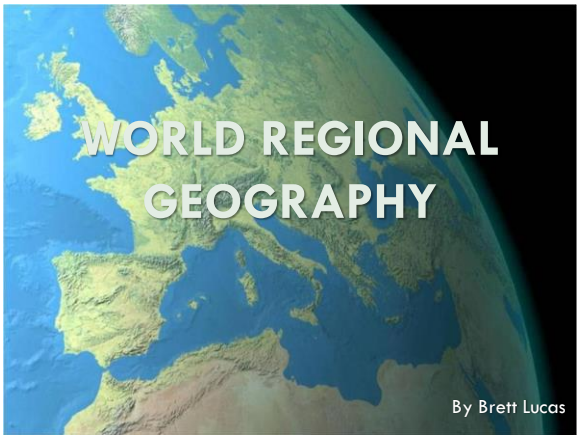
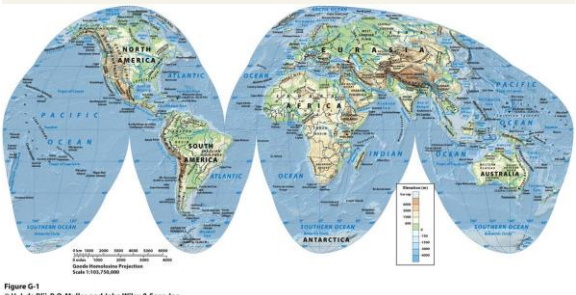


INTRODUCTION

World Regional Geography



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A World on Maps: *Maps in Our Minds*

- ***Mental maps*** are maps in our minds of our *activity spaces:*
  - Offer general layout of the places we frequent and know (e.g., home, school, work, our city).
  - Help us to navigate our activity spaces efficiently, predictably, and safely.
  - With each new activity space in our life, a new mental map is formed.
  - As knowledge of an activity space expands, so does the mental map.

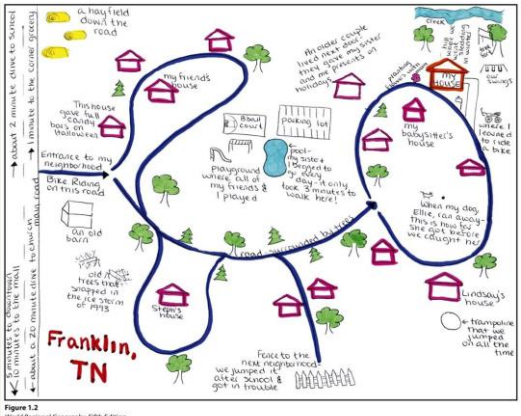

Figure 1.2
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A World on Maps: *The Map Revolution*

- *Cartography* is the making of maps.
- Technological revolutions:
  - *Remote sensing*: scanners and cameras on satellites send information to computers on Earth.
  - *Geographic information systems* (GISs): programs allow presentation and analysis of spatial data.
- Limitations
  - Satellite data require on-the-ground verification.
  - Maps are summaries and are inherently distorted.

Geography's Perspective

Geography is sometimes called the most interdisciplinary of disciplines.

A Spatial Perspective

- Key theme: *space* on Earth's surface and its *organization*
  - Particular patterns and processes that organize social and natural spaces
- ***Spatial perspective***: Geography's consideration that spatial patterns are crucial to how we live & organize our societies

What Is Geography?

- Geography is the study of our planet's surface and the processes that shape it
- Geography, as an academic discipline, is unique in that it links the physical sciences with the social sciences
- Physical geographers have generally focused on how the earth's physical processes work
- Human geography is the study of the various aspects of human life that create the distinctive landscapes and regions of the world
- Physical and human geography are often tightly linked

Geography's Perspective: *Environment and Society*

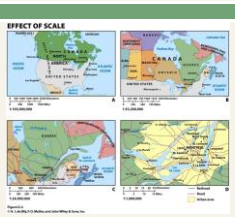
- Geography's intersection at social and natural sciences explicitly integrates each perspective.
- Relationship between human societies and natural (physical) environment is a two-way street:
  - Human transformation of the environment
  - Human dependence on the environment and behavior a product of it
- Humans will always be a part of nature.

Geography's Perspective: *Spatial Patterns*

- Necessary knowledge of location and distribution of significant features of Earth's surface:
  - Both human and natural worlds
  - Also incorporates a temporal (historical) perspective
- Geography's comprehensive spatial vocabulary:
  - Extensive and meaningful terms describe patterns and processes from past, present, and into the future.
  - Some definitions become more specific and complex in their usage by geographers.

Geography's Perspective: *Scale and Scope*

- ***Scale***: map or analytical representation
- Map scale: compares the area and detail on the ground with on the map
- *Operational scale*: scale where social or natural processes play out and are investigated at a certain *level of analysis*



Map Analysis Activity:

1. What is the relationship between area and detail shown in a *small-scale* map versus a large-scale map?

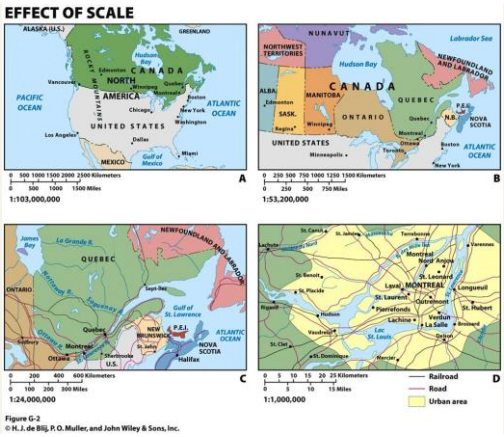


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Figure 1.3 part 2
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Figure 1.3 part 3
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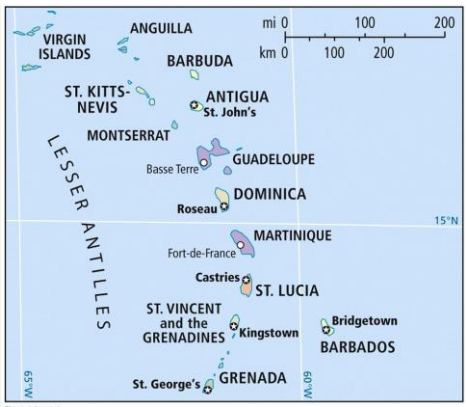

Figure 1.3 part 4
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Figure 1.3 part 5
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Figure 1.3 part 6
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Figure 1.3 part 7
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Longitude and Latitude

- Most maps contain lines of latitude and longitude, which enable a person to establish a position on the map relative to other points on the globe
- Lines of longitude (also called meridians) run from pole to pole
- Lines of latitude (also called parallels) run around the earth parallel to the equator

Longitude and Latitude

- Both latitude and longitude lines describe circles
- There are 360 degrees (designated with the symbol °) in each circle of latitude
- There are 180 degrees in each pole to pole semi-circle of longitude
- The globe is also divided into hemispheres
- The prime meridian, 0° longitude, divides the globe into Eastern and Western Hemispheres
- The equator divides the globe into the Northern and Southern Hemispheres

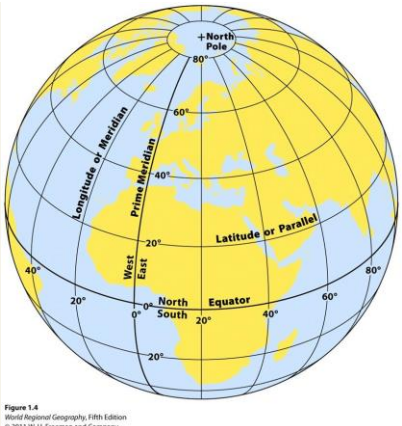

Figure 1.4
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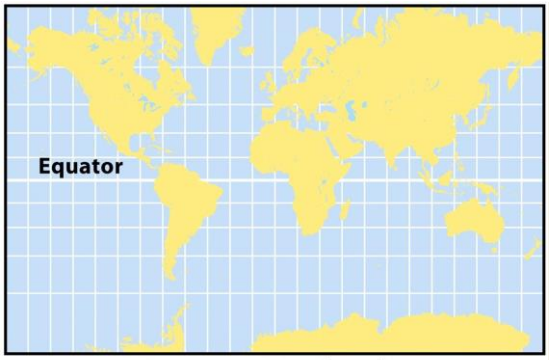
Map Projections

- Printed maps must solve the problem of showing the spherical earth on a flat piece of paper
- The various ways of showing the spherical surface of the earth on flat paper are called map projections
- All projections create some distortion
- Maps are not unbiased



Mercator Projection

Figure 1.5a
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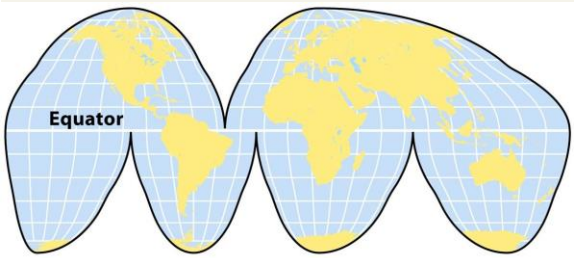

Goode's Interrupted Homolosine Projection

Figure 1.5b
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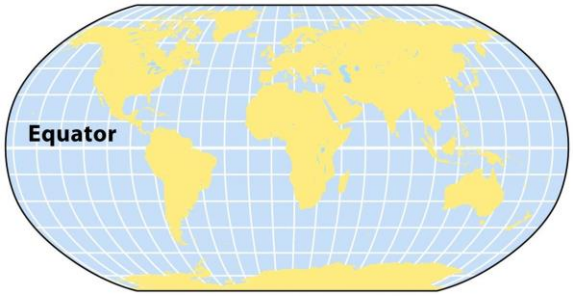

Robinson Projection

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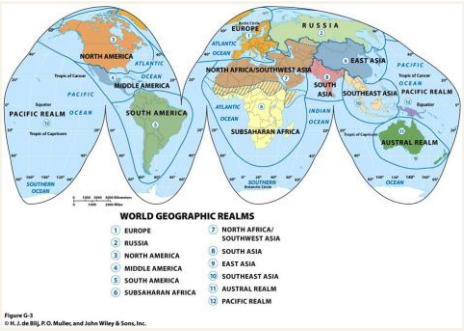
World Geographic Realms

Geographic realms: global neighborhoods with combinations of environmental, cultural, and organizational properties

Criteria for Geographic Realms:

1. *Physical* and *human*: define broad areas
2. *Functional*: interaction within the area
3. *Historical*: above criteria interrelated over time

World Geographic Realms



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World Geographic Realms:
Delineating Realms: Boundaries and Transition Zones

- Beyond common natural boundaries that separate world realms (e.g., oceans and seas)
- ***Transition zones***: where two geographic realms meet are not sharp boundaries:
  - Represent ever-changing zones of regional interaction and change
  - Vary in size: most are narrow; a few can be broad
  - Reality of contested, shifting boundaries, and changing geographic fortunes in the world

World Geographic Realms:
Geographic Realms: Dynamic Entities

- Temporal change affects realms' criteria.
- In the four decades after WWII, country borders changed little, but since 1985, far-reaching realignments have been occurring again.

World Geographic Realms:
Two Varieties of Realms

- *Monocentric*: realms are dominated by a single major political entity, either by its territorial or population size.
- *Polycentric*: appearance, functioning, and organization are dispersed among equally influential regions or countries.

Regions within Realms

Regional concept: refined level of spatial classification requiring more specific criteria:

- Often employed as part of everyday communication
- Often easy to imagine and describe, but difficult to outline on the map
  - Different criteria can be identified or prioritized, thus changing the delimitation
- Use of spatial generalizations and selective criteria
  - Depends on the purpose for creating the region

Regions within Realms: *Criteria for Regions*

Five sets of criteria:

1. *Area*: space occupied on Earth's surface
2. *Boundaries*: nature's sharp divisions or using specific criteria to divide
3. *Location*
   - Often a region's name contains a locational clue.
   - ***Absolute location:*** area's extent defined by the geographic grid.
   - ***Relative location:*** referenced against other regions.

Regions within Realms: *Criteria for Regions*

Five sets of criteria (cont.):

4. *Homogeneity* or sameness:
   - Human (cultural), physical (natural), or both
   - ***Formal regions***: areas with a measureable or visible internal homogeneity
5. *Regions as Systems* marked by functional integration:
   - ***Spatial Systems***: components and interactions within an areal extent, known as a ***functional region***
   - Core, as center of activity with a surrounding zone of interaction, or ***hinterland***

Regions within Realms: *Interconnections*

- All human-geographic regions are more or less linked to other regions.
- Globalization:
  - Causing ongoing integration and connections
  - Sometimes blurs regional identities
  - Sometimes paradoxical:
    - Some regions become more alike.
    - Some regions develop stronger contrasts.

Thematic Concepts and Their Role

- Within the world regional framework, most lectures are organized around nine thematic concepts:
  - Population
  - Gender
  - Development
  - Food
  - Urbanization
  - Globalization
  - Democratization
  - Water
  - Climate change

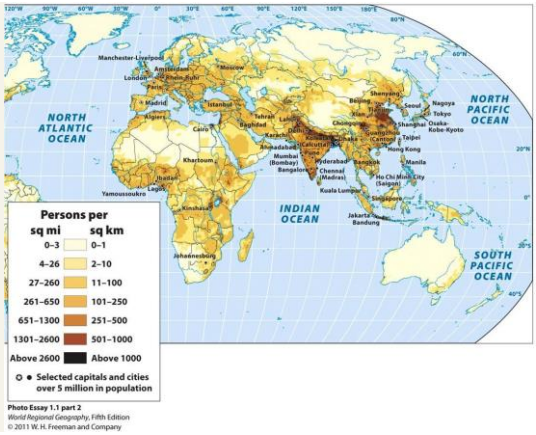

Photo Essay 1.1 part 2
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The Physical Setting

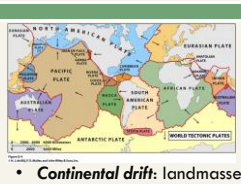
- The role of natural environments in how people make their living:
  - *Patterns of opportunity* are favored areas with opportunities for plant and animal domestication:
    - Then followed continued adaptation and invention
    - Led to the development of villages, towns, and cities
  - People in other environments found it harder without such favored opportunities.
- Modern map carries these imprints of the past.

The Physical Setting:
Natural (Physical) Landscapes

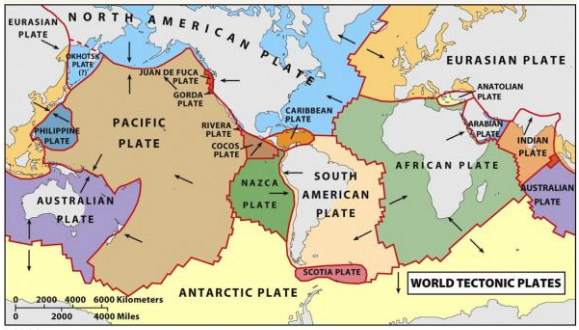
- ***Natural landscapes***: array of landforms constituting Earth's surface, including the physical features that mark them:
  - Landform types: mountains, hills, plains, plateaus
  - Physical features: water bodies, soil, vegetation
- Influence human activity and movement
- Each geographic realm has its distinctive combination of natural landscapes

The Physical Setting:
Geology and Natural Hazards

- ***Tectonic plates***: lighter rock continents float atop heavier rock plates that move by magma circulation cells within the Earth.
- Collision of tectonic plates cause earthquakes and volcanoes.



- ***Continental drift***: landmasses were once pieces of a supercontinent, *Pangaea*, that broke up and continues to drift apart



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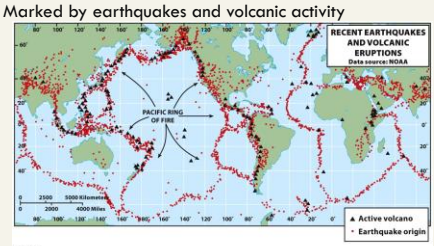
The Physical Setting:
Geology and Natural Hazards

- ***Pacific Ring of Fire***: zone of crustal instability along plate boundaries ringing the Pacific Ocean Basin
- Marked by earthquakes and volcanic activity



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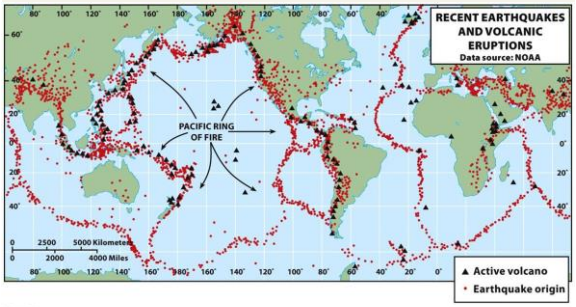

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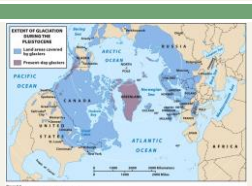
The Physical Setting:
Geology and Natural Hazards

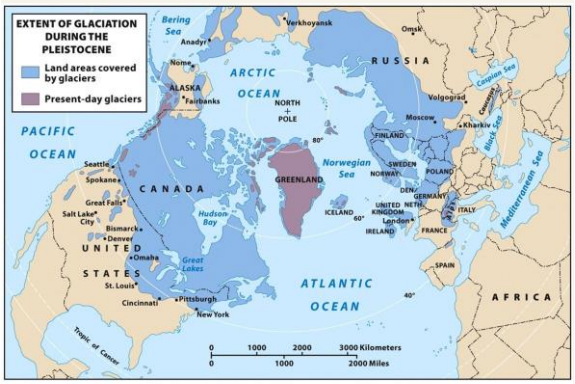
- Map Analysis Activity:
  Comparing Tectonics and Natural Hazards
  1. What connections are seen in the two maps?
  2. What realms are most susceptible to tectonic hazards?

The Physical Setting: *Climate*

- Cyclical nature of climate
- ***Ice age***: periods when average temperatures were low, allowing the expansion of glacial ice equator-ward
- Cyclical periods:
  - ***Glaciation***: cold phases with glacial expansion
  - ***Interglacials:*** warm phases with glacial receding



- Geologic periods:
  - *Pleistocene*: recent epoch spanning rise of humans
  - *Holocene*: today's Pleistocene interglacial epoch



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The Physical Setting: *Climate*

Global Climate Change

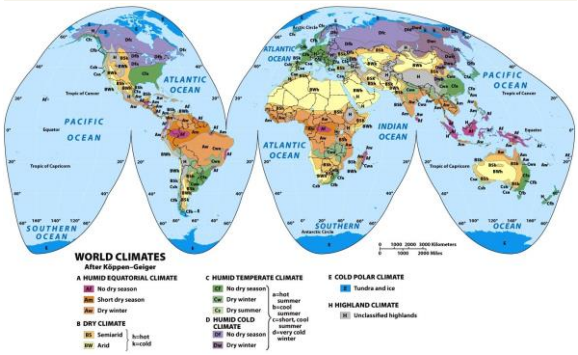
- Includes natural and anthropogenic induced changes associated with warming or cooling.
- *Greenhouse effect* leads to these climatic shifts. Relationship between the atmosphere and radiation:
  - *Warming*: more solar radiation is trapped by the atmosphere.
  - *Cooling*: more solar radiation is released out of or blocked from the atmosphere.

The Physical Setting: *Climate*

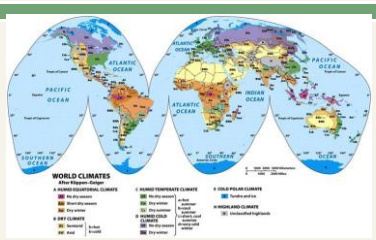
Climate Regions

- *Weather* vs. *Climate*
  - ***Weather:*** immediate state of the atmosphere
  - ***Climate***: aggregate, total record of weather conditions at a place or region over time
- Köppen's climatic regions
  - *A*: equatorial/tropical – *B*: dry
  - C: temperate – *D*: cold
  - *E*: polar – *H*: highland

The Physical Setting: *Climate*



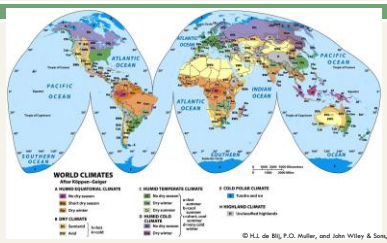
The Physical Setting: *Climate*



Map of Global Climate Regions

- Color-coded regions have relatively similar weather.
- Notice patterns with latitude.

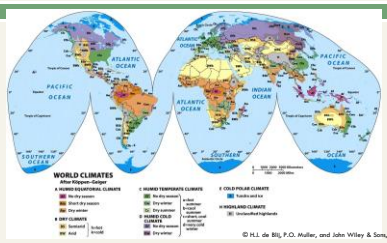
The Physical Setting: *Climate*



Humid Equatorial (*A*) Climates

- Region has high temperatures and high precipitation.
- Three subregions: monsoon, rainforest, and savanna.

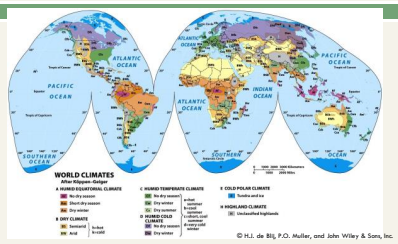
The Physical Setting: *Climate*



Dry (*B*) Climates

- Region has low precipitation with varying temperature averages.
- Two subregions: arid and semiarid.

The Physical Setting: *Climate*



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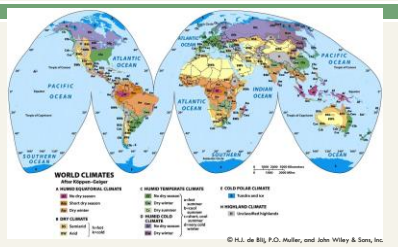
Humid Temperate (C) Climates

- Mid-latitudes have no temperature extremes or severity.
- There are three subregions: No dry season, dry winter, and dry summer.

The Physical Setting: *Climate*



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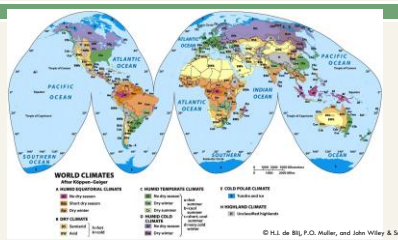
Humid Cold (*D*) Climates

- Mostly continental with large temperature extremes.
- There are two subregions: no dry season and dry winter.

The Physical Setting: *Climate*



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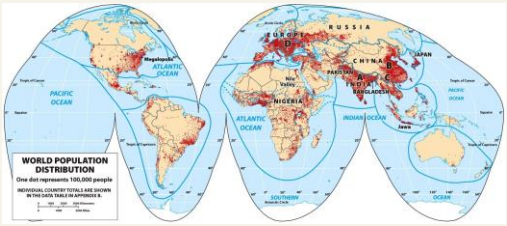
Cold Polar (*E*) and Highland (*H*) Climates

- Temperature ranges are due to high latitudes or elevations.
- Region E is *tundra* and ice; H is unclassified highlands.

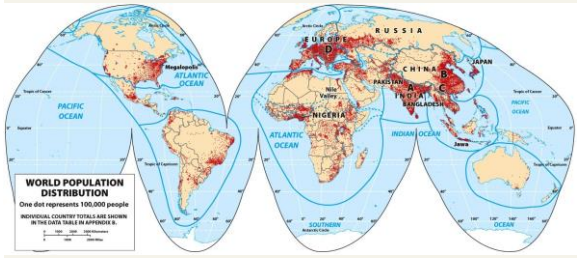
Realms of Population

- Current world population: 7.1 billion
- Occupying less than 30% of Earth's surface



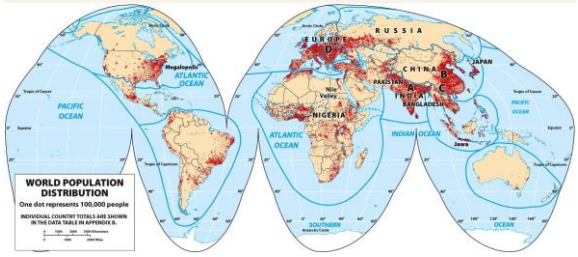
Realms of Population:
Major Population Clusters

- ***Population distribution***: map with dots to represent ~100,000 people.
- Distinct from *population density* as persons per unit area

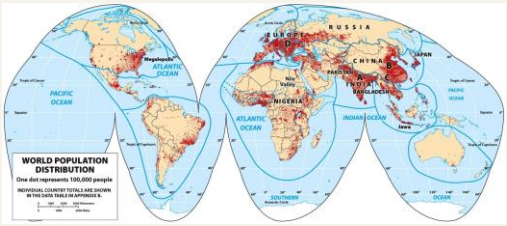


Realms of Population:
Major Population Clusters

- Three major world population clusters = 4 billion people
- ***Urbanization***, or percentage of people living in cities and towns, varies among the world's realms and regions



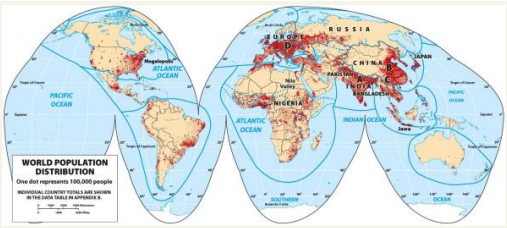
Realms of Population:
Major Population Clusters



A: *South Asia*

- Centered on India, including Pakistan and Bangladesh
- World's largest cluster made up mostly of farmers

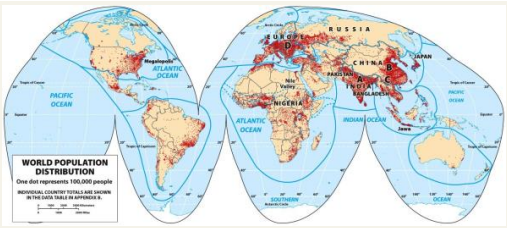
Realms of Population:
Major Population Clusters



B *&* ***C***: *East Asia*

- Centered on China, including coastal zone
- Rapid change from rural-to-urban life and development

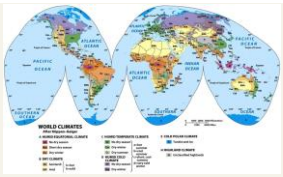
Realms of Population:
Major Population Clusters



D: *Europe*

- European continent, including Western Russia
- Among the world's most urbanized and industrialized realms

The Physical Setting & Realms of Population



Map Analysis Activity:
Comparing Climate and Population

1. What relationship is seen between climate and where people are clustered?
2. What about where people are *not* clustered?

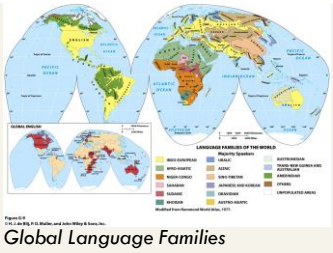
Realms of Culture

- ***Cultural landscape***: distinctive attributes of a society imprinted on its portion of the world's physical stage:
  - People start with their physical environment and use their culture to create a multilayered landscape.
  - The cultural landscape can be read for clues about the relationship of people to their environment.
- No realm has a single cultural landscape.
- Variations help to define the world's regions.

Realms of Culture:
The Geography of Language

- Language as the essence of culture:
  - Linguistic diversity in the face of English primacy
  - Language lifespan: emerge, thrive, and die out
- Language tree:
  - 15 *language families*: shared, but distant, origins
  - Several language subgroups under a family
  - *Lingua franca*: a common second language used in government, commerce, or higher education
  - English primacy a result of colonization and globalization
  - Languages evolve over generations

Realms of Culture:
The Geography of Language



Map of Global Language Families

- Spatial perspective on history of "language trees"
- Work in progress as languages change or die out

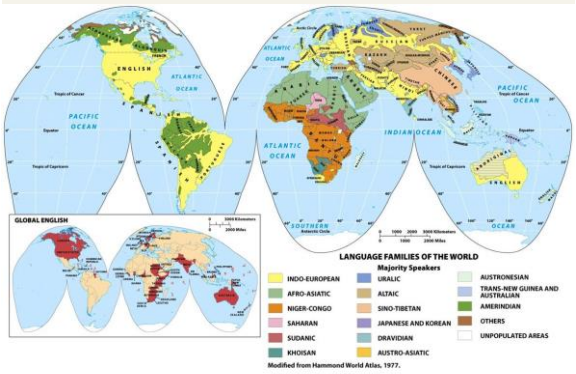


Figure G-9
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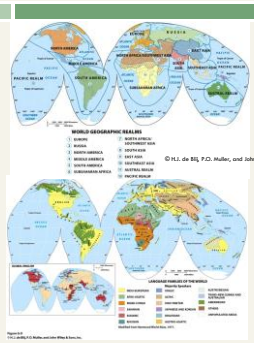
Realms of Culture:
The Geography of Language

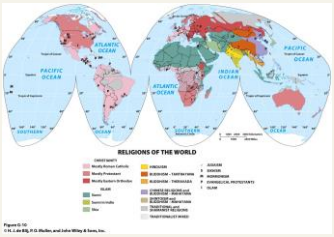


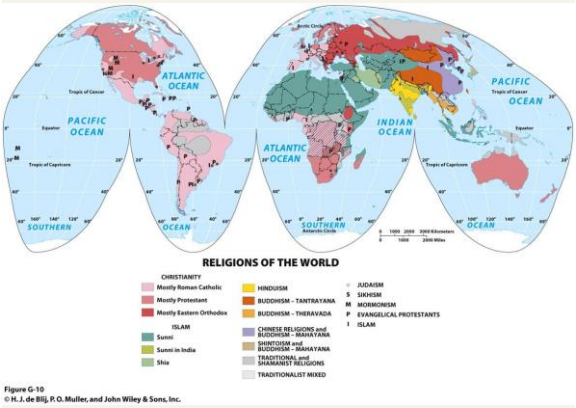
Map Analysis Activity:
Comparing Realms and Language Trees

1. What realms are mostly dominated by a single language family?
2. What realms are more linguistically fragmented?

Realms of Culture: *Landscapes of Religion*

- Crucial influence world civilizations and history.
- Patterns are diffuse and dynamic, yet there is still a strong connection between realms and religion.





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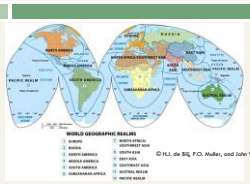
Realms of Culture: *Landscapes of Religion*



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Map Analysis Activity: *Comparing Realms and Global Religions*

1. What realms seem to be dominated by a single religion?
2. What realms have the greatest religious diversity?
3. Why is viewing religion at the global-scale misleading?

A World of States

- ***States***: geographic term for political entities, also known as countries.
- Size is not a dependable criterion of importance.

A World of States: *The Modern State*

Sovereignty: notion that government of a state rules supreme within its borders

- Essential to the world's territory organized into a system of states
- Sovereignty is usually recognized by other states.
- However, recognition can be mired in conflict and war.

A World of States: *The Modern State*

- Emergence of the modern state:
  - Ancient "proto-states" origins
  - ***European state model***: assumed a political entity (*state*) would territorially match a cultural entity (*nation*) as a *nation-state*
- Notion of the modern state is challenged…
  - "from below" by ethnic minorities.
  - "from above" by international integration.
- *Power* is still largely held by states.

A World of States

Subdivisions of the State

- Subnational political units
  - e.g., states, provinces, regions, federal districts, etc.
  - Power is decentralized to substate entities.

Geopolitics and the State

- Global influence often relates to a state's geographic attributes:
  - Physical geography, cultural, or economic factors.
  - Significance of attributes does change overtime.

A World of States

States, Realms, and Regions

- State borders often help bound realms and regions.
- Realm and region boundaries can cut across states.

Political Geography

- Shapes world-scale geographic regions.
- Global boundary framework also changes.

Geographies of Development

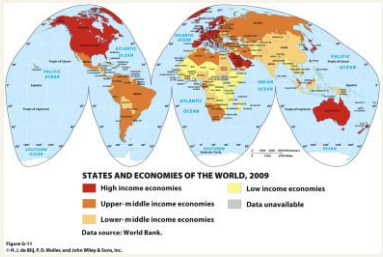
- *Economic geography*: focuses on spatial aspects of peoples' livelihoods and the patterns of production, distribution, and consumption.
- ***Development***: gauges a state's economic, social, and institutional growth.

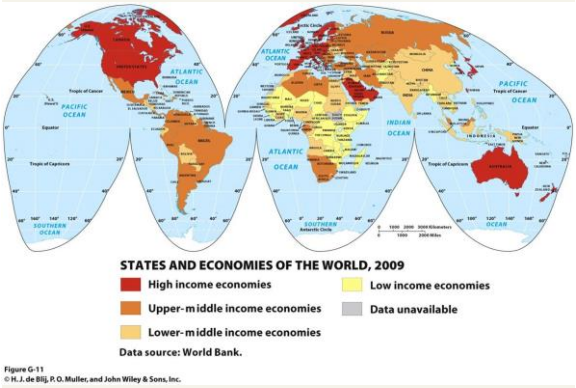
Statistics: A Caution

- Data reflect state-scale totals and averages.
- Data can conceal regional and local variability.

Geographies of Development:
Development in Spatial Perspective

- World Bank development classification is based on economic success as measured by income or GDP.





The Gini Coefficient

- Economic geographers study regional disparity:
  - Can be difficult to analyze income distribution within a considerably large population.
- Gini coefficient: Statistical formula measuring degree of dispersion
- GC adapted into an index to reveal proportion of a population sharing wealth:
  - 0.0 = equitable distribution;
  - 1.0 = completely uneven with one earner taking all
- Globally, countries' Gini coefficients are rising.

Geographies of Development:
Development in Spatial Perspective

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Map Analysis Activity:
Comparing Realms and Global Economies

1. What realms have more countries in the high income category?
2. What realms have more countries in the lowest income category?
3. Are there any realms with a diversity of incomes?

Geographies of Development:
Development in Spatial Perspective

- Economic development at substate scales is geographically complex and uneven.
- Within high- and middle income economies, there are still people in poverty.
- Global influence does rely on economic prowess and relative size.

- ***Cartogram***: type of pseudo-map distorts size of states relative to their international prominence.
  - Not intended to reflect actual political space.

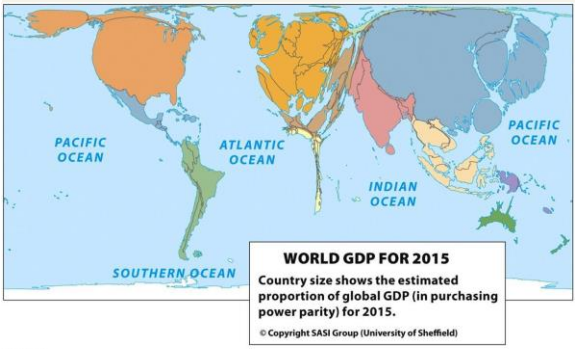

Figure G-12
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Geographies of Development:
Development in Spatial Perspective

Uneven Development

- Human success has been focused on certain areas and has bypassed others.
  - ***Core areas***: places of dominance that exerted power over surroundings, near and far.
  - ***Periphery***: created through one-sided interactions to sustain the core.
  - Core-periphery interactions usually meant wealth for the core and enforced stability in the periphery.

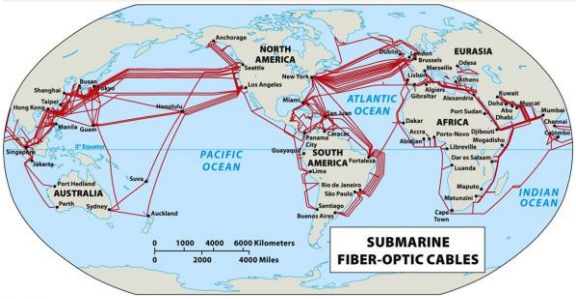
Geographies of Development:
Development in Spatial Perspective

Uneven Development

- Exists at a range of scales.
- *Spatial networks* have nodes or intersections of various centrality and importance.

The World Is Not Flat!

- Friedman: the world is so mobile, interconnected, and integrated that core-periphery barriers are falling.
- Yet, a *global* core persists.
- And globalization's effects on development are uneven by scale and pace.



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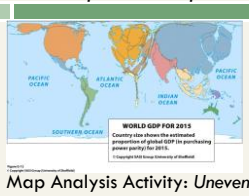
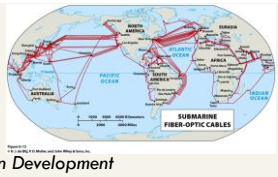
Geographies of Development:
Development in Spatial Perspective





Map Analysis Activity: *Uneven Development*

1. What relationships can be seen in the map of *World GDP for 2015* and the map of *Submarine Fiber-Optic Cables*?
2. What inferences about the uneven nature of core-periphery spatial networks can be made from these two maps?

Globalization

- ***Globalization***: a *geographic* process in which economic, cultural, and political relations shift to ever-broader scales:
  - The world is integrated and interconnected in a global village.
  - Driven by rapid advances in communication and transportation technologies.
  - Not entirely new: historical globalization processes of the mid- and late-nineteenth century.

Globalization

Global Challenges, Shared Interests

- Global warming is a global threat, yet mired in regional interests.
- Global migration flows create global cultural interaction, yet barriers to *transnational migrants* increase.

Winners and Losers

- *WIN*: Expand international capitalism, standardize practices, and shrink the development gap.
- *LOSE*: Uneven development persists, increasing inequality at all scales and unfair competition.

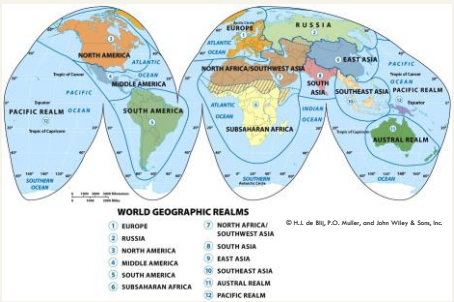
Globalization:
The Future

- The uncertainty of the future of globalization:
  - Critics: There are growing development gaps and impending global destabilization.
  - Proponents: Give globalization time to spread its advantages to all.
  - Reality of the present: The "global village" is still distinct, and some contrasts have been amplified.

What do you think?

- Do you side with critics or proponents? Why?

Realms and Regions:
The Structure of This Book



Realms and Regions:
Remarks on the Discipline of Geography

- Geography is both a social and physical science.
- Types of study:
  - *Regional geography* is an all-encompassing study of the world by its regions, which uses…
  - *Systematic geography* and its research in systematic fields that relate to other disciplines, but uses its unique spatial perspective.