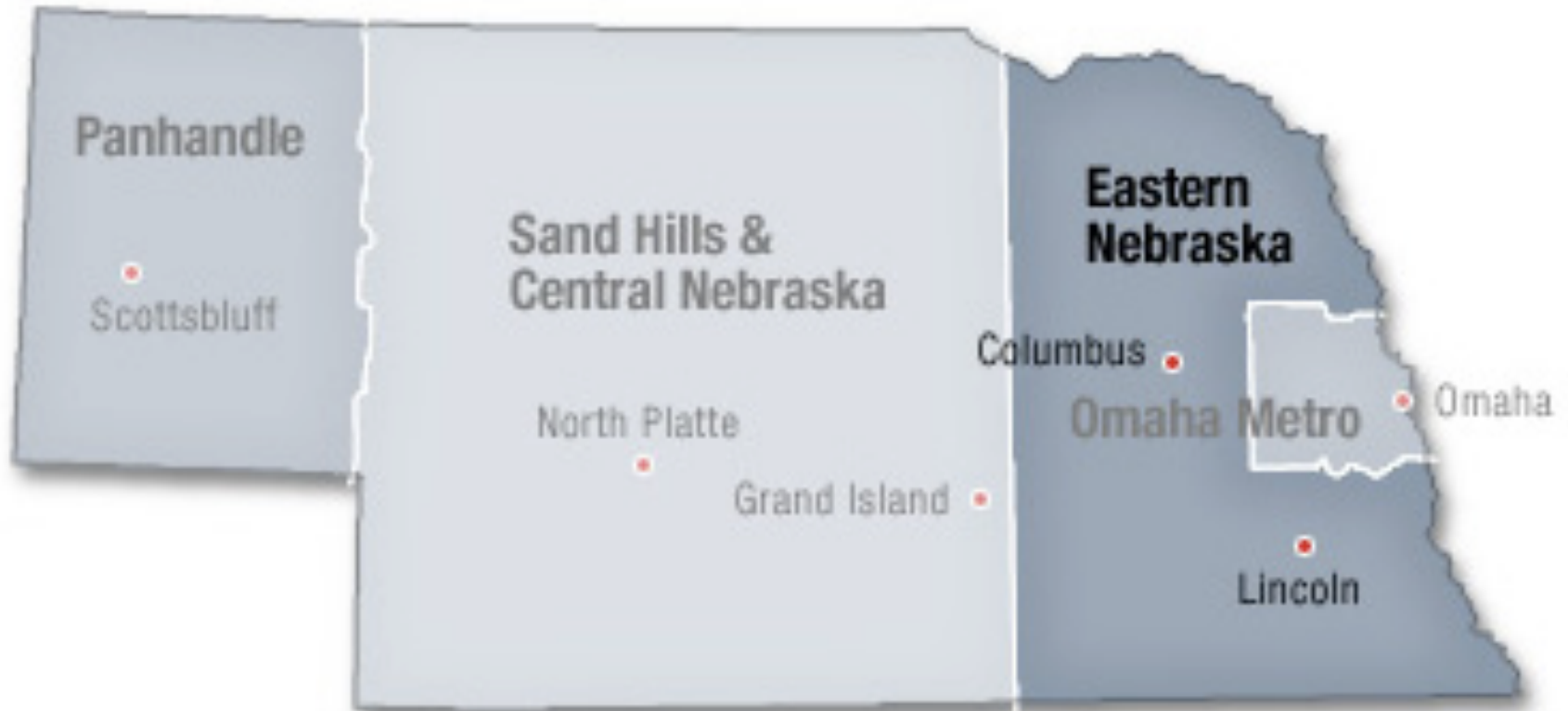


PERCEPTUAL REGIONS OF NORTH AMERICA



W. Zelinsky)

NEBRASKA



THE UNITED Countries OF Baseball



Fan Loyalty Oath 2007

THESE BORDERS ARE REAL FOR SEVEN MONTHS A YEAR, FROM OPENING DAY TO THE WORLD SERIES. THE MAJORITY OF PEOPLE OF EACH COUNTRY PLEDGE THEIR ALLEGIANCE TO THE TEAM SHOWN, REGARDLESS OF PLACEMENT IN THE STANDINGS, QUESTIONABLE TRADES, DRAFT PICKS, PITCHING ROTATIONS, UNIFORM REDESIGNS, OR MASCOT BEHAVIOR, AND THESE LINES WILL STAY TRUE UNTIL THE CITIZENS OF EACH COUNTRY VOTE TO REDRAW THE BORDERS FOR NEXT SEASON.



Let's Test Ourselves Over

Region:

- State of Nebraska
- Amazon River basin
- Dixie
- The Sun Belt
- Lancaster County
- Country of Brazil
- The I-80 corridor
- Husker Nation

Formal, Functional, or Perceptual?

- Formal
- Functional
- Perceptual
- Perceptual
- Formal
- Formal
- Functional
- Perceptual

57

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.
- Origin of word, culture, is the Latin *cultus*, which means “to care for.”
 - Two meanings
 1. To care *about*
 2. To care *of*

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.

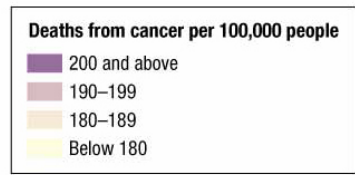
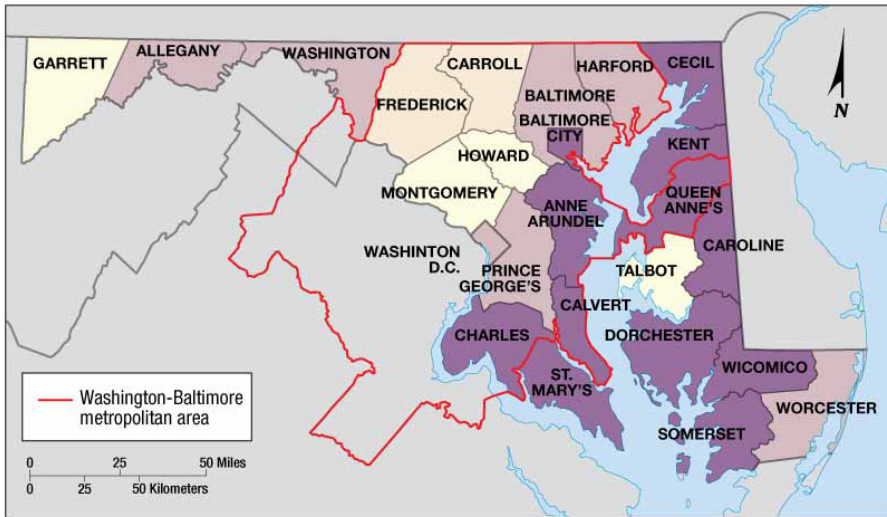
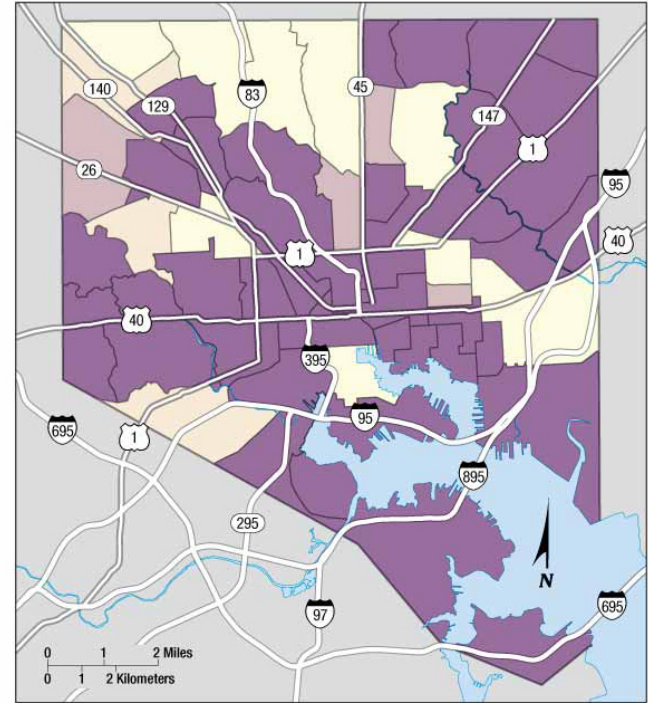
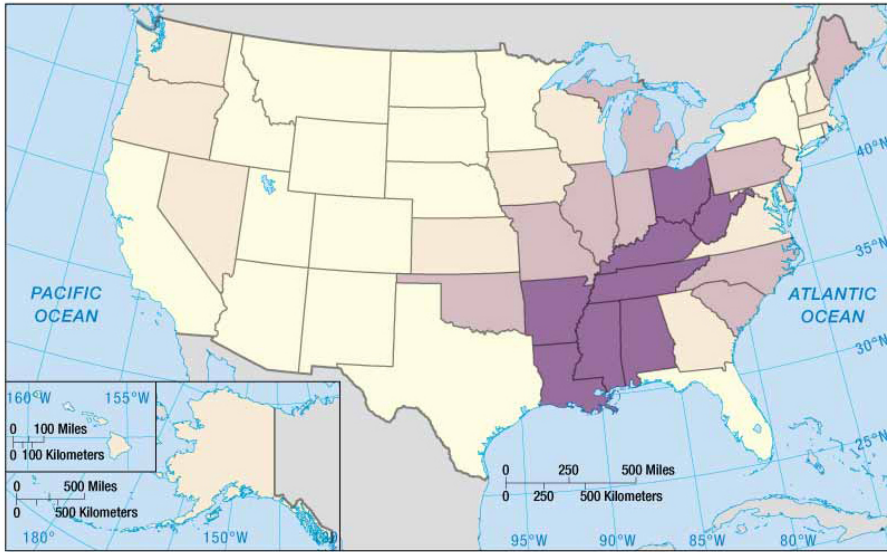
- » Especially important cultural values derive from a group's language, religion, and ethnicity.

- 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.

KI 3 - Why Are Different Places Similar?

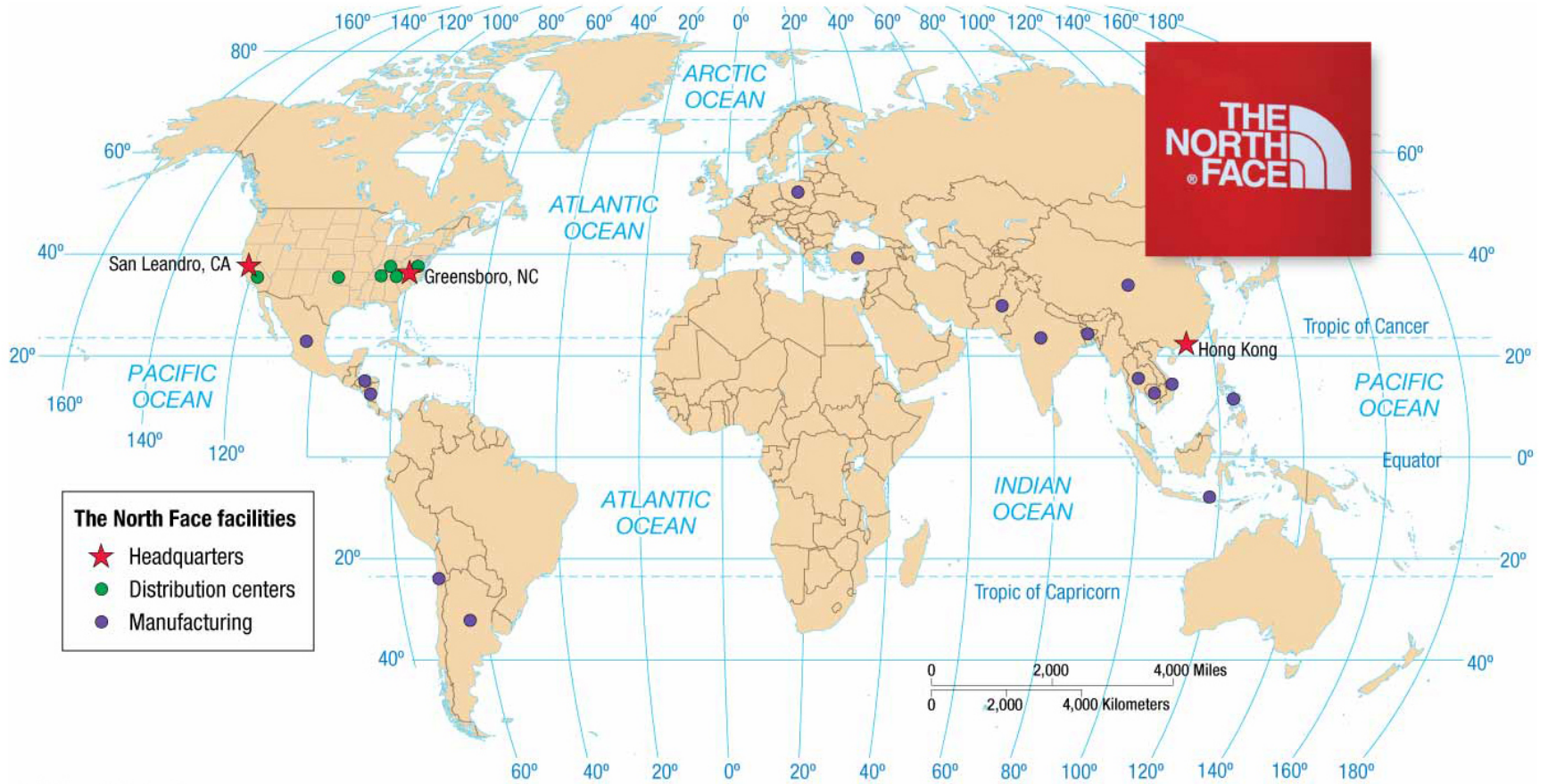
- Scale, space, and connections help geographers explain why similarities among places and regions do not result from coincidence.
- *Scale* is the relationship between the portion of the Earth being studied and Earth as a whole.
 - *Globalization* is a force or process that involves the entire world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



Why Are Different Places Similar?

- Globalization of Economy
 - Globalization of the economy has been created primarily by transnational corporations, sometimes called multinational corporations.
 - A *transnational corporation* conducts research, operates factories, and sells products in many countries, not just where its headquarters and principal shareholders are located.





Why Are Different Places Similar?

- Globalization of Culture
 - Geographers observe that increasingly uniform cultural preferences produce uniform “global” landscapes of material artifacts and of cultural values.
 - 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



CHINA



DUBAI

Cultural Diffusion

- Cultural diffusion or spatial diffusion is the spread of an idea or innovation from its source to other cultures.
- Diffusion occurs through the movement of people, goods or ideas.

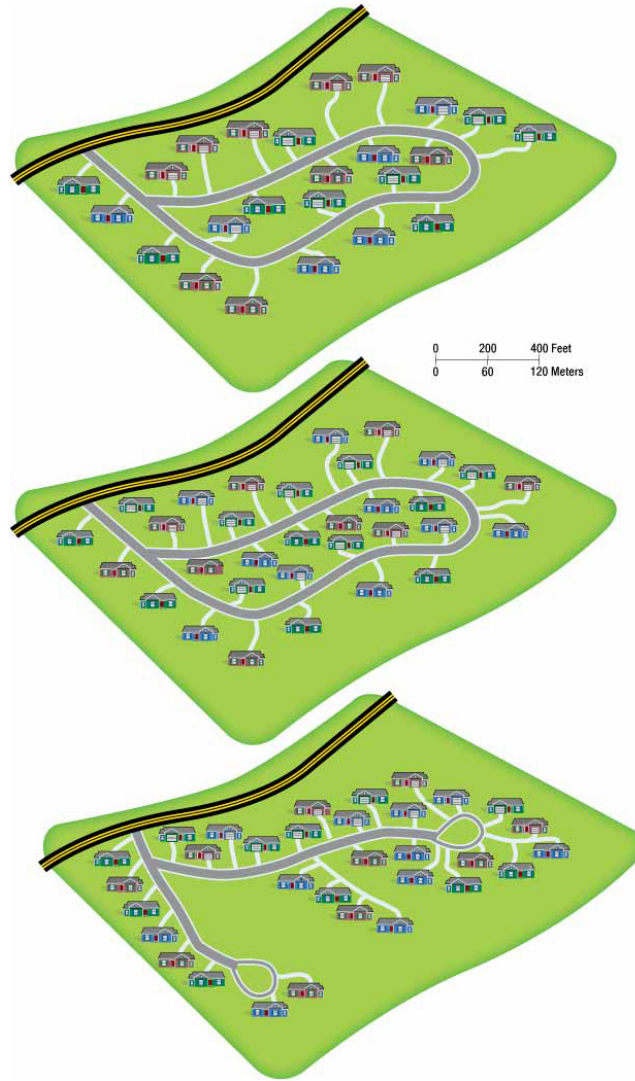


Why Are Different Places Similar?

- 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 feature in space as long as its *distribution*

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



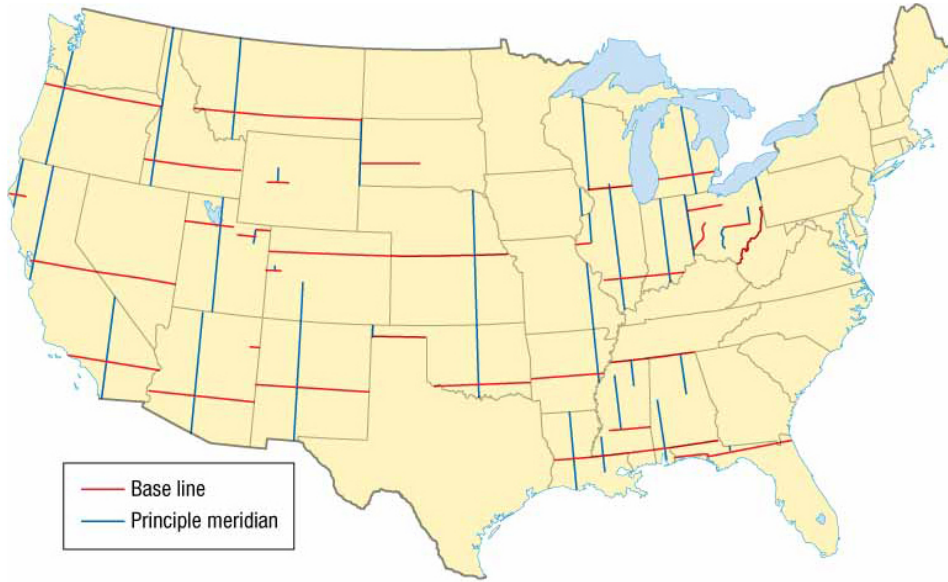
♥ American League
♥ National League



1952

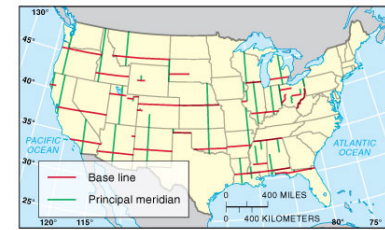


2013

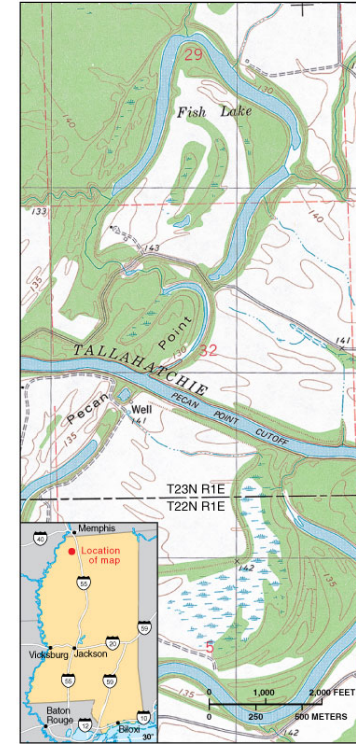


N	T24N R1W		T24N R1E						
	T23N R1W		6	5	4	3	2	1	
7			8	9	10	11	12		
18			17	16	15	14	13		
19			20	21	22	23	24		
30			29	28	27	26	25		
31			32	33	34	35	36		
T22N R1W		T22N R1E							

- The Township and Range System was created by the US Land Ordinance of 1785.
- Each township is divided into 36 sections each 1 mile by 1 mile and numbered 1 in the NE and 36 in the SE.
 - Resulted in a **grid-like pattern**
- The Homestead Act of 1863 encouraged the settlement of the West by giving each settler a quarter section or 160 acres of land.



N	T24N R1W		T24N R1E					
	6	5	4	3	2	1		
T23N R1W	7	8	9	10	11	12		
	18	17	16	15	14	13		
	19	20	21	22	23	24		
	30	29	28	27	26	25		
T22N R1W	31	32	33	34	35	36		
	T22N R1W		T22N R1E					



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Principal	19	20	21	22	23	24	tiles
	30	29	28	27	26	25	
	31	32	33	34	35	36	

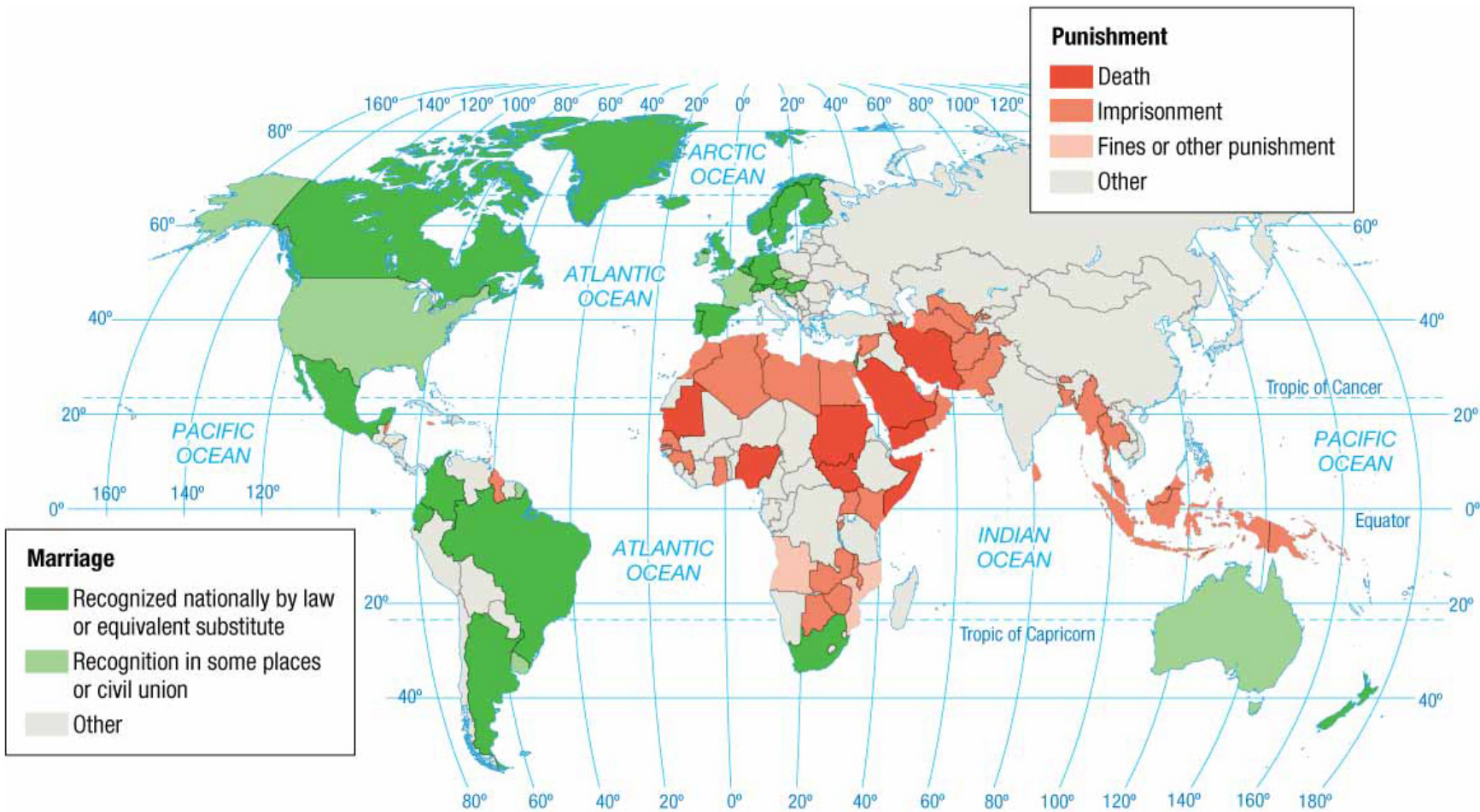
72 Base Line

This chart highlights Section 22 (1 square mile or 640 acres) of Township 1 North, Range 1 East

T&R map (c) 1997
Matt T. Rosenberg

Why Are Different Places Similar?

- Cultural Identity in Space
 - Patterns in space vary according to gender, ethnicity, sexuality.
 - The cultural landscape has the ability to communicate to people what the accepted norm is within a place.
 - Ex. A bar or park that makes whites feel welcomed and people of color unwelcomed (or vice versa)
 - Ex. An inviting shopping district to people practicing alternative lifestyles located in close proximity to where many same-sex couples live



Hearths and Diffusion Questions

- What is a hearth?
 - Is a place from which an innovation originates
-
- What is diffusion?
 - Process by which a characteristic spreads across space from one place to another.

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

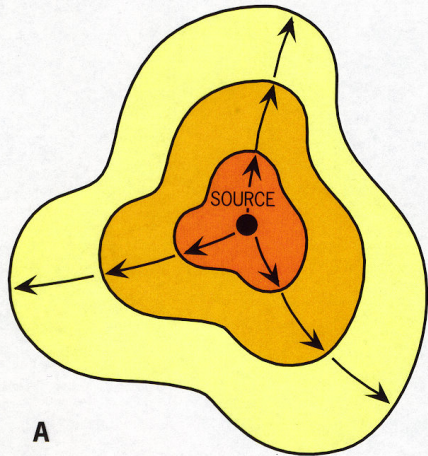
Why Are Different Places Similar?

- Connections between Places

- 3. Stimulus Diffusion

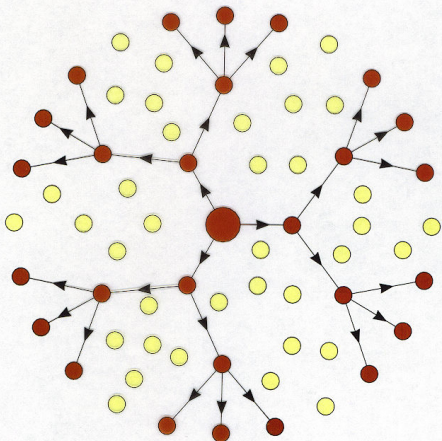
- Spread of an underlying principle even though a characteristic itself apparently fails to diffuse.

- » Ex. Innovative features of Apple's iPhone and iPad have been adopted by competitors.



- » A = Contagious Diffusion

- » B = Hierarchical Diffusion



B

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

Space-Time Compression

- Reduction in time it takes for something to reach another place. ↓



KI 4 - Why Are Some Human Actions Not Sustainable?

- What is a resource?
 - Substance in the environment that is useful to people, economically and technologically feasible to access, and socially acceptable to use.

- Difference between renewable and nonrenewable?
 - Renewable – produced in nature more rapidly than it is consumed by humans

KI 4 - Why Are Some Human Actions Not Sustainable?

- Sustainability and Resources

- Geographers observe two major misuses of resources:

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

- Three Pillars of Sustainability

1. Environment Pillar

- Sustainable development can only exist if conservation is embraced more fully than wasting resources or preservation of all resources.

Why Are Some Human Actions Not Sustainable?

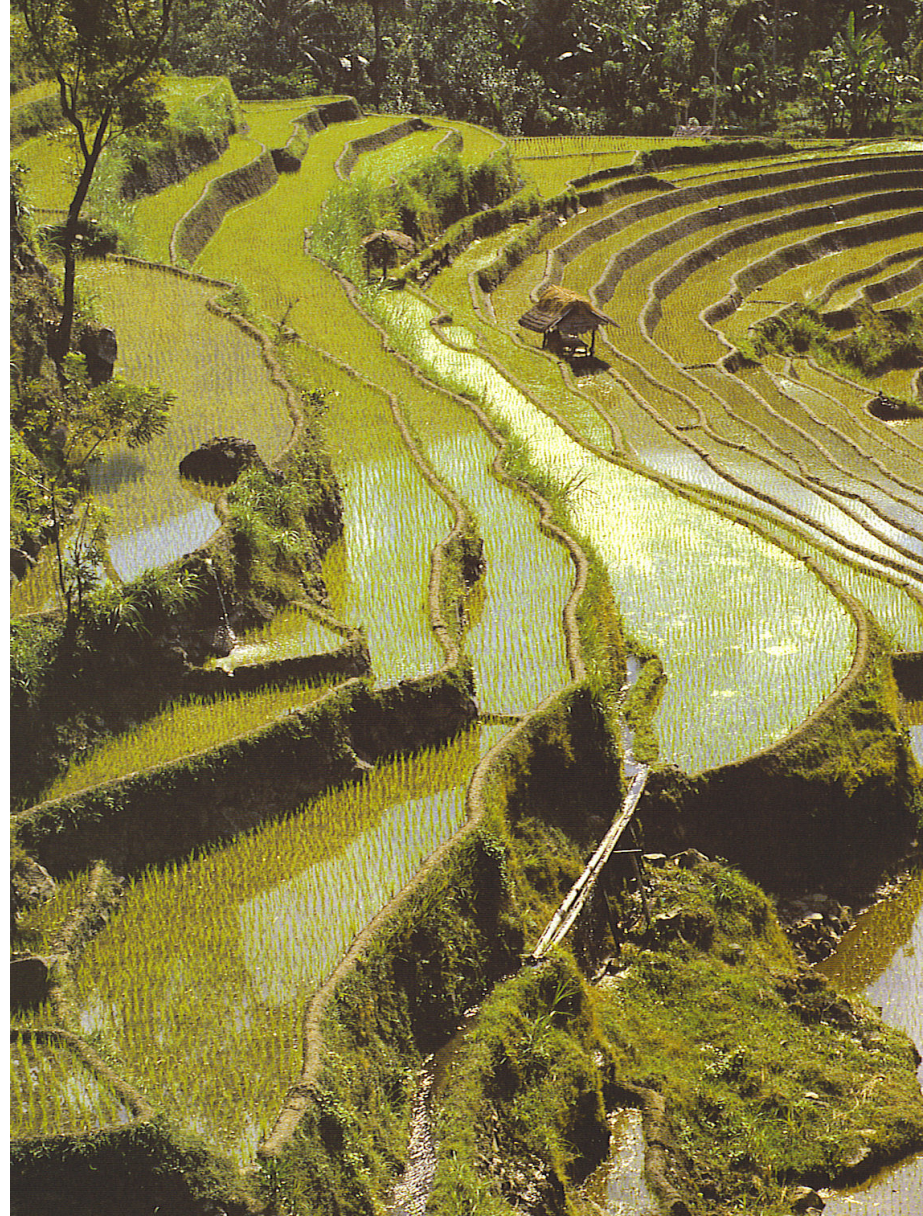
- Sustainability and Resources
 - Three Pillars of Sustainability
 2. Economy Pillar
 - Efforts to set prices of commodities and goods based not only on supply and demand but also on costs to the environment.
 3. Society Pillar
 - Modifying the wants of cultures in regards to shelter, food, and clothing to objects that are sustainable

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

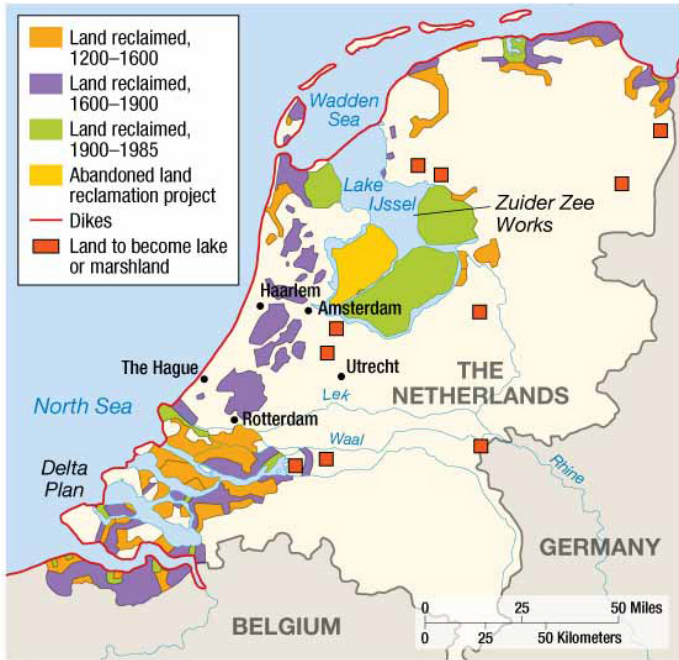
Do you believe that the physical environment determines human activities? Explain.

- **Environmental determinism** the belief that the physical environment caused social development
- **Possibilism** has replaced environmental determinism.
 - The environment may limit some human actions, but people have the ability to adjust to their environment.
 - Ex. When climate limits the crop, people can grow crops that are compatible.



Why Are Some Human Actions Not Sustainable?

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