# **AP Human Geography Concepts & Terms Notes**

# **UNIT I: Geography, Its Nature & Perspectives**

US road map is not a thematic map

Every meridian is the same length and has the same beginning and end

According to environmental determinism, the physical environment causes social development

Highest density: most in numbers

Highest concentration: closest together

Cloropleth map uses shading

# **Five Themes of Geography:**

Location:

Relative location

Absolute location

Place:

**Human Characteristics** 

**Physical Characteristics** 

Human-Environmental Interaction:

Humans adapt to the environment

Humans modify the environment

Humans depend on the environment

Movement

People

Goods

Ideas

Regions

Formal (uniform)

Functional (nodal)

Vernacular (perceptual)

#### **Culture:**

Customary beliefs, social forms, and material traits of a group of people in tradition

#### Hearth:

Where an idea originates

# **Acculturation:**

The spread of cultural traits from one society to another

# **Globalization of Culture:**

Globalization due to interchanging beliefs and customs

# **Globalization of Economy:**

Globalization due to business

### **Reference Maps:**

Regular maps showing cities, boundaries, mountains, or roads

### **Thematic Maps:**

Maps highlighting a particular feature or a single variable such as temperature, city, size, or acreage in potatoes (Gives extra information)

# **Isoline Maps:**

Show lines that connect points of equal value Isolines are on topographic maps

# **Choropleth Maps:**

Show the level of some variable within predefined regions, such as counties, states, or countries

### **Dot Maps:**

Use a dot to represent the occurrence of some phenomenon in order to depict variation in density in a given area

# **Cartograms:**

Maps that have distorted population

#### **Resolution:**

The amount of details or depth of a map

#### Scale:

Generally, the relationship between the portion of Earth being studied and Earth as a whole, specifically the relationship between the size of an object on a map and the size of the actual feature on Earth's surface

The three main types of scales are ratio (fraction) scales, bar scales, and written scales

### **Small Scale:**

Depicts a large area (such as the state of Arizona) but with less detail

## **Large Scale:**

Depicts a small area (such as downtown Phoenix) with great detail

# **Cartography:**

The science of making maps

# **Projection:**

The system used to transfer locations from Earth's surface to a flat map

The most common type is the Robinson Projection

However, maps depicting the entire world can distort shape, distance, relative size, and direction

#### Toponym:

The name given to a portion of Earth's surface

Has to be a natural feature

#### Site:

The physical character of a place

#### **Situation:**

The location of a place relative to other places (relative location)

#### Meridian:

An arc drawn on a map between the North and South poles (longitude)

The two main meridians are the Prime Meridian and the International Date Line

#### Parallel:

A circle drawn around the globe parallel to the equator and at right angles to the meridians (latitude)

# **Time Zones:**

There are four major time zones in the United States (Eastern, Central, Mountain, and Pacific). The time zones are based on Greenwich, England because at the time England was the most powerful country. There is a new time zone ever 15 degrees longitude. One degree longitude is 69 miles, so there is a new time zone every 1,035 miles. If you go east you go forwards in time. If you go west you go back in time.

#### **Greenwich Mean Time:**

The time in that time zone encompassing the prime meridian, or zero degrees longitude.

#### **International Date Line:**

An arc that for the most part follows 180 degrees longitude, although it deviates in several places to avoid dividing land areas. When you cross the International Date Line heading east (toward America), the clock moves back 24 hours, or one entire day. When you go west (toward Asia), the calendar moves ahead one day.

### **Spatial Association:**

The distribution of one phenomenon that is related to another phenomenon. (The reason two things are placed where they are – if they're related they will probably be close)

# **Spatial Distribution:**

The arrangement of phenomenon across the Earth's surface

#### **Environmental Determinism:**

A nineteenth- and early twentieth- century approach to the study of geography that argued that the general laws sought by human geographers could be found in the physical sciences. Geography was therefore the study of how the physical environment caused human activities. (States the physical terrain of the world dictates how the humans survive).

#### Possibilism:

The theory that the physical environment may set limits on human actions, but people have the ability to adjust to the physical environment and choose a course of action from many alternatives. (States people can overcome the physical problems/features – humans conquer land instead of land conquering humans).

#### **Distribution:**

The arrangement of something across Earth's surface

#### **Density:**

The frequency with which something exists within a given unit of area. Density does not tell you where something is, just strictly numbers

#### **Arithmetic Density:**

The total number of people divided by the total land area

# **Physiological Density:**

The total number of people divided by all arable land (farmland)

### **Agricultural Density:**

The total number of farmers (and family) divided by all arable land

#### **Concentration:**

The spread of something over a given area Concentration tells you where something is Can be clustered or dispersed

#### Pattern:

The geometric or regular arrangement of something in a study area

#### **Diffusion:**

The spreading of a feature or trend from one place to another over time

#### **Relocation Diffusion:**

The spread of a feature or trend through physical movement of people from one place to another. Does not have to grow in numbers. AIDS is an example of relocation diffusion.

# **Expansion Diffusion:**

The spread of a feature or trend among people from one area to another in a snowballing process. Involves growing numbers.

**Hierarchical Diffusion** – The spread of a feature or trend from one key person or node of authority or power to other people or places. Example- grunge music.

**Contagious Diffusion** – The rapid, widespread diffusion of a feature or trend throughout a population. Example-influenza (flu).

**Stimulus Diffusion** – The spread of an underlying principle or thought process, even though a specific characteristic is rejected. Examples- Apple computers/Martin Luther King Jr. (he is dead but his thought process still lives on).

# **Cartography:**

The science of map making

### Toponym:

A name given to a place on earth.

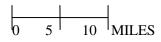
#### Scale:

The relationship to a feature's size on a map to its actual size on earth.

Fractional Scale – numerical ratio 1:24,000

Written Scale – description in words "1 inch equals 1 mile"

Graphic Scale – bar line showing distance



# Site:

The physical characteristic of a place

### **Situation:**

The relative location of a place

#### Meridian:

Lines of longitude running in the north-south direction ending at the poles

#### Parallel:

Lines of latitude parallel to the equator

#### Time Zone:

Greenwich Mean Time – The time at the prime meridian

International Date Line – 180 degrees from Prime Meridian – 24 hours

Telling time from longitude – every 15 degrees. From Prime Meridian going west loose 1 hour/15 degrees – east gain 1 hour/15 degrees

#### **Regions:**

Formal (Uniform) – Everyone shared distinct characteristics

Functional (Nodal) – Area organized around a focal point

Vernacular – A perceptual region – beliefs and cultural identity

# **Spatial Association:**

The distribution of one phenomenon that is scientifically related to the location of another phenomenon

# **Spatial Distribution:**

The arrangement of phenomenon across the earth's surface

#### **Distribution:**

The arrangement of a feature in a space Three types – density, concentration, pattern

# **Density:**

The frequency of which something occurs.

Arithmetic – the total number of objects in an area

Physiological – the number of persons per unit area of suitable agricultural land

Agricultural – number of farmers per area of farmland

# **Concentration:**

The spread of something over a given area Clustered – close together Dispersed – far apart

#### **Pattern:**

The arrangement of objects in space

#### **Culture:**

Customary beliefs, social forms, and material traits of a group of people in tradition

#### **Hearth:**

Where an idea originates

#### **Acculturation:**

The spread of cultural traits from one society to another

#### **Diffusion:**

The spreading of a feature or trend from one place to another.

**Relocation** – spreading through physical movement.

**Expansion** – Spreading in a snowballing process

**Contagious**— rapid widespread diffusion of a characteristic throughout the population — example - influenza **Hierarchical**— The spread from authority or power to other people — example — political leaders or hip hop music **Stimulus**— the spread of an underlying principal though the characteristic itself might diffuse — example — principals from Apple computer though the company diffused.

#### **Globalization of Culture:**

Globalization due to interchanging beliefs and customs

### **Globalization of Economy:**

Globalization due to business

# **Environmental Determinism:**

Physical environment dictates the social environment

#### Possibilism:

Humans have the ability to adjust to the environment

# **UNIT II: Population**

# **Demography:**

The study of human populations

# **Over Population:**

The definition of over population is having too many people and to little resources

### **Carrying Capacity:**

The largest number of people that the environment of a particular area can support

# **Doubling Time:**

The time it takes for a population to double

# Four most over populated regions/Sparsely populated regions in the world (Over populated):

East Asia

South Asia

Southeast Asia

Western Europe

#### East Asia:

One fifth of the world's people live in east Asia.

The region borders the pacific ocean.

East Asia includes: eastern China, Japan, the Korean Peninsula, and Taiwan.

#### **South Asia:**

Another one fifth of the world's population lives in south Asia.

South Asia includes: India, Pakistan, Bangladesh, and Sri Lanka.

# **Southeast Asia:**

The world's third largest population cluster is in southeast Asia.

A half billion people live in southeast Asia.

The islands are: Indonesia (Java, Sumatra, Borneo), Papua New Guinea, and the Philippines.

# **Western Europe:**

World's fourth largest population cluster.

Contains one ninth of the world's population.

Most of Europe's people live in cities.

This region ranges from Monaco to Russia.

### **Sparsely Populated Regions:**

# **Dry Lands-**

When an area is dry for farming not many people want to live there.

These areas cover about 20% of the earth's land surface.

The largest desert region is the Sahara.

Deserts lack sufficient water to grow crops to feed many people.

#### Wet Lands-

Wet lands are lands that receive high levels of precipitation.

These areas are unfavorable for human life.

A combination of rain and heat depletes nutrients from the soil which prevents growing crops.

#### Cold lands-

Cold lands are areas that are covered with ice or have permanently frozen ground.

These regions have less precipitation than some deserts.

These polar regions are unsuitable for crops and animals.

# High lands-

Few people live at high elevations.

The highest mountains in the world are steep, snowy, and sparsely settled.

Some people prefer to live at higher elevations if the temperature and precipitation are uncomfortable at lower elevations.

# **Population Increase:**

**Doubling time-** The number of years needed to double a population.

**Total fertility rate-** The average number of children a woman will have during her childbearing years.

Infant mortality rate- The annual number of deaths of infants under one year old.

**Life expectancy** measures the number of years a newborn will be expected to live.

The current estimated world human population is 6,379,157,361. This figure is extremely precise, however, since there is no complete database on the world's population, and humans are constantly being born (at the rate of about 3 per second) and dying. However, it is clear that the world's population continues to grow, in other words, more people are being born than people dying.

## **Causes of Population Increase:**

**Crude birth rate (CBR)-** The total number of live births in a year for every 1,000 people alive in the society. Ex: a (CBR) of 20 means that for every 1,000 people in a country, 20 babies are born over a one year period.

**Crude death rate (CDR)-** total number of deaths in a year for every 1,000 people alive in the society. The annual number of deaths per 1,000 population.

**Natural increase rate (NIR)-** the percentage by which a population grows in a year. To compute you subtract CBR from CDR.

# **Natural Increase:**

Natural- means a country's growth rate excludes migration.

About 80 million people are added to the world's population each year.

The historic high was in 1989 with 87 million.

The number of people added each year has dropped slower than the NIR because the population base is much higher now than in the past.

#### Fertility:

TFR total fertility rate- the average number of children a woman will have throughout her childbearing years (15-49).

#### **Mortality:**

Two useful measures of mortality in addition to the crude death rate already discussed are the infant mortality rate and life expectancy.

**Infant mortality rate (IMR)**-the annual number of deaths of infants under one year of age, compared with total live births.

**Life expectancy-** the average number of years a newborn infant can expect to live at current mortality levels.

# **Population Pyramid:**

A bar graph representing the distribution of population by age and sex

Population pyramids can be used to demonstrate the demographics of a certain area, and can be used as an indication of the development of a certain area

# The Demographic Transition:

The Basics-

There are four stages to the demographic transition:

Stage 1-: Low Growth

Stage 2: High Growth

Stage 3: Moderate Growth

Stage 4: Low Growth

All countries are in one stage or another of the demographic transition.

Once a country has entered a stage, it cannot go back down to a previous stage.

# Stage 1:

No countries are still in stage 1.

Most of humanity's several-hundred-thousand-year occupancy of Earth was characterized by stage 1 of the demographic transition.

Crude birth and death rates vary yearly but over time they were comparable.

National increase rate was essentially zero, and world population was constant at about half a million. During this period primary food relied on hunting and gathering.

As food became easier to obtain, population increased, but when food became more difficult to obtain, the population decreased.

About 8000 BC the population became to grow by several thousand per year.

Between 8000 BC and 1750 AD the population from 5 million to about 800 million. This was caused by the agricultural revolution.

This was the first time humans domesticated plants and animals.

# Stage 2:

From about 10,000 years after the agricultural revolution, world population grew at a modest pace.

Around 1750 AD the population began to grow ten times as fast.

The natural increase rate rose from 0.05 to 0.5

Some demographers divide stage 2 of the demographic transition into 2 parts.

The first part is the accelerating population growth.

During the second part the population begins to slow, although birth and death rates remain very separated.

The sudden population boom was caused by the industrial revolution which began in England in the late 18th century.

The industrial revolution brought about rapid improvements in industrial technology. This brought about a lot of wealth which was used to make communities healthier.

New machines helped farmers increase agricultural production. The improved agricultural efficiency allowed more people to work in factories. This caused industrialization in communities.

European and North American countries entered stage 2 around 1750 or 1800. Countries elsewhere didn't enter stage 2 till much later. Many African countries didn't enter stage 2 until the late 1950's due to the medical revolution.

The natural; increase rate for stage 2 countries was about 1.7 at the time.

The population increased by about 80 million in 2000 compared to 8 million in 1900.

Several medical advances were made during this time as well.

### Stage 3:

A country enters stage 3 when the crude birth rate begins to drop sharply. The death rate continues to fall but not as much as in stage 2.

Natural increase is more moderate than stage 2 as well.

European and North American nations entered stage 3 in the early twentieth century. Latin American and Asian countries have entered rather recently, while most African countries still have not entered stage 3.

The decrease in death rates in stage 2 is caused by technological advances, while the decrease in births during stage 3 is a result of changes in social customs.

People in stage 3 countries are more likely to live in cities than in rural areas.

### Stage 4:

A country achieves stage 4 when birth and death rates are nearly equal and natural increase is almost zero.

This is known as ZPG or Zero Population Growth. This term is usually applied to stage 4 countries.

Social changes again dictate the change between stages 3 and 4. Here the primary factor is women who enter the labor force.

Life style changes also tend to lead to smaller families in stage 4, and people with more birth control options tend to use them more in stage 4 countries.

Due to discrepancies, ZPG is not always accurate. Scientists use the more accurate term TFR or Total Fertility Rate. Typically a TPR of 2.1 is equal to the ZPG.

There are 4 stages in the Demographic Transition.

Low growth, high growth, moderate growth, and low growth.

When a country enters stage 4, it has in a sense completed a cycle. It began with low natural increase in stage 1, in stage 2 there is a huge increase in technology and population. During stage 3 it begins to slow down, though advances continue. In stage 4 the growth is minimal. The only difference is that at the end of stage 4 the country has a vast amount of technology and the population is much higher.

### Stage 5:

Currently no Stage 5

Experts suggesting that there will be in the near future

Characterized by a negative population growth

This will first occur in Western Europe and make its way through most MDCs.

# **Malthus Theory:**

States that the world will get wiped out by over population, starvation, and disease (mainly the ratio of people to food).

Thomas Malthus stated this in 1798 in his book- An Essay on the Principle of Population.

Today: 1 person, 1 unit of food

25 years from now: 2 people, 2 units of food 50 years from now: 4 persons, 3 units of food 75 years from now: 8 people, 4 units of food 100 years from now: 16 people, 5 units of food

Back in the 17 & 1800s, they didn't have the same farming technology and methods we have today.

There wasn't as much medicine to cure diseases.

Lester Brown a Stanford University biologist, said Malthus made critical points but missed a couple important points, gains in land productivity, and the preference for eating "higher up the food chain".

### Example-

In Sub-Saharan Africa, drought, poverty, and disease (mainly AIDS) are reducing life expectancy.

The population is bigger than the amount of arable land-which causes more than half of the children to be under-nourished or mal-nourished.

#### **Neo-Malthusians:**

Study Malthus' theory

They point out that the amount of farmland is decreasing while the population is increasing.

Global Warming could interfere with food production.

Both extensification and intensification of agriculture will lead to land degradation.

#### **Malthus's Critics:**

Many geographers believe Malthus' theory is very pessimistic because they based on a belief that the world's supply is fixed not expanding.

Malthus did not foresee the advancement in technology that would help mankind survive.

**Census-** A complete enumeration of a population.

**Crude Birth Rate-** The total number of live births in a year for every 1,000 people alive in the society.

**Crude Death Rate-** The total number of deaths in a year fro every 1,000 people alive in the society.

**Demographic Transition-** The process of change in a society's population from a condition of high crude birth and death rates and low rate of natural increase to a condition of low crude birth and death rates, low rate of natural increase, and a higher total population.

**Demography-** The scientific study of population characteristics.

**Dependency Ratio-** The number of people under the age of 15 and over age 64, compared to the number of people active in the labor force.

**Doubling Time-** The number of years needed to double a population, assuming a constant rate of natural increase.

**Epidemiologic Transition-** Distinctive causes of death in each stage of the demographic transition.

**Epidemiology-** Branch of medical science concerned with the incidence, distribution, and control of diseases that affect large numbers of people.

**Ecumene-** The portion of Earth's surface occupied by permanent human settlement.

**Industrial Revolution-** A series of improvements in industrial technology that transformed the process of manufacturing goods.

**Infant Mortality Rate-** The total number of deaths in a year among infants under one year old for every 1,000 live births in a society.

**Life Expectancy-** The average number of years an individual can be expected to live, given current social, economic, and medical conditions. Life expectancy at birth is the average number of years a newborn infant can expect to live.

**Medical Revolution-** Medical technology invented in Europe and North America that is diffused to the poorer countries of Latin America, Asia, and Africa. Improved medical practices have eliminated many of the traditional causes of death in poorer countries and enabled more people to live longer and healthier lives.

**Natural Increase Rate-** The percentage growth of a population in a year, computed as the crude birth rate minus the crude death rate.

**Overpopulation-** The number of people in an area exceeds the capacity of the environment to support life at a decent standard of living.

**Pandemic-** Disease that occurs over a wide geographic area and affects a very high proportion of the population.

**Population Pyramid-** A bar graph representing the distribution of population by age and sex.

**Sex Ratio-** The number of males per 100 females in the population.

Total Fertility Rate- The average number of children a woman will have throughout her childbearing years.

Zero Population Growth- A decline of the total fertility rate to the point where the natural increase rate equals zero.

# **Migration:**

Form of relocation diffusion involving permanent move to a new location

# **Mobility:**

All types of movement from one location to another

# **Circulation:**

Constant, short term, repetitive movements by an individual

# **Emigration:**

Migration away from country

### **Immigration:**

Migration into a country

### **Net Migration:**

The difference between the number of immigrants and the number of emigrants Net In-Migration & Net Out-Migration

#### **Counterurbanization:**

Net migration from urban to rural areas in MDCs

# **Reasons For Migration:**

Usually people migrate for economic reasons

Although not as frequently, cultural and environmental reasons also induce migration

Push factor: when people are forced out of an area

Ex: Hurricane Katrina destroyed many peoples' houses, so they were forced to move somewhere else.

Pull factor: when people desire to move into a new location

Ex: Better job opening in a new area, a good place to retire. Usually promises a better situation than the present one.

# **Economic Push and Pull Factors:**

Pull- People emigrate to places with better job opportunities. They will also emigrate because of better natural resources. Metal and coal deposits might attract miners. A brand new industry or store could attract technicians, scientists, engineers, or other workers.

Push- When a industry goes bankrupt, workers will lose their jobs and might be forced to move to a different area because of a job opportunity.

#### **Environmental Push and Pull Factors:**

Pull-people are attracted to areas with warm climates, mountainsides, and seasides.

Push- certain physical conditions cause people to move to different areas like too much or too little water in an area can force people to move. Also an area that is storm prone can force people to migrate.

#### **Cultural Push and Pull Factors:**

The 2 main push factors are slavery and political instability. Millions of people were captured and shipped to many different countries as prisoners or slaves.

People called refugees are forced to migrate form their countries because of fear of persecution because of their race, nationality, religion, or political opinion.

Pull- people migrate for especially the lure of freedom. People are attracted to democratic countries that encourage individual choice in education, career, and a place of residence.

#### **Brain Drain:**

Large-scale emigration by talented people

# **International & Internal Migration:**

International Migration- The permanent movement from one country to another.

Internal Migration- Permanent movement within a particular country.

### Examples -

International Migration- Moving to Russia from the United States, or from Africa to Australia.

Internal Migration- Moving to Arkansas from Michigan, or from Georgia to California.

Internal Migration- People living in India must migrate to a different part of India to escape the flooding that occurs near them.

International Migration- Some Jewish people were able to escape the Nazis by migrating to the different countries away from them.

### **Internal Migration:**

Permanent movement within a country.

Divided into two types-

**Interregional migration**- movement from one region of a country to another.

Rust Belt and Sun Belt

Intraregional migration- movement within on region

#### **International Migration:**

Divided into two types-

Voluntary migration- implies that migrant has chosen to move for economic improvements.

**Forced migration**- the migrant has been compelled to move by cultural factors.

Economic push and pull factors usually induce voluntary migration. Whereas cultural factors usually compel forced migration

# **Net Migration:**

The difference between the level of immigration and the level of emigration.

In-Migration: synonym of immigration, moving into a country

Out-migration: leaving a country

Countries with net out-migrations include Asia, Africa, and Latin America.

Countries with net in-migrations include North America, Europe, and Oceania.

### **Guest Workers:**

Workers who migrate to the MDCs of Northern and Western Europe, usually from Southern and Eastern Europe or from North Africa, in search of higher-paying jobs

### **Temporary Migration for Work:**

- 1. Guest Workers Citizens of poor communities who obtain jobs in Western Europe and the Middle East.
- 2. Time Contract Workers -Recruited for a fixed period of time to work in mines or on plantations.

#### **European Guest Workers**

- In Europe, these workers are protected by Minimum Wage laws and union contracts
- About 700,000 of these workers enter Europe legally
- 500,000 workers enter illegally
- The United Kingdom restricts the ability for foreigners to get work permits.
- If you are allowed to work in another country there is usually a time limit for how long you can stay for your desired assignment.

# Distinguishing Between Economic Migrants and Refugees

- Very difficult to distinguish between those seeking economic opportunities and refugees fleeing from persecution etc.
- In Western Europe, Canada, and the US economic migrants are not usually admitted however refugees receive priority in admission.

# **Intervening Obstacles**

- Immigrants may not always get to there destination because of an environmental or cultural obstacle.
- Also, transportation is a problem with immigration. It is difficult to meet all the requirements to be able to travel in any way to a new country.
- Oceans and lakes are an obstacle in migration because people are unable to cross the bodies of water.
- Motor vehicles and airplanes are the easiest way to go from one place to another, but it is also the hardest requirements to meet when traveling.

### Countries Attitudes Towards New Immigrants

- Making it to the desired country isn't always the end of the complications, once the immigrants reach the country, the citizens may dislike the new people because of cultural differences.
- The guest workers are not always excepted and can be treated unfairly.

# Vietnam:

The long Vietnam War ended in 1975 when Communist-controlled North Vietnam captured South Vietnam's capital city of Saigon. The US evacuated from Saigon several thousand people who had been closely identified with the American position during the war and who were therefore vulnerable to persecution after the Communist victory. A second surge of Vietnamese boat people began in the late 1980s. Their most popular destinations were Malaysia, Hong Kong, and Thailand. 800,000 Vietnamese have reached the US since the end of the Vietnam War, another 1 million in other countries.

# **UNIT III: Cultural Patterns and Processes**

#### **Popular Culture:**

Culture found in a large, heterogeneous society that shares certain habits despite differences in other personal characteristics

# **Folk Culture:**

Culture traditionally practiced by a small, homogeneous, rural group living in relative isolation from other groups

#### **Origin of Folk Cultures:**

Folk customs often have anonymous hearths, originating from anonymous sources, at unknown dates, through unidentified originators

#### **Origin of Pop Cultures:**

Popular culture is most often a product of the economically more developed countries, especially in North America, Western Europe, and Japan

# **Transition from Folk to Pop Culture:**

Most of the world turns from folk to pop culture.

Folk culture diffuses slowly to other locations through the process of migration. Popular culture diffuses rapidly across Earth to locations with a variety of physical conditions.

#### Taboo:

A restriction on behavior imposed by social custom

# **Diffusion Associated With Pop Culture:**

Rapid diffusion depends on a group of people having a sufficiently high level of economic development to acquire the material possessions associated with popular culture

# **Language Family:**

A collection of languages related to each other through a common ancestor long before recorded history

# **Language Branch:**

A collection of languages related through a common ancestor that existed several thousand years ago. Differences are not as extensive or as old as with language families, and archaeological evidence can confirm that the branches derived from the same family.

# Language Group:

A collection of languages within a branch that share a common origin in the relatively recent past and display relatively few differences in grammar and vocabulary

#### Dialect:

A regional variety of a language distinguished by vocabulary, spelling, and pronunciation

#### **Old English Speakers:**

West Germanic invaders from Jutland (Denmark) known as the Anglos, Saxons, and Jutes began populating the British Isles in the  $5^{th}$  and  $6^{th}$  centuries AD

Pushed the native Celtic speaking people into Scotland, Whales, and Ireland

# **Creolized Language:**

A language that results from the mixing of a colonizer's language with the indigenous language of the people being dominated

French Creole in Haiti

Papiamento (Creolized Spanish) in Netherlands Antilles (West Indies)

Portuguese Creole in the Cape Verde Islands off the African Coast

# **Indo-European Language Family:**

The world's most extensively spoken language family by a wide margin

Nearly 3 billion people speak an Indo-European language as their first language

Eight Branches:

Indo-Iranian

Romance

Germanic

Balto-Slavic

Albanian

Armenian

Greek

Celtic

# 10 most Spoken Languages in the World:

Position	Language	Family	Script Used	Speakers	Where Spoken
				(Millions)	(Major)
1	Mandarin	Sino-Tibetan	Chinese	885	China,
			Characters		Malaysia,
					Taiwan
2	English	Indo-European	Latin	332	USA, UK,
					Australia,
					Canada, New
					Zealand
3	Spanish	Indo-European	Latin	322	South America,
					Central
					America, Spain
4	Arabic	Afro-Asiatic	Arabic	235	ME, Arabia,
					North Africa
5	Bengali	Indo-European	Bengali	189	Bangladesh,
					Eastern India
6	Hindi	Indo-European	Devanagari	182	North and
					Central India
7	Portuguese	Indo-European	Latin	170	Brazil,
					Portugal,
					Southern
					Africa
8	Russian	Indo-European	Cyrillic	170	Russia, Central
					Asia
9	Japanese	Altaic	Chinese	125	Japan
			Characters and		
			2 Japanese		
			Alphabets		
10	German	Indo-European	Latin	98	Germany,
					Austria,
					Central Europe

### **Ideograms:**

The system of writing used in China and other East Asian countries in which each symbol represents an idea or a concept rather than a specific sound, as is the case with letters in English

# Religion, Culture, and Physical Environment

People care deeply about their religion and draw from religion their core values and beliefs, an essential element of the definition of culture. Religious values are important in understanding not only how people identify themselves, as was the case with language, but also the meaningful ways that they organize the landscape. Like language, migrants take their religion with them to new locations, but although migrants typically learn the language of the new location, they retain their religion.

# **Religion Hierarchy:**

A hierarchical religion has a well-defined geographic structure and organizes territory into local administrative units (has "rankings" amongst the religion). A good example is Roman Catholicism (Pope, Cardinals, Bishops).

# **Universalizing Religion:**

A religion that attempts to appeal to all people, not just those living in a particular location 3 Biggs – Christianity, Islam, Buddhism

# **Christianity:**

Origin - Israel

2 billion adherents

Known as Christians

Mainly in Western Hemisphere and Europe

Foundation based on the Ten Commandments

Major branches- Catholics (50%). Protestants (25%), Eastern Orthodox (10%)

#### **Islam:**

Origin – Saudi Arabia

1.3 billion adherents

Known as Muslims

Foundation based on the Five Pillars

Major branches- Sunnis (83%), Shiites (16%), Kurds (1%)

#### **Buddhism:**

Origin – NE India/Nepal

370 million adherents

Known as Buddhists

Mainly in China and SE Asia

Foundation based on the Four Noble Truths

Major branches- Mahayanists (56%), Theravadistis (38%), Tantrayanists (8%)

Different from Christianity and Islam- you may also participate in another existing religion

# **Ethnic Religion:**

A religion with a relatively concentrated spatial distribution whose principles are likely to be based on the physical characteristics of the particular location in which its adherents are concentrated

2 Biggs – Hinduism and Judaism

# Hinduism:

Origin – India/Pakistan

800 million adherents (3<sup>rd</sup> largest overall)

97% live in India (80% of India's pop.)

Believe in several gods – Brahma being the main one

Follow the Caste System

Believe in Karma and Reincarnation

### Judaism:

Origin – Israel

14 million adherents

Mainly clustered in Israel and the US

Also prevent in former USSR (Russia, Ukraine, Belarus, Lithuania)

Have similar roots as Christianity and Islam

#### **Ireland:**

The most troublesome religious boundary in Western Europe lies on Ireland. Most of Ireland is Roman Catholic, but Northern Ireland is 58% Protestant and 42% Roman Catholic.

# **Israel/Palestine:**

After the 1973 war, the Palestinians emerged as Israel's principle opponent. Israelis have no intention of giving up control of the Old City of Jerusalem, and Palestinians have no intention of giving up their claim to it.

#### **Religious Architectures:**

Christians – Churches

Muslims – Mosques

Hindus – Temples

Buddhism – Pagodas

Jews - Synagogues

# **Religion Versus Communism:**

Organized religion was challenged in the 20<sup>th</sup> century by the rise of communism in Eastern Europe and Asia. The three religions most affected were Eastern Orthodox Christianity, Islam, and Buddhism.

#### **US Distribution of Ethnicities:**

African American – (13%) Southeast Hispanic American – (13%) Southwest Asian American – (4%) West

American Indian (Native American) – (1%) Southwest and Plains States

### **Clustering of Ethnicities:**

Within a country, clustering of ethnicities can occur on two scales. Ethnic groups may live in particular regions of the country, and they may live in particular neighborhoods within cities.

### **Sharecropper:**

A person who works fields rented from a landowner and pays the rent and repays loans by turning over to the landowner a share of the crops

#### **Ghettos:**

When the African American immigrants reached the big cities, they clustered in the one or two neighborhoods where the small numbers who had arrived in the 19<sup>th</sup> century were already living. These areas became known as ghettos. The ghettos today have been through expansion.

# **Ethnicity and Race:**

Race is biological. An example would be skin color, but its not just skin color. Ethnicity is the cultural aspect/category. An example would be a hearth.

# **Separate But Equal Doctrine:**

The Separate But Equal Doctrine occurred in 1896. It allowed segregation of Blacks, Jews, and Roman Catholics.

# "White Flight":

"White Flight" comes from the Brown vs. Brown of Education doctrine in 1954, which eliminated segregation. 'White Flight" is when whites left their homes to where they knew would be a dominate white area because they were scared of the blacks.

#### **South Africa Apartheid:**

Apartheid is the physical separation of different races into different areas. The white-dominated government of South Africa repealed the apartheid laws in 1991. In 1994, Nelson Mandela became president of South Africa.

South Africa the country-

Black- 76%

White- 13%

Asian- 3%

Mixed-13%

Each with different legal status

# **Nationality/Nationalism:**

Nationality is identity with a group of people that share legal attachment and personal allegiance to a particular place as a result of being born there.

Nationalism is loyalty and devotion to a particular nationality.

#### **Nation-State:**

A state whose territory corresponds to that occupied by a particular ethnicity that has been transformed into a nationality Have by far one dominate ethnicity/nationality -1 country, 1 ethnicity

# **Self Determinism (Separatism):**

The concept that ethnicities have the right to govern themselves Quebec (Province in Canada) – early 1980s strong French Australia Israel/Palestine Native Americans

# **Multi-Ethnic States/Multi-National States:**

Multi-Ethnic state – state that contains more than one ethnicity

Don't necessarily try to appeal to every ethnicity – sometimes happy, sometimes not

Belgium = (Dutch = Flemish = North + French = Walloons = South)

Multi-National state – state that contains two or more ethnic groups with traditions of self-determination that agree to coexist peacefully by recognizing each other as distinct nationalities

Try to appeal to every nationality/ethnicity (by giving them jobs) – get along just fine

United Kingdom = England + Scotland + Whales + N. Ireland

# **Block Busting:**

Real estate agents telling people that blacks or Indians were going to move next door to them so they could buy the peoples' house for very cheap and sell it for double.

#### **Balkanization:**

States/countries breaking down through ethnic conflict – constant conflict

### **Balkanized:**

A geographic area that can't be stable/happy because there are too many ethnicities and too much ugly history between them.

Servia

Boznia

Balkan Peninsula

# **UNIT IV: Political Organization of Space**

#### Colonies, Early European States, and Ancient and Medieval States:

A colony is a territory that is legally tied to a sovereign state rather than being completely independent.

The modern movement to divide the world into states originated in Europe.

Political unity in the ancient world reached its height with the establishment of the Roman Empire, which controlled most of Europe, North Africa, and Southwest Asia. The European portion of the Roman Empire was fragmented into a large number of estates owned by competing kings, dukes, barons, and other nobles.

The development of states can be traced to the ancient Middle East, in an area known as the Fertile crescent. The first states to evolve in Mesopotamia were known as city-states – sovereign states that comprise a town and the surrounding countryside.

#### **Modern Colonies:**

Today only a handful of colonies remain. Nearly all are islands in the Pacific Ocean or Caribbean Sea

# **State Shapes:**

Compact State- a state in which the distance form the center to any boundary does not vary significantly Fragmented State- a state that includes several discontinuous pieces of territory

Elongated State- a state with a long, narrow shape

Prorupted State- an otherwise compact state with a large projecting extension

Perforated State- a state that completely surrounds another one

#### **Boundaries:**

Can see on a map:

Physical- natural boundaries (oceans, rivers, mountains)

Geometric- main official lines

# Can't see on a map:

Culture

Religious

Language

### **Federal State:**

An internal organization of a state that allocates most powers to units of local government (have a say so)

Centripetal forces

Example- US

# **Unitary State:**

An internal organization of a state that places most power in the hands of central government officials (not necessarily bad, but no say so- only government)

Centrifugal forces

Example- UK

# **United Nations:**

A cooperation under the political category

Deals with military, economic, agricultural, etc.

# **European Union:**

A cooperation under the economic category

Promotes development through economic cooperation (free trade, Euro, subsidizing)

#### **Sovereignty:**

Ability of a state to govern its territory free from control of its internal affairs by other states

# **Development:**

# **Gross Domestic Product (GDP):**

The value of the total output of goods and services produced in a country in a given time period (normally one year)

### **Gross National Product (GNP):**

Similar to GDP, except that it includes income that people earn abroad, such as a Canadian working in the United States

#### **Human Development Index (HDI):**

Indicator of level of development for each country, constructed by United Nations, combining income, literacy, education, and life expectancy

# **Job Types (Sectors):**

Primary- extracting from Earth (agriculture, mining, fishing, forestry)

Secondary- manufacturing raw materials- taking something from the land and making it a product

Tertiary- Services, Banking, Retailing, Education

### **Rostow's Stages of Development Model:**

Rostow, in the 1950's, made a 5 stage model of the international trade development approach.

- 1. The traditional society: the country has not yet started process of development
- 2. The preconditions for takeoff: the country initiates innovative economic activities
- 3. The takeoff: there is rapid growth in economic activities
- 4. The drive to maturity: modern technology diffuses
- 5. The age of mass consumption: the economy shifts to consumer goods

The model assumes that LDCs will achieve development by moving to a higher stage in the model.

# The Four Dragons:

Some of the first countries to adopt the international trade alternatives were South Korea, Singapore, Taiwan, and the then-British colony of Hong Kong (known as the four dragons). They promoted development by concentrating on producing manufactured goods, especially clothing and electronics.

### **Self Sufficiency:**

The more popular development alternative for LDCs for most of the 20<sup>th</sup> century Incomes in the countryside keep up with those in the city Reducing poverty is more important than creating wealthy consumers Fragile businesses can be independent and protected from businesses and governments in MDCs Set barriers limiting goods being imported

#### **International Trade:**

A country can develop economically by concentrating scarce resources on expansion of its distinctive local industries

# **Transnational Corporation:**

A company that conducts research, operates factories, and sells products in many countries, not just where its headquarters or shareholders are located

#### **Centripetal Force:**

An attitude that tends to unify people and enhance support for a state

# **Centrifugal Force:**

An attitude that tends to break or make people fall apart- fight

# **UNIT V: Agricultural and Rural Land Use**

Agriculture=farming+livestock

Before 12,000 BC- hunting and gathering- no agriculture

# **Agricultural Hearths:**

<u>Fertile Crescent-</u> historical region watered by the Nile, Jordan, Euphrates, and Tigris Rivers. It is here that agricultural is thought to be first developed. Wild wheat and barley grew in abundance and tribes of nomad hunters and herders settled down along the banks of the rivers and became the world's first farmers. As population increased irrigation was developed. Around 5,000 B.C. the first cities were constructed in the southern part of the crescent valley, near the Persian Gulf, by people who became known as the Sumerians.

<u>Ethiopia (horn of Africa)</u>- Before embracing full scale farming Ethiopians were mainly hunters and gatherers. They began to cultivate crops which eventually led to farming. When farming became more dependable and common irrigation was exploited.

<u>Nile Valley</u>- the Nile Valley civilization developed along the banks of the Nile River in Egypt. Its long narrow floodplain provided ideal conditions for settlement and development of stable communities. The annual flooding of the river (which was viewed as a gift from the gods) deposited nutrient rich silt over the land. The silt made the soil excellent for growing wheat flax and other crops. It is believed that many nomadic hunters settled the land. Around 5500BC hunting was mostly replaced by domesticating animals such as cattle, sheep, pigs, and goats, as well as growing cereal grains.

<u>China</u>- By 5000 BC there were many agricultural communities spread throughout what is now China. There were many villages along rivers such as the Great Yellow River (Huang He). They hunted deer and other game, fished, and gathered food. They also raised domestic dogs, pigs, and chickens. With the flooding of rivers irrigation was an important thing to master. The Chinese also farmed rice.

<u>Southeast Asia</u>- Prior to agriculture, hunting and gathering sufficed to proved food in Southeast Asia. It was here that the chicken and pig were domesticated and rice was farmed. Agricultural technology was exploited when population increased to the point that systematic intensive farming was necessary for survival. River plains and delta regions helped the process of agriculture and trade.

Mesoamerica- From 8000 – 2000 the hunter gatherers in the region began to cultivate wild plants. This probably began so they would have food to rely on if hunting became bad or in the event of a drought. As time went on the cultivated plant foods became increasingly important to the people of Mesoamerica. The plants they grew were more reliable. Mesoamerica eventually went into a subsistence pattern based on the cultivation of plants. Probably the most important Mesoamerican agriculture is maize.

# **Subsistence Agriculture:**

Self-sufficient, small in scale, low technology,
Food production for local consumption- not for trade or sale
Some are confined to small fields- very likely they do not own the soil they till
Small fields-share cropper, low end money pull for agriculture
Can promote cohesiveness within society, share land, food surpluses, personal wealth is restricted
Cultivators are poor but free

Subsistence farming is growing enough food for one person and their family. Not to make a profit or sell. Lots of subsistence farms grow things like tomatoes, corn, potatoes, cucumbers, and spinach. Some subsistence farms also have livestock.

# **Plantation Farming:**

Regional, bigger scale, but not yet commercial

Plantation farming is on a bigger scale than subsistence, but not yet commercial. These farms are for profit. Many plantations farm rubber, pine, spruce, and eucalyptus trees, oil palm, cotton, tea, and tobacco. Some are orchards, in which they would grow fruit, (that grow on trees).

# **Shifting Cultivation:**

A form of subsistence agriculture in which people shift activity from one field to another; each field is used for crops for a relatively few years and left fallow for a relatively long period

Cultivation where tropical forests are removed by cutting and burning, ash contributes to soil fertility Clearings are usually abandoned after a few years for newly cleared land (150-200 million people)

#### **Intensive Subsistence Agriculture:**

A form of subsistence agriculture in which farmers must expend a relatively large amount of effort to produce the maximum feasible yield from a parcel of land

#### Pastoral Nomadism:

A form of subsistence agriculture based on herding domesticated animals They live in dry climates

### **Ranching:**

A form of commercial agriculture in which livestock graze over an extensive area Semi-arid or arid land MDC's

#### **Transhumance:**

The seasonal migration of livestock between mountains and lowland pastures

# **Commercial Farming:**

Aka agribusiness- a system of economic and political relationships that organize food production from the development of the genetic makeup of the seeds to the retailing and consumption of the agricultural product- not just farming also development, harvesting, canning, and selling of crops- is an example of a company that incorporates primary, secondary, and tertiary job sectors

Mass profit, almost all diary products are from commercial farming

Ex. Mayfield

These farms are made for mass profit. They use genetically modified plants, and sometimes animals. They grow the worlds largest crops like wheat, rice, corn, and pretty much everything you find in Kroger. They also raise animals like cows, pigs, and chickens. Almost all dairy products come from a commercial farm.

#### The Von Thunen Model:

Agricultural land use 1826

The black dot represents a city

1 (white)- dairy and market gardening

2 (green)- forest for fuel

3 (yellow)- grains and field crops

4 (red)- ranching

Dark green=wilderness where agriculture is not profitable



### **Crop Rotation:**

The practice of rotating use of different fields from crop to crop each year, to avoid exhausting the soil

# **Slash-and-burn Agriculture:**

Another name for shifting cultivation, so named because fields are cleared by slashing the vegetation and burning the debris

### **Desertification:**

Degradation of land, especially in semiarid areas, primarily because of human actions like excessive crop planting, animal grazing, and tree cutting

# 1<sup>st</sup> Agricultural Revolution:

12,000 yrs ago, Neolithic era

Fertile Crescent, China, North Africa, Southeast Asia, and Latin America

Accompanied by a modest population explosion

Domestication- animals (about 40 species today) occurred after people became more sedentary

# 2<sup>nd</sup> Agricultural Revolution:

1871-1914

Resulted from the Industrial Revolution- produced new technology that helped with the agricultural progress a lot Ex. tractor, cotton gin

# 3<sup>rd</sup> Agricultural Revolution:

Aka Green Revolution- benefiting LDC's by introduction and production of fertilizers and pesticides into LDC's 1960 to present

Based on higher yielding strains using genetic engineering

# **Double Cropping:**

Harvesting twice a year from the same field

# **UNIT VI: Industrial & Economic Development**

#### The Industrial Revolution:

Started in the north of the UK around 1750

A series of improvements in industrial technology that transformed the process of manufacturing goods Transformed how goods are produced for society and the way people obtain food, clothing, and shelter

# **World's Largest Industrial Production Regions:**

Approximately ¾ of the world's industrial production is concentrated in four regions: eastern North America, northwestern Europe, Eastern Europe, and East Asia.

#### **Industries in US:**

New England, Middle Atlantic, Mohawk Valley, Pittsburgh-Lake Erie, Western Great Lakes

# **Bulk-Reducing Industry:**

An industry in which the final product weighs less or comprises a lower volume than the inputs Example- Copper concentration (pennies)

# **Bulk-Gaining Industry:**

An industry in which the final product weighs more or comprises a greater volume than the inputs Example- Soft-drink bottling

# **Break-of-Bulk Point:**

A location where transfer is possible from one mode of transportation to another

# **UNIT VII: Cities and Urban Land Use**

# Filtering – Urban Decay – Inner-City Decay:

The slow digression of a city, usually occupied by low-income people

The peripheral model helped to promote this because of the middle-class people moving to the outskirts

# **Redlining:**

Banks purposely not giving loans to a certain low-income area of a city Illegal, but still happens because it's hard to prove

#### **Urban Renewal:**

Done by the government

To attract businesses

To clean up the city and help their reputations

# **Public Housing:**

Housing owned by the government; in the United States, it is rented to low-income residents, and the rents are set at 30 percent of the families' incomes

#### **Gentrification:**

Done privately

The process of high income people going to low income places and kicking the people out

Usually areas where houses are worn down, looks very trashy

The high income people build houses in edgy areas because they want to cut down on their commute

### **Annexation:**

Official adding of land

Can be on national scale or state scale

# **Peripheral Model:**

Latest version- most up to date

Developed in the 1990s (other three developed in early 1900s – outdated)

Has to contain a beltway/ring way/ring road

A ring road is a road that surrounds the core of the city

The purpose is to take this road without going through the city

The core of the city – major part – is in the ring road

Must contain an edge city

Promotes greenbelts

# Sprawl:

The adding of land- not necessarily official

Adding/spreading to the metropolitan area (the city and surrounding areas)

Taking up arable land

Spreads outwards

Promotes greenbelts

#### **Greenbelts:**

Designated areas not allowed to be touched by development (parks, nature trails)

Sections of land that are designated natural areas- they cannot be built upon

# **Smart Growth:**

Instead of building outwards they build upwards to save land

Increases population density

Saves natural areas

# **Central Business District (CBD):**

Where all big businesses take place in a city

Node

Nuclei

# **Edge City:**

Little mini cities on the outskirts that are like the big cities

Lots of edge cities in Atlanta

Ex. Roswell and Alpharetta – has most of the services as in big cities

A.K.A. "suitcase cities"

Typically a place without a high residence area

Sandy Springs- used to be part of Atlanta, and then became its own official city

To become an edge city, the city has to be newly developed and business oriented-more jobs than homes

#### **Ghettoization:**

Started in Europe

Legal restriction of people to certain areas

Used to be legalized but not anymore

Ghettos refer to areas where populations of mixed income are confined to a certain area even though they might have the means and desire to move

Can be economic or social "ghettos"

# **Industrialization and Urbanization:**

The growing of industry and the growing of population and population density of a city

One promotes the other

The Industrial Revolution promoted Urbanization

# **Megalopolis:**

A Greek word meaning great city

D.C. Geographer Jean Gottmann named the region in the northeastern US- large metropolitan areas so close together that they now form one continuous urban complex, extending from north of Boston to south of Washington- Megalopolis

#### **Primate Cities:**

Having more than twice the population of the second largest city

Center of culture for country

Draws citizens because they feel they have to be apart of the city to be successful

Most likely to become capital (ex. Paris, France)

Not every country has a primate city

Can have primate cities on large and small scales

California's primate city is Los Angeles

America lacks a primate city

# **Rank Size Rule:**

2<sup>nd</sup> largest city is ½ of 1<sup>st</sup>

3<sup>rd</sup> largest city is <sup>1/3</sup> of 1<sup>st</sup>

4<sup>th</sup> largest city is ½ of 1<sup>st</sup>

### **World Cities:**

Have a large population density because of technology high rise

They are cities that have great influence on the whole world

They become a world city because they are in the center of the global economic system

Highest Tier of World Cities- London, Tokyo, and New York (world's business capital)

2<sup>nd</sup> Tier- Chicago, Washington and Los Angeles

#### **Megacities:**

Over 10 million people

Experience a sudden rise in population where the infrastructure can't support the population for a time For the most part Megacities are in LDC's because the people there are forced to go to urban areas to find work

### **Central Place Theory:**

Walter Christaller created the central place theory to explain the size and spacing of cities that specialize in selling goods and services

The theory consisted of two basic concepts:

- 1. Threshold- the minimum market
- 2. Range- the maximum distance- the amount of distance a person is willing to drive to the threshold

#### **Concentric Zone Model:**

A general model that cities are based upon that Burgess developed in 1925

The plan of a city (urban planner) may be based on the concentric zone model

Relates the distance to the city to how wealthy a family is

The wealthier you are the bigger land you have and the farther away from the city you are

6 Concentric Zones:

Zone 1- CBD

Zone 2- immediately adjacent to CBD (factories and manufacturing plants- where things are produced without much pollution- not nasty)

Zone 3- contains poorest segments of the urban population, low income housing areas, low income people have factory jobs and do not use car for transportation

Zone 4- working class

Zone 5- middle class, not struggling, higher quality housing

Zone 6- high class, expensive housing

The zones expand-build out not up

The concentric zone model has two main problems: outdated and only applies to America

#### **Sector Model:**

Has arms that extend from the CBD instead of circles

CBD still in center of city

Lower income still near manufacturing areas

Transportation and manufacturing most likely along an "arm"

# **Multiple Nuclei Model:**

Attributes:

Differential Accessibility- people don't just go to the same CBD all the time- they go to different places

Land Use Compatibility- related businesses are close together, centripetal forces

Land Use Incompatibly- conflicting businesses are sent apart from each other, centrifugal forces

Location Suitability- suitable for certain activities

#### **Transportation**;

40 percent of all trips made into or out of a CBD occur during four hours of the day- two in the morning and two in the afternoon

In larger cities, public transportation is better than motor vehicles- cheaper, less polluting, and more energy-efficient Americans prefer to commute by car

# **Infrastructure:**

What makes a city work or operate

Example- electricity, sewers, road ways

#### **Suburbanization:**

The growth of suburbs was constrained by transportation problems

The invention of the railroad in the 19<sup>th</sup> century enabled people to live in suburbs and work in the central city Many so-called streetcar suburbs built in the 19<sup>th</sup> century still exist and retain unique visual identities

### **Hinterland:**

Same as range in the central place theory

Area around the city that the city serves

The farthest distance a city is willing to serve