A BIT MORE ON MAP PROJECTIONS

• Some are a review, others are new!
MERCATOR PROJECTION

The standard map projection for nautical purposes.

Distortion: Size and Shape
MOLLWEIDE PROJECTION

Distortion: Shape and Angle

Primarily used where accurate representation of area takes precedence over shape
ROBINSON PROJECTION

Primarily used to create visually appealing maps of the entire world.

Distortion: Everything in small amounts.
AZIMUTHAL EQUIDISTANT PROJECTION

Distortion:
Shape and distance as one gets farther from the center.

Used when drawing Polar maps.
FULLER PROJECTION

Distortion: Maintains the accurate shape and size but rearranges direction.
Often seen as a politically driven map.

Distortion:
Retains the accurate size of landmasses but sacrifices shape.
PETERS COMPARED TO MERCATOR
Longitude

- Also known as lines of Meridians drawn from North to South, but measure East and West

1. **Prime Meridian** passes through Greenwich, England, and is 0 degrees longitude (East and West Hemispheres)

2. **International Date Line** is opposite the Prime Meridian and is 180 degrees longitude
Time Zones

• 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)
  – Located at the prime meridian (0° longitude)
  Passes through Greenwich, England
  – Master reference time for all points on Earth
Telling Time

• The International Date Line is...
  – Located at 180° longitude.
  – Not a straight line!
  – Move the clock back 24 hours if you are heading eastward toward America.
  – Move the clock ahead 24 hours if you are heading westward toward Asia.
Latitude: Also known as Parallels – circles drawn around the globe

- Measure North to South
- North and South poles are 90 degrees latitude

3. Equator is 0 degrees latitude – North and South Hemispheres
THE 5 THEMES OF GEOGRAPHY

Used as a basis for understanding geographic information and to gain a better appreciation of cultural and environmental changes throughout the world
THE FIVE THEMES OF GEOGRAPHY

• Location
• Place
• Human-Environment Interaction
• Movement
• Regions
LOCATION
Where we are.

• **Absolute Location** (site)
  - EXACT LOCATION
  - A latitude and longitude (GPS Coordinates) or a street address (local location).
    - Washington D.C
      39 Degrees N
      77 Degrees W
    - The White House is located at 1600 Pennsylvania Ave.

• **Relative Location** (situation)
  - Location in relation to something else!
    - Described by landmarks, time, direction or distance. From one place to another.
      - Washington D.C. is located on the east coast of the US.
PLACE

What is it like there, what kind of place is it? Describes place in terms of both physical and human characteristics.

• **Human Characteristics**
  - What are the main languages, customs, and beliefs.
  - How many people live, work, and visit a place.

• **Physical Characteristics**
  - Landforms (mountains, rivers, etc.), climate, vegetation, wildlife, soil, etc.
HUMAN-ENVIRONMENT INTERACTION (HEI)

- How humans and the environment have affected each other. How do we interact with our environment
  - We depend on it.
    - People depend on the Tennessee River for water and transportation.
  - We modify it.
    - People modify our environment by heating and cooling buildings for comfort.
  - We adapt to it.
    - We adapt to the environment by wearing clothing suitable for summer (shorts) and winter (coats), rain and shine.
MOVEMENT

• Movement is how people, goods, and ideas are moved from place to place.
  – Human Movement
    • Trucks, Trains, Planes
  – Information Movement
    • Phones, computer (email), mail
  – Idea Movement
    • How do fads move from place to place?
      TV, Radio, Magazines
Regions are areas that share some type of common characteristic(s).

There are 3 types of regions

- Formal Regions
- Functional (nodal)
- Perceptual (vernacular)

- MORE ON THIS LATER!!!!!!
More Information on Regions!
Three Types of Regions

1. **Formal regions** have one or more common characteristics. They can be political entities, climate regions or landform regions.

   - Southern Europe

2. **Functional regions** have a focal point with surrounding areas linked by transportation and communication systems.

   - New York metropolitan area

3. **Perceptual regions** are defined by how people perceive of an area.

   - Rust Belt
3 Main Types of Regions

Formal Region (uniform or homogeneous): defined by a commonality, typically a cultural linkage or a physical characteristic.
EX: Culture Regions, a country, Corn Belt,

Example: culture regions
Each would be a formal region
Formal Region Map
Functional Region

defined by a set of social, political, or economic activities or the interactions that occur within it.

*most intense near the central node, then lose relevance as distance increases

- Distance Decay

ex: - an urban area (DFW METROPLEX)
  - newspaper route
  - radio station broadcast
  - reception of television station
Functional Region
City and surrounding Suburbs
Perceptual (Vernacular)

Perceptual Region: ideas in our minds, based on accumulated knowledge of places and regions, that define an area of “sameness” or “connectedness.”

EX: “The South” (Is Florida part of the South?)

The Mid-Atlantic

The Middle East (has perception changed since 9/11?)

The Sunbelt
World Regions

- World regions may overlap (Southeast Asia and Asia)
- World regions often have transitional boundaries (North Africa and Sub-Saharan Africa)
Diffusion: The Spread of Something

• Culture Hearths: sources of civilization from which an idea, innovation, or ideology originates (e.g. Mesopotamia, Nile Valley), viewed in the context of time as well as space
  – Ideas then spread from their source areas to more distant locations
• Cultural Diffusion: spread of an innovation, or ideology from its source area to another culture
POSTULATED CULTURE HEARTS AND EARLY DIFFUSION ROUTES

- Ancient Hearth
- Sphere of Interaction
- Modern Hearth
- Major direction of flow of ideas
Culture Hearths

- Mesoamerica
- Andean America
- Fertile Crescent
- Nile Valley
- Indus Valley
- Ganges Delta

**Postulated Culture Hearths and Early Diffusion Routes**

- **Hearth**
- **Sphere of Interaction**
- **Major direction of flow of ideas**
Diffusion

• **Diffusion**: the process of dissemination, the spread of an idea or innovation from its hearth to other areas.

  – 2 types

  • **1- Expansion Diffusion**: an idea or innovation that spreads outward from the hearth
    – (3 sub-types)

  • **2. Relocation Diffusion**: People move to a new area and take their language, religion, and other cultural items with them.
    – The items being diffused leave the original areas behind as they move to new areas.
Expansion Diffusion

a. Contagious – spreads to nearly all adjacent individuals (ex. The flu, Spread of Islam from Mecca)

b. Hierarchical idea spreads from persons or nodes of authority or power to other persons or places Clothing Fads, AIDS, Popular Culture) and Reverse Hierarchical idea spreads from less powerful/influential to the more powerful/influential

Example: Wal-Mart is the classic example: a chain that started out in small rural towns and has since spread to larger cities. Example: Diffusion of terms from minority use of the term spreads up the social ladder to majority group(s).
Stimulus Diffusion

c. **Stimulus** – idea promotes a local experiment or change in the way people do things. (McDonalds?)

Example:

Because Hindus believe cows are holy, cows often roam the streets in villages and towns. The McDonalds restaurants in India feature veggie burgers.
Relocation Diffusion

**Defined again:** The physical spread of cultures/ideas. When people migrate, they often bring various aspects of their culture

- Language, religion, customs

Main difference to keep in mind between expansion diffusion and relocation diffusion is:

***Expansion - it is the IDEA, INNOVATION or DISEASES) that does the moving***

***Relocation – involves the actual movement of people who bring the ideas etc...***
Worldwide, there are 1.4 billion followers of Islam

There are between 5 – 7 million Muslims in the United States

Diffusion of Islam
630 – 1600 AD
Starbucks.. They're everywhere
Music, clothing and fads

• New clothing & music fads spread quickly among major world cities such as?

• Only later do they filter down the urban hierarchy
Barriers to Diffusion

What slows/prevents diffusion?

- time-distance decay

-The farther an idea is from the source, the less likely it is to be adopted

- cultural barriers: Religious beliefs, language, politics etc.

Figure 4.3. Distance decay curve showing decreasing interaction as distance increases.
Cultural Environment

Architecture, changing the landscape, etc

**Cultural ecology** – study of the relationship between a culture group and the natural environment it occupies

– Arid regions versus humid regions
Environmental Determinism

• Ellsworth Huntington
• Belief that humans are controlled and/or their behavior is determined by their physical environment
  – Climate being the critical factor
• According to Huntington, religion and racial character are the products of climate
• The underdevelopment of the tropics, he explains, is owing to the humid, hot, oppressive weather which makes the people lethargic, lazy, inefficient, suspicious and timid.
• Becoming less accepted
Possibilism

- Possibilism is the belief that while people may face challenges regarding physical environment, choices are always present as to how one can deal with each problem.
- However, possibilists still retain the notion that humans can’t control all aspects of their environment.
- According to the possibilists, nature is never more than an adviser. There are no necessities but everywhere possibilities.
Cultural Ecology focuses on how cultural beliefs and practices help human populations adapt to their environments and live within the means of their ecosystem. It contributes to social organization and other human institutions. Cultural Ecology also interprets cultural practices in terms of their long-term role in helping humans adapt to their environment.
Cultural Landscape

- **Carl Sauer** coined the term in 1927
- All identifiably human-induced changes in the natural landscape (artificial features)
CULTURAL LANDSCAPE
The visible human imprint on the landscape.
SEQUENT OCCUPANCE

Layers of imprints in a cultural landscape that reflect years of differing human activity.

Athens, Greece - ancient Agora surrounded by modern buildings
SEQUENT OCCUPANCE

Layers of imprints in a cultural landscape that reflect years of differing human activity.

Prague, Czech Republic – Prague architecture includes Gothic, Renaissance, Baroque, Neo-Classical and Art Nouveau.
SEQUENT OCCUPANCE

Mumbai, India & Dar es Salaam, Tanzania
African, Arab, German, British, and Indian layers to the cities.

Apartment in Mumbai

Apartment in Dar es Salaam
** Similarity of Different Places**

- **Scale**: From local to global
  - Globalization of economy
  - Globalization of culture

- **Space**: Distribution of features
  - Distribution

- **Connections between places**
  - Spatial association
  - Diffusion
Cultural Landscape
The visible human imprint on the landscape.
Carl Saur

Religion and cremation practices diffuse with Hindu migrants from India to Kenya.
Friction of Distance

- Degree to which distance interferes with interaction
Space-time compression

- People are closer together
- Reduced *perceived* distance
Distance Decay Model

- Law of Spatial Interaction
- Distance and interaction are inversely proportional
- The shorter the distance the more likely interaction will occur; the greater the distance the less likely interaction occurs
- The “friction of distance” increases with distance
- Relative distance – measured in time and cost of travel; transferability