

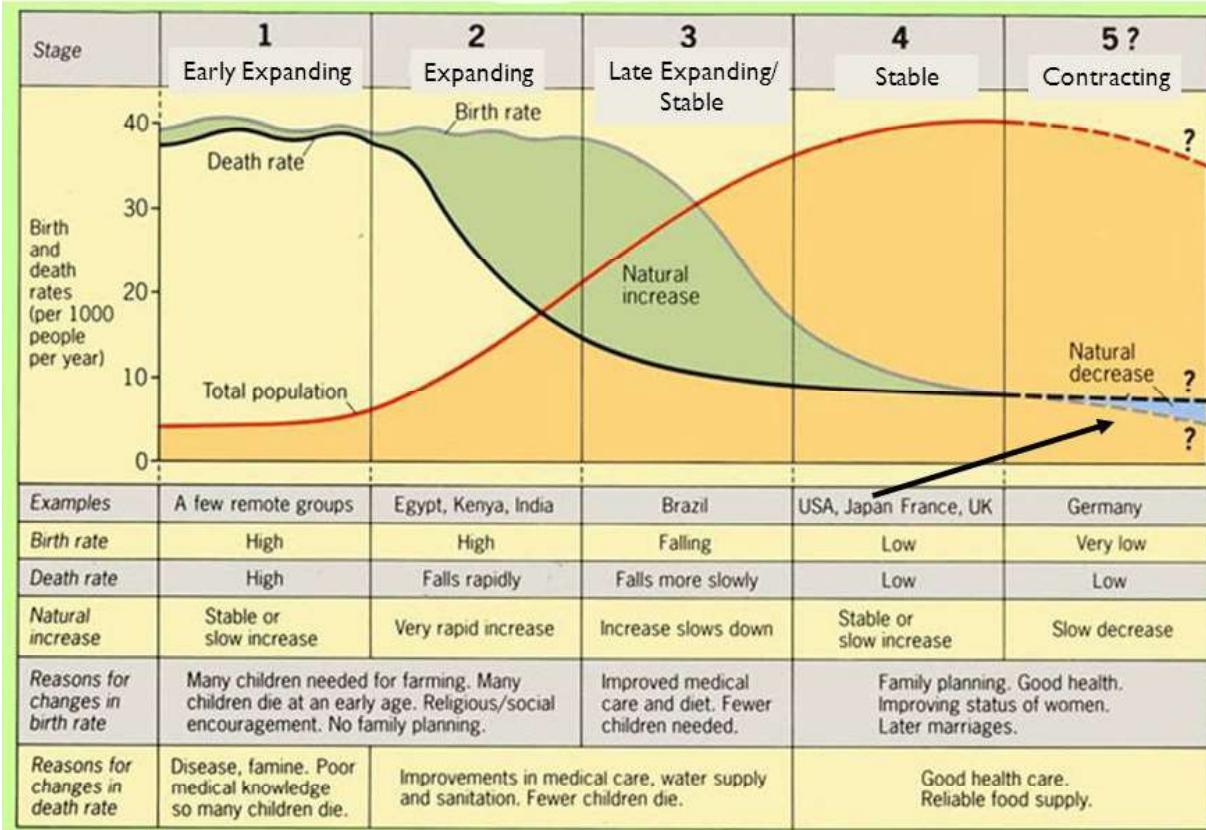
16 Things to Understand About Unit 2 Gold



- 1) Demographic Transition Model
- 2) Birth rate, death rate, RNI, doubling time
- 3) Total Fertility Rate, Infant Mortality Rate
- 4) Epidemiological Transition Model
- 5) Physical factors of population distribution (climates, landforms, bodies of water)
- 6) Human factors of population distribution (culture, history, economics, politics)
- 7) How the physical and human factors vary with scale
- 8) Arithmetic density, arable land, Physiological density, agricultural density
- 9) Population pyramids
- 10) Carrying capacity
- 11) Malthus theory of population
- 12) Cornucopian Theory vs. Neo Malthusian Theory
- 13) Dependency Ratio
- 14) Reasons for aging population (sanitation, nutrition, health care)
- 15) How changing roles for females affect demographic change
- 16) Pronatalist vs. Antinatalist policies

The Demographic Transition Model

~ The **Demographic Transition Model (DTM)** describes change over time as a country develops into an industrialized economic system.



~ **Crude Birth Rate (CBR)** is the amount of births per year per 1000 people in population.

~ **Crude Death Rate (CDR)** is the amount of deaths per year per 1000 people in population.

~ **Rate of Natural Increase (RNI)** is the difference between number of births and deaths.

Understanding the Demographic Transition Model

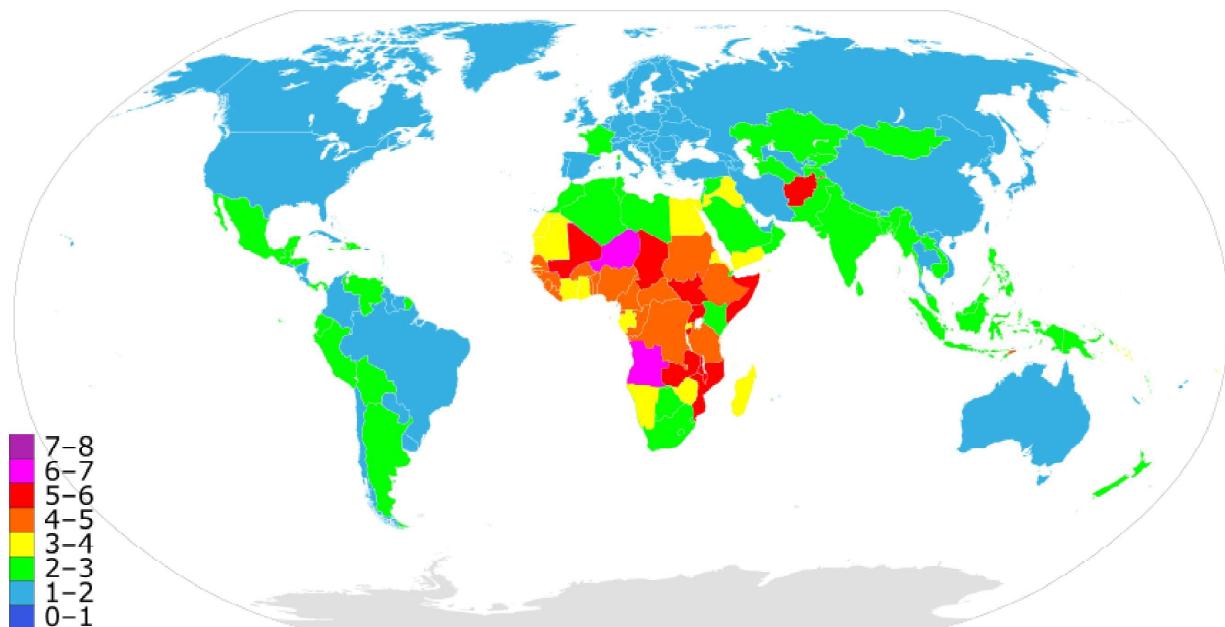
The Demographic Transition Model runs from Stage 1 to Stage 5. It shows how when the birth rate is much higher than the death rate, the population grows quickly, and how when the birth rate drops below the death rate, countries' populations begin to shrink. Periphery (LDC) countries tend to be on the lower end of the DTM, while semi-periphery tend to be in the middle and core (MDC) countries tend to be on the high end.

Above is an updated example of the DTM. When the chart above first came out, people were still speculating over whether Stage 5, where a population shrinks, actually existed. It is overwhelming apparent in 2019 that Japan is in stage 5 (See arrow). So while the rest of the chart remains the same, which countries are where will be constantly changing.

Total Fertility, Infant Mortality and The Epidemiological Transition Model

~ **Total Fertility Rate** is the average number of children born per woman in a society. In general it needs to be above 2.1 for a society to maintain its current population without migration. The number is higher than 2.0 because it is expected that some female children will die before reaching child bearing ages.

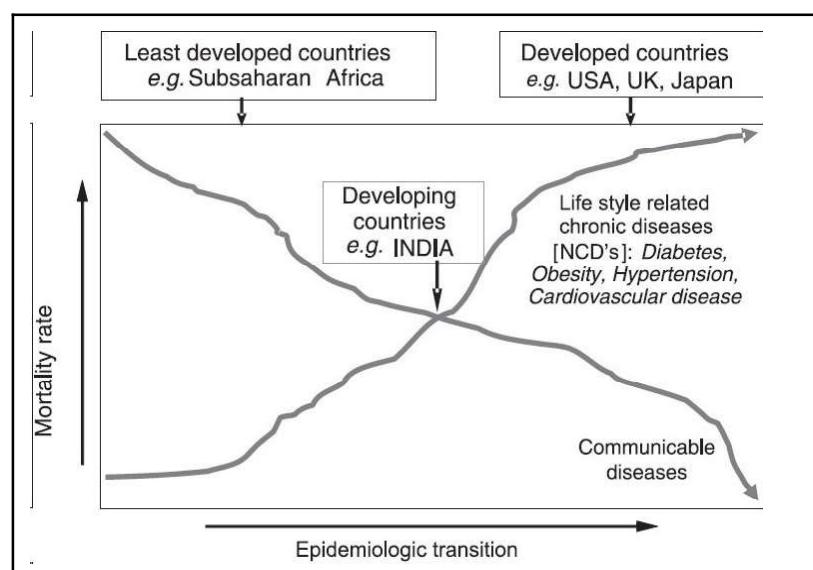
Total Fertility Rates in 2018



The Epidemiological Transition Model

~ **Infant Mortality Rate** – The number of children who die before reaching age one out of every 1000 live births. It is higher in LDCs who have less quality medical care than MDCs. In fact, the types of diseases contracted in MDCs and LDCs vary greatly because of medical care as well.

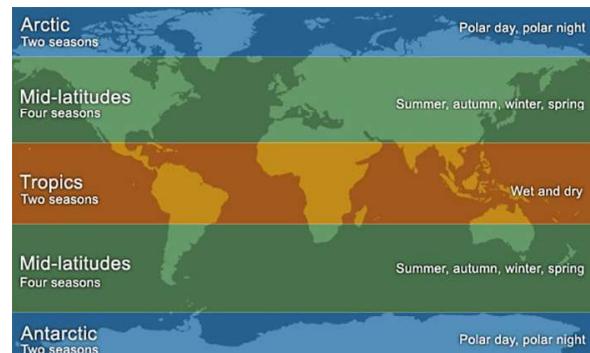
~ **The Epidemiological Transition model** (right) demonstrates how less developed countries tend to be more likely to die from communicable diseases (flu, tuberculosis, rabies, measles, HIV/AIDS), while more developed countries tend to be more likely to die from lifestyle related chronic diseases (diabetes, obesity, heart disease, hypertension).



Physical factors of where people live

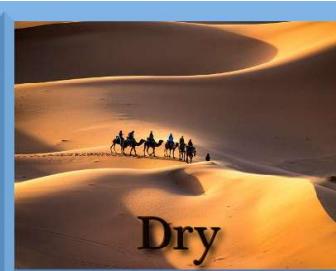
~ **Climate** is the average weather conditions of a region (typically measured over 30 years), and it includes the temperature, air pressure, humidity, precipitation, sunshine, cloudiness, and winds.

People tend to want their **ecumene** (land that people have made their permanent home) to be in moderate, less extreme, climates. They don't want to be too near the poles (in high latitudes) or too near the equator (in low latitudes). Most people remain between 30° & 60° N latitude or 30° & 60° S latitude



Which is not to say that people love living everywhere as long as it is a middle latitude. There are typically four extreme conditions that will limit population, if it is too wet, if it is too dry, if it is too cold, and if it is too high elevation wise.

1) **Wet**: Extremely wet climates, like the Florida Everglades (top left) or the Amazon rainforest are too wet to farm well, as the excess water carries nutrients away.

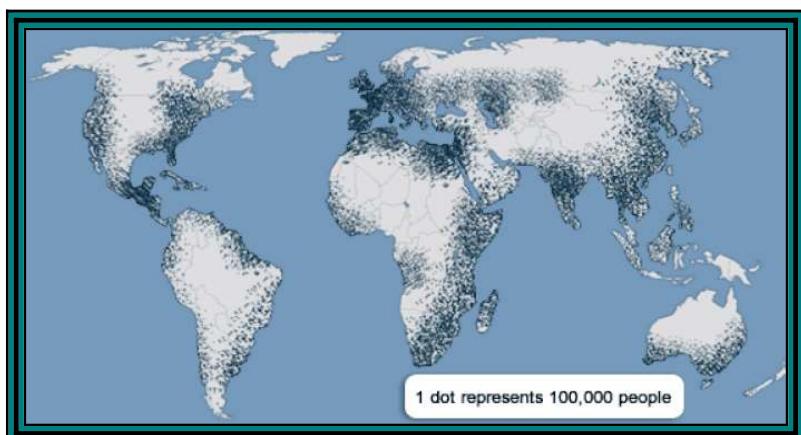


2) **Dry**: Extremely dry climates like the Sahara desert (top right) have the opposite problem and don't have enough water for crops.



3) **Cold**: Crops freeze easily and extremely cold climates are inhospitable to humans as well.

4) **High**: Hilly and mountainous areas, while exceptional for views, often have rocky soil that makes farming difficult. These four extremes show us that most people will not live in areas they cannot farm successfully.



KEY STATISTIC: Nearly 70% of the world's population live within 250 miles of the coast.

In the map to the left, each dot represents 100,000 people. In addition to this tendency of being near the coast, even inland, people settle close to rivers, lakes, and other sources of fresh water.

Human factors of where people live

Physical Factors	High Density	Low Density
Relief (shape and height of land)	Low land which is flat e.g. Ganges Valley in India	High land that is mountainous e.g. Himalayas
Resources	Areas rich in resources (e.g. coal, oil, wood, fishing etc.) tend to densely populated e.g. Western Europe	Areas with few resources tend to be sparsely populated e.g. The Sahel
Climate	Areas with temperate climates tend to be densely populated as there is enough rain and heat to grow crops e.g. UK	Areas with extreme climates of hot and cold tend to be sparsely populated e.g. the Sahara Desert

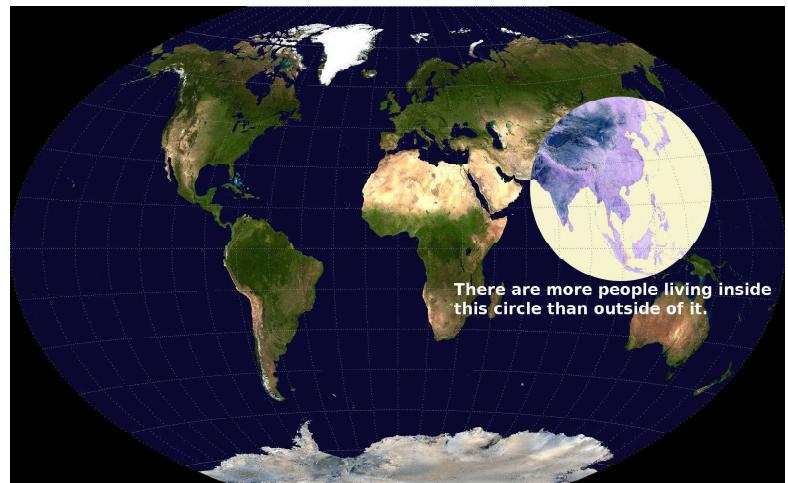
Human Factors	High Density	Low Density
Political	Countries with stable governments tend to have a high population density e.g. Singapore	Unstable countries tend to have lower population densities as people migrate e.g. Afghanistan.
Social	Groups of people want to live close to each other for security e.g. USA	Other groups of people prefer to be isolated e.g. Scandinavians
Economic	Good job opportunities encourage high population densities, particularly in large cities in MDCs and LDCs around the world.	Limited job opportunities cause some areas to be sparsely populated e.g. Amazon Rainforest

While the physical factors determine what types of climates humans like, the human factors help dictate why that population isn't spread uniform across the globe. In fact, it is far from uniform.

Main areas of population concentration:

- A. East Asia (China, Korea, Japan)
- B. South Asia (India, Bangladesh, Pakistan)
- C. Southeast Asia (Indonesia, Thailand)
- D. Europe
- E. Northeastern United States

**Worth noting that there is a huge gap between the concentration in Asia and the concentration elsewhere. The United States is the third largest country in the world by population, but China and India each have roughly four times as many people as the United States.



Scale matters

Physical: On a global scale, people don't like to live in high elevations like the Himalayas, but on a more local level, there are not huge variances in climate, and the highest elevation spots in town may be more desirable and valuable because of their good views.

Human: Relative to rural areas, cities are often more polluted, yet because of the jobs offered there, people are willing to migrate to the city – a pattern on the regional scale, but on the local scale, they would not want to live right next to the most polluted areas.

Population Density

KEY POINT: **Arable land** is land that can be used for agriculture.

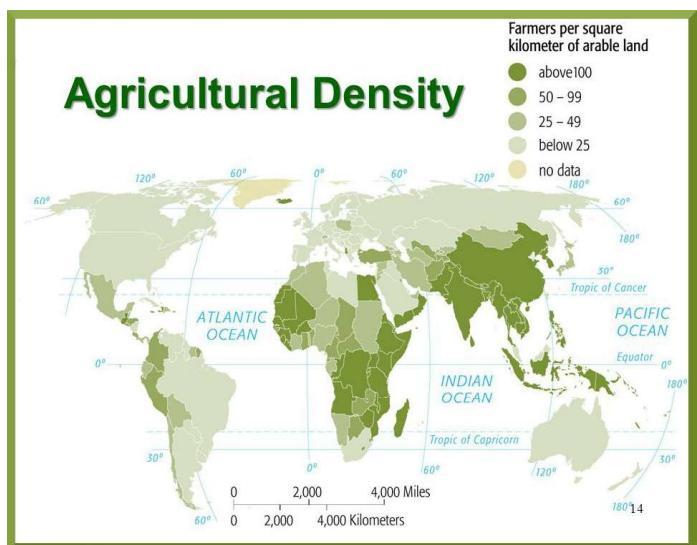
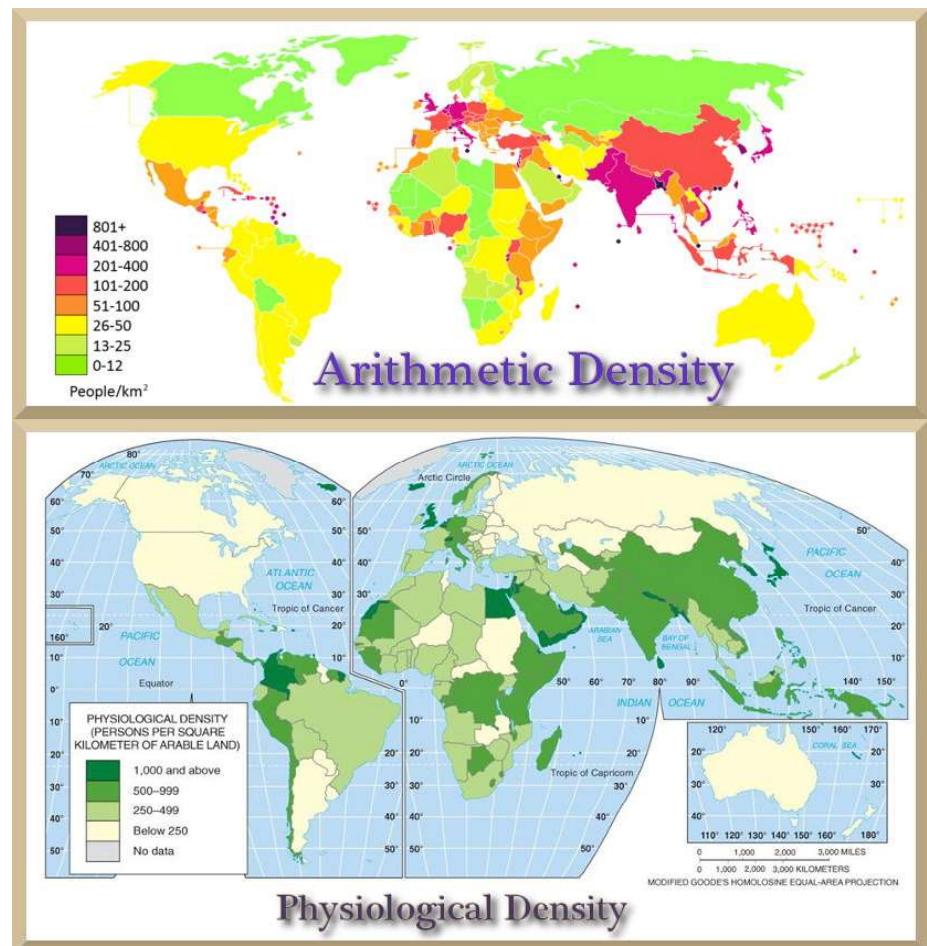
Two main ways to measure population density:

- 1) **arithmetic density** – the number of people per unit area of land
- 2) **physiological density** – the number of people per unit of arable land

Basically, arithmetic density (which is what most people mean when they talk about population density) does not take into account whether the land is habitable or not. Therefore, it may indicate that places are far less crowded than they are.

For example: Egypt has a much higher physiological density (2,256 people per square kilometer) than its arithmetic density (84). This is because much of Egypt is desert and most people live near the Nile River.

That's an example of a dry climate yielding low amounts of arable land, but you also see it in Iceland (too cold) and Colombia (too high in the rugged Andes mountains).



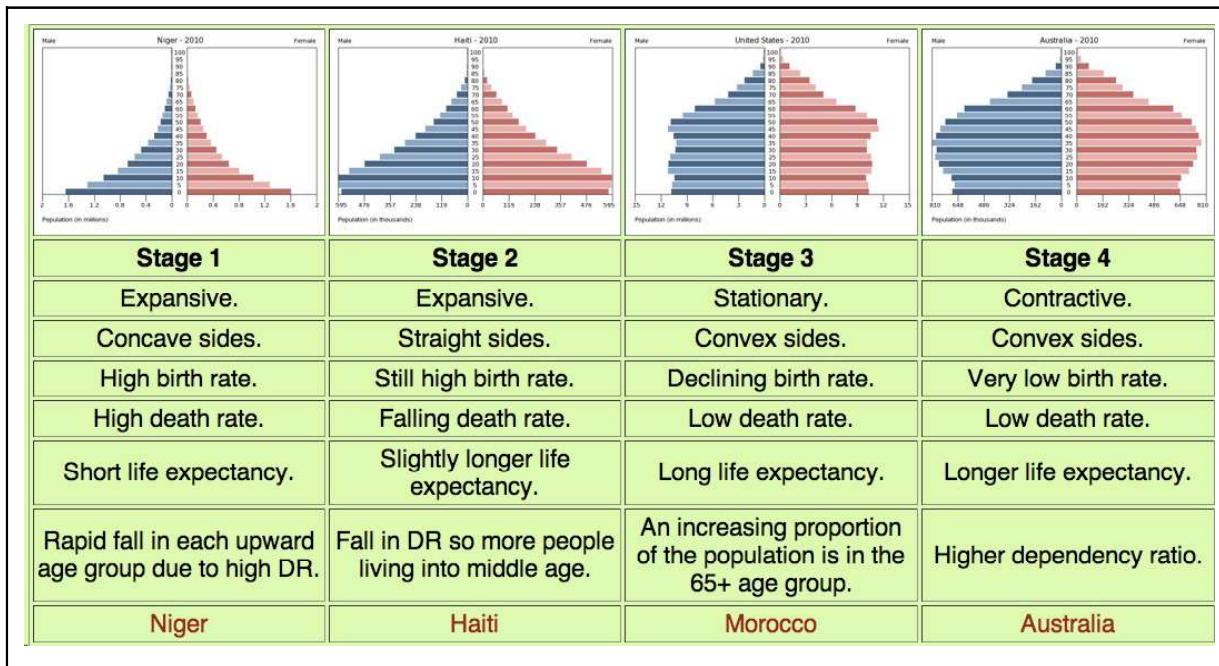
In addition to arithmetic and physiological density there is something known as **agricultural density**, which is the amount of farmers per unit of arable land.

A higher agricultural density means that the available agricultural land is being used more and may reach its output limit sooner than a nation that has a lower agricultural density. In contrast, an area with a low agricultural density has a higher potential for agricultural production.

Population Pyramids

~ **Population Pyramids** are two-sided vertical bar graphs that show what percentages of people in certain age groups make up a population. They can also be used to compare male to female population because the left side of the graph is the number of males of each age and the right side is the number of females.

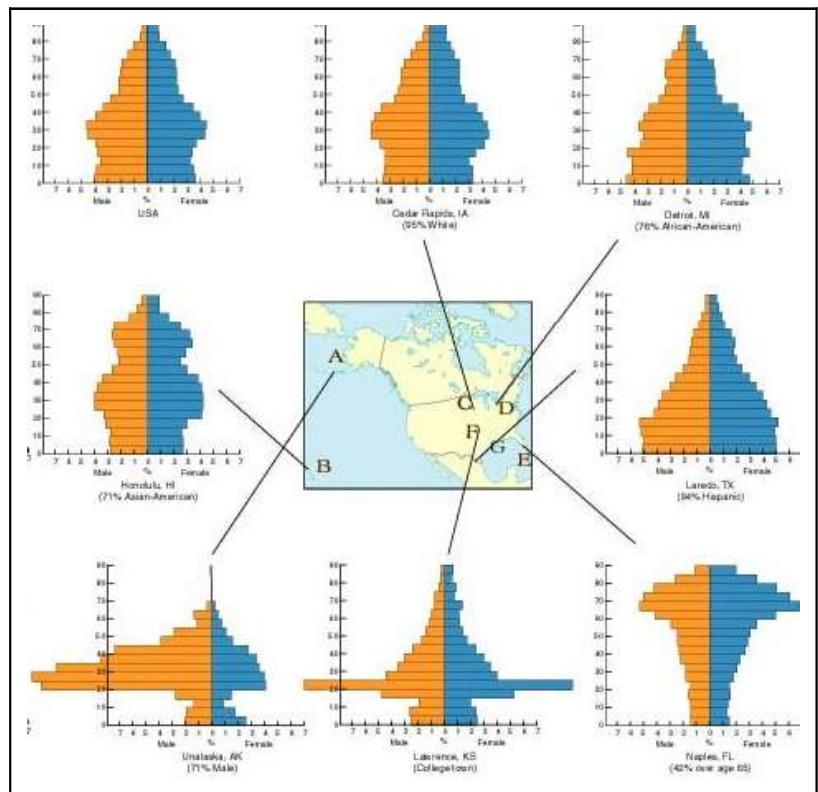
The shape of the graphs can give some indication of what stage of development a country is in, or on a smaller scale, what type of town you may be looking at.



*The chart above shows the variance between countries, while the chart to the right shows how a dangerous main industry (Unalaska, AK), a college town (Lawrenceville, KS) or a retirement community (Naples, FL) can skew a population pyramid.

It also shows how different demographic makeups affect them from a predominantly Asian area (Honolulu, HI) to a Caucasian area (Cedar Rapids, IA) to an African American area (Detroit, MI) to an Hispanic area (Laredo, TX).

~ **Demographic momentum:** tendency for growing populations to continue growing after a fertility decline because of their young age distribution

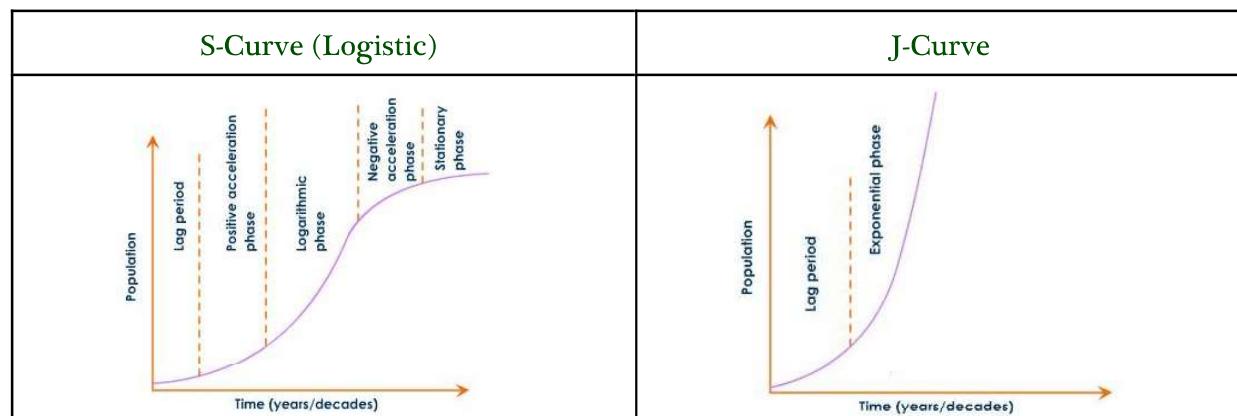


Carrying Capacity (Malthus & Neo-Malthusians)

Carrying Capacity: The number of people that can be supported by the amount food, water and other resources in the area.

- ~ Thomas Malthus was an English economist who said in 1780:
 - a) Rapid population growth is a major cause in human poverty and misery
 - b) Food supply increases arithmetically (1,2,3,4), while population increases geometrically (1,2,4,8)
 - c) Conclusion: The geometrically growing population would outgrow an area's food supply, thus causing people to die off or leading people into poverty.
This is Malthus' Population Theory
 - ~ The J-Curve shows how population grows slowly and then skyrockets
- Explanation of difference between arithmetic growth and geometric growth:
- ~ If you have 100 people and you increase arithmetically by 10 a year, you will have 110 people in year two, 120 in year three, continuing to 200 by year 11.
 - ~ If you have 100 people and you increase geometrically by 10% a year, you would also have 110 in year two, but you would have 121 in year three (10% of 110 is 11), and by year 11, you would be at 234 people
 - ~ Therefore if food grew arithmetically and people grew geometrically, then by year 11, you would have 234 people, but only food for 200 of them.

Neo Malthusian (Agree with Malthus)	Cornucopian Theory (Disagree with Malthus)
<ul style="list-style-type: none">~ Think Malthus predictions will come true by 2050.~ Created the S-Curve (logistic model) to show how at higher population densities, limited resources lead to competition and eventual end to population growth	<ul style="list-style-type: none">~ Ester Boserup argued in the 1960s that increase in population would create increase in work force and thus more food.~ The Cornucopian Theory suggests human invention and innovation will help expand food supply



Dependency Ratio

~ **Dependency ratio:** The number of dependents (people age 0-14 and over age 65) compared with the working population (age 15-64)

There are no countries that have a dependency ratio higher than 100, which would mean there are more non working age people than working age people.

Traditionally, the higher dependency ratio countries are LDCs who have high birth rates and death rates, like the Democratic Republic of the Congo, which has a ratio of 97 as of 2017, way above the world average of 54.

Lately, there has been a trend of MDCs with high aging populations, as well. Japan is currently up to 68, mostly older.



Calculating the Dependency Ratio

The dependency ratio is simply the number of people of non working age (very old + very young) divided by the number of people of working age.

The point is to see if there are enough people working to support those who are not working

$$\frac{\text{children (0-14) + elderly (65+)}}{\text{Those of working age (15-64)}} \times 100$$

The resulting figure gives the number of people not working for every 100 working people.

Reasons for Aging Population



HEALTHCARE

The improvements in health care over the last few centuries are astounding. With vaccines against big killers like smallpox, an increase in antibiotics like penicillin, and better medical procedures raising the life expectancy greatly.

NUTRITION

Perhaps no single thing has increased life expectancy more than the mechanization of agriculture and the increased food production that goes with it. Improved ability to transport food and provide food security have also improved nutrition.

SANITATION

Large cities and dense populations breed diseases like cholera. Public sewage systems go a long way to alleviating those pressures. In addition, the concept of boiling water killing diseases and water treatment plants has made people safer.

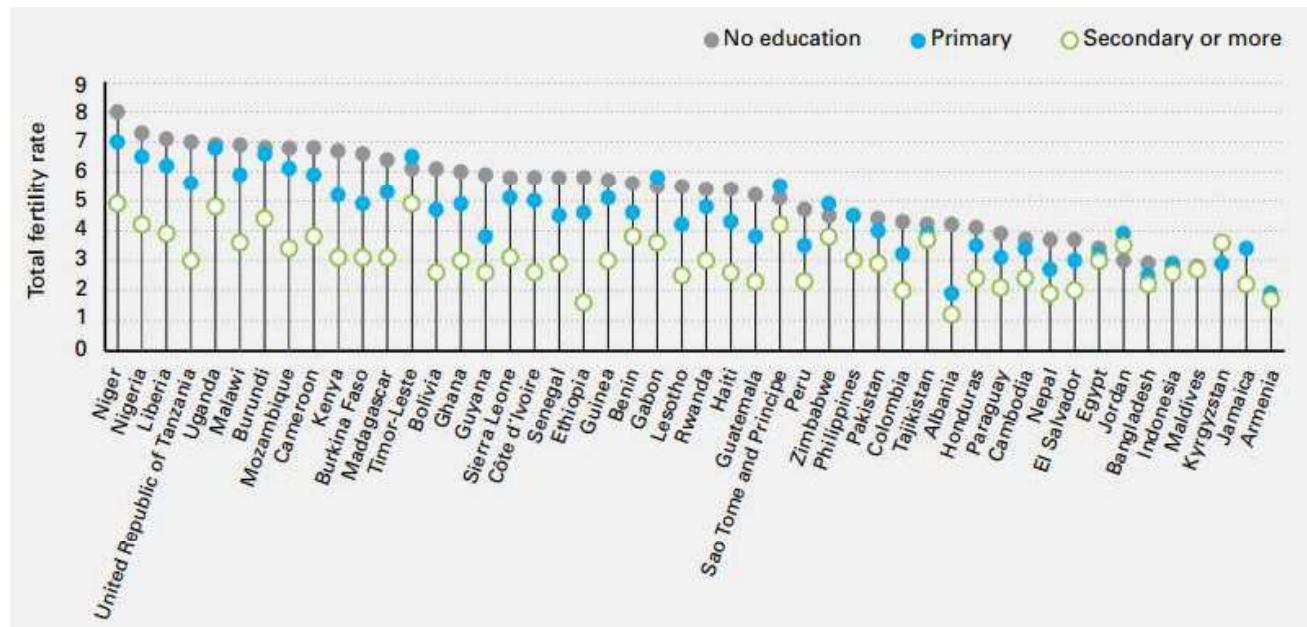
Consequences of aging population: In addition to dependency ratio factors, aging populations are more likely to support cuts to education, increased pensions, and support of crime legislation.

Changing Roles of Women and Demographic Change

The total fertility rate is dropping world wide and one of the factors that has the biggest effect on it is the role of women in society.

Education

Consistently, the more women are allowed access to education, the less children they have. Below is a graph of 48 low to middle income countries, that demonstrates this:



One of the main reasons for this is understanding their opportunities. Another reality, though, is that the further women go in school, the older they are when they start having kids.

For Most Highly Educated Women, Motherhood Begins in the Thirties

Age at birth of first child, by educational attainment

	UNDER 30		30 AND OLDER		MEDIAN AGE
	under 25 yrs	25-29	30-34	35+	
Master's degree+	18%	28%	34%	20%	30 yrs
Bachelor's degree	28	34	27	14	28
Two-year degree/some college	49	29	15	7	25
High school or less	62	22	11	6	24

Note: Based on women ages 40-50 who have ever given birth.

Source: Pew Research Center analysis of 2012 Current Population Survey June Supplement

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Population Policies

Key Terms:

- ~ **Population Policies**: Laws enacted by the government to influence the size and structure of a country's population
 - ~ **Propaganda**: Biased information used to promote or publicize a particular political cause or point of view (All of the main population policies use this).
 - ~ **Pronatalist**: Policies encouraging more babies being born and higher birth rates.
 - ~ **Antinatalist**: Policies discouraging large families and seeking lower birth rates.

Three main types of Population Policies

I. Expansive Population Policies (Pronatalist Policies)

A. Examples:

1. France: family friendly policies to women's careers (tax breaks, day care, maternity leave)
 2. Sweden: flexible work schedules and 18-month maternity leave to support women in work place
 3. Poland: cash incentive for each child and even doubled incentive for women in poor families

B. Reasons:

1. Build Army
 2. Sense of National Relief after war
 3. Population decline

II. Restrictive Population Policies (Anti-Natalist)

A. Examples:

1. China: one-child policy
 2. India: tax breaks, education of rural locals to teach birth control

B Reasons

1. Slow down explosive growth
 2. Overcrowding problems

III Eugenics

A. Encouraging growth of only favored part of population (race, ethnicity, social group)

T T

B Examples:

1. Nazi Germany and the Aryan Race
 2. Japan: Low migration allows a very "pure" population
 3. Some countries don't allow people with certain disorders to have children

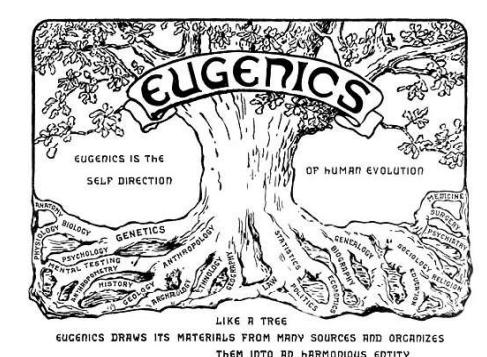
Pronatalist Propaganda



Antinatalist Propaganda



Eugenics Propaganda



16 Things to Understand About Unit 2 Purple



- 1) Emigration vs. Immigration
- 2) Chain migration, step migration, brain drain, guest workers, remittances
- 3) Push and Pull Factors
- 4) Intervening Obstacles
- 5) Transhumance, Transnational Migration
- 6) Ravenstein's Laws for migration, rural to urban migration
- 7) Reversing historical trends of migration
- 8) Colonization of America and its lingering results
- 9) Demographic Balancing Equation, doubling time
- 10) immigration policy; xenophobia effects
- 11) Forced migration (including slavery)
- 12) Refugees, asylum and internally displaced persons
- 13) Historical external migration patterns of United States
- 14) Historical internal migration patterns of the United States
- 15) Effects of migration on the country of origin
- 16) Effects of migration on the receiving country

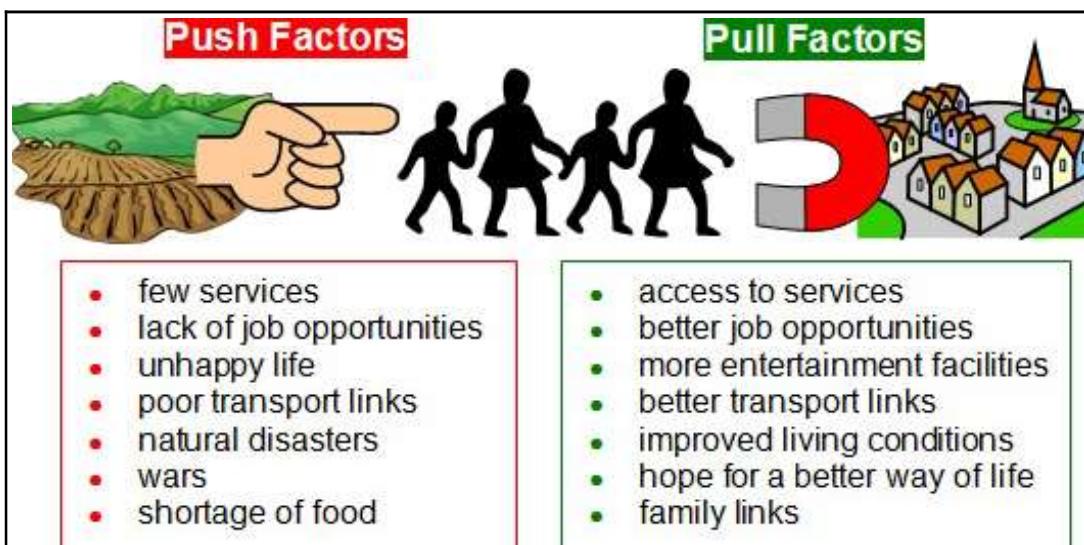
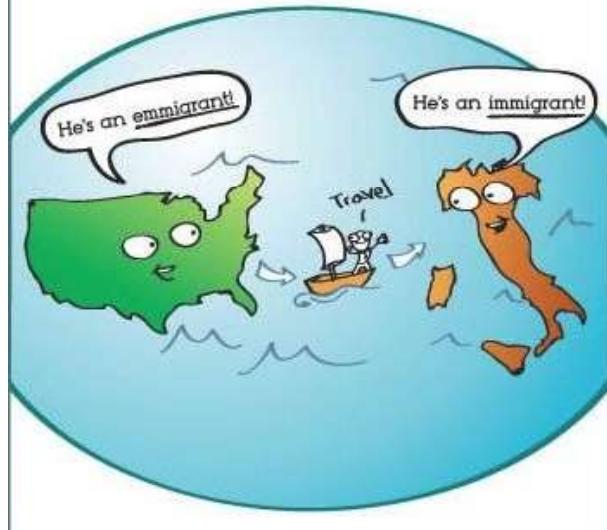
Voluntary Migration

Key Terms:

- ~ **voluntary migration**: to willingly choose to move from one country to another
- ~ **emigrate**: to leave your country and migrate to another country (starts with e like exit)
- ~ **immigrate**: to join a new country after leaving somewhere else (starts with i like in)
- ~ **guest (temporary) workers**: temporarily live and work in a host country
- ~ **chain migration**: when people migrate to areas where there is already an established contingent of similar people or ethnicities
- ~ **step migration**: common in LDCs, it is when people move in several steps before reaching their final destination
- ~ **brain drain**: when the most educated people of a country migrate elsewhere for “better” life
- ~ **Push factor** – A negative aspect of where you are that causes you to leave
- ~ **Pull factor** – A positive aspect of somewhere else that makes you want to go there

Emigrate / Immigrate

Emigrate = leaving; Immigrate = coming



Sometimes migration is met with **intervening obstacles**, barriers to migration in many forms:

Economic: Running out of money stops a migrant from reaching destination.

Social: Perhaps a migrant gets married along the way and settles down.

Political: A migrant can't get a visa to enter the country they are heading toward.

Environmental: A sea, desert, or a mountain range proves too difficult to cross.

Transhumance, Transnational Migration

Not all migration is a simple move from point A to point B. There are a couple of types of migration that involve a more fluid back and forth – Transhumance and Transnational Migration.

Transhumance: the action or practice of moving livestock from one grazing ground to another in a seasonal cycle, typically to lowlands in the winter and highlands in the summer.

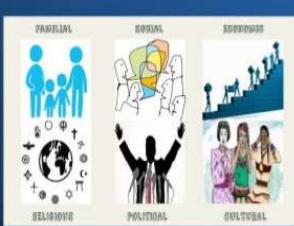
Transhumance is one of the oldest migration patterns, especially in Italy, where they have even requested that Unesco include it on its list of humanity's Intangible Cultural Heritage, but it is practiced many other places.

Shepherds on horseback move with their herds (often sheep, but also cattle in some areas), often accompanied by dogs, to the mountains in the spring before the terrain becomes too arid, and back to the plains in the fall before the snow.



Transnational migration: a process of movement and settlement across international borders in which individuals maintain or build multiple networks of connection to their country of origin while at the same time settling in a new country

TRANSMIGRANTS



Are immigrants whose daily lives depend on multiple and constant interconnections across international borders and whose public identities are configured in relationship to more than one nation-state.

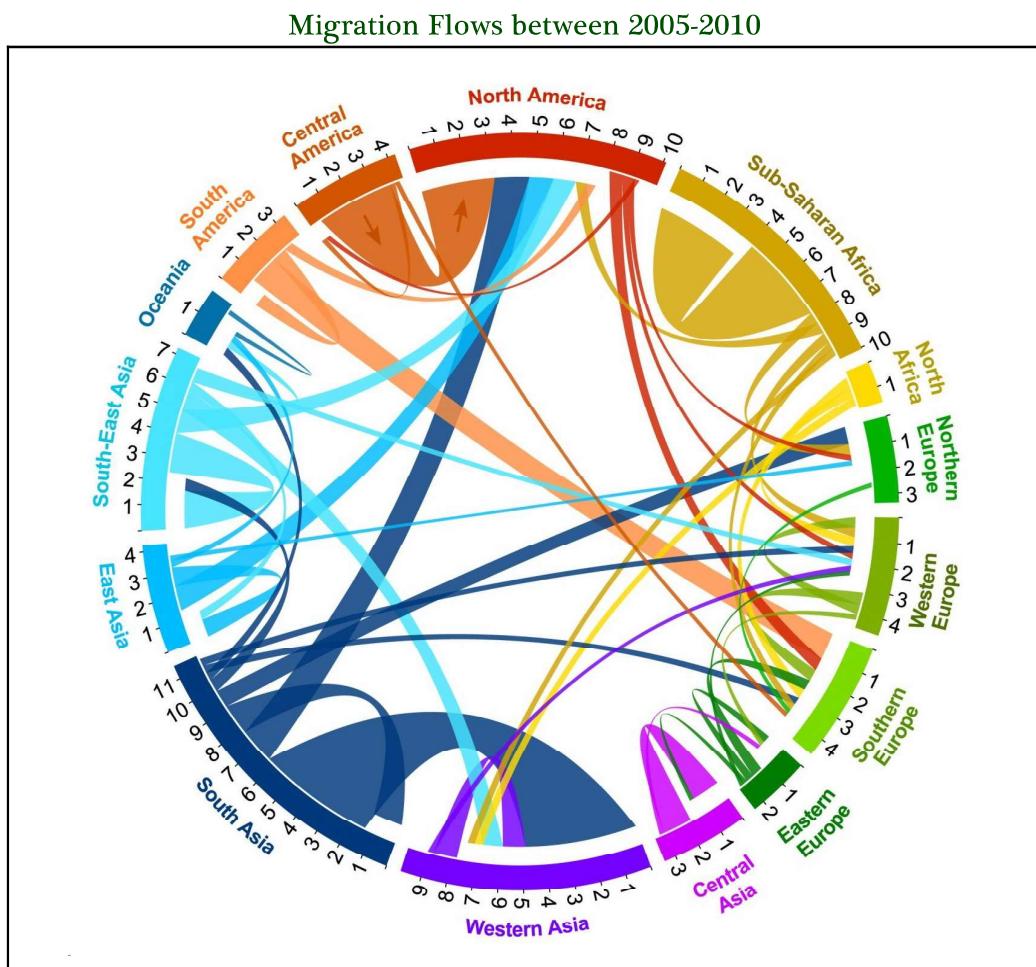
Basically, to a transnational migrant, home means more than one country, rather than a single nation-state.

One country particularly interested in transnational migration is the Philippines, which even has a government agency (the Overseas Workers Welfare Administration or OWWA) dedicated to helping these workers.

The OWWA exists because the Philippines has come to depend on something called **remittances** for their survival. A remittance is when a migrant worker sends money back to their home family. Remittances are essential to the economy of the Philippines.

Ravenstein's Laws of Migration

- 1) Economic factors are the main cause of migration.
- 2) Most migrants only move a short distance.
- 3) Long-distance migrants are more likely to migrate to urban areas, because they believe cities are more likely to have jobs than rural areas.
- 4) Most migration is Rural to Urban migration. Starting with the Industrial Revolution, which made less farm workers necessary, people have flocked from the country to the city.
- 5) Most migration occurs through step migration.
- 6) Most migrants are younger adults, people from age 20 to 45 with less established jobs.
- 7) Young men are more likely to migrate internationally, as it poses a great risk, but women are more likely to migrate internally, whether for work or to live with their husbands family.
- 8) Each migration flow produces a compensating counter-flow.



*Numbers represent millions of migrants. Bars touching represent people flowing out. Bars that stop short represent people flowing in. Reversing a historical trend, Europe is almost exclusively seeing in migration rather than out migration.

Colonization of America and Its Effects

Legacy of Colonialism

In human geography terms, how the Portuguese in Spanish split the world, or how bad Columbus was at predicting the Earth's size (he was very, very bad at it, like off by 6000 miles kind of bad) are not the most important things. What is important in what ways are the ways the differences in the colonization of Anglo and Latin America are still affecting the Americas of today. So, let's take a look at the most important.

1) What religion settled each

Anglo America: For the most part, post Louisiana purchase anyway, the United States and Canada were settled by the English, who were protestant. The most dominant modern religion in Anglo America is Protestant Christianity.



Latin America: Spain, Portugal, and France are all Catholic, and so are most of the Latin America countries they settled.

2) Who settled each

Anglo America: Mostly settled by families, breeding a natural conflict between the natives and the settlers over time.

Latin America: Mostly conquistadors. Which naturally fostered in roads into cultural combination as the male conquistadors sought opportunities for families.

3) Type of agriculture/slavery

Anglo America: Tobacco and cotton, which while hard, are not sugar and didn't require the constant influx of slaves. In fact, slave populations could actually reproduce and grow naturally.

Latin America: Sugar. The most deadly of all the slave crops to produce. Requires hot, tropical weather, dangerous machinery, and even the dust if inhaled consistently was dangerous. It required a constant influx of new slaves, because slaves lived on average 6.5 years.

Demographic Balancing Equation, Immigration Policy

Key Terms:

~ **Demographic Balancing Equation:** An equation that is used to calculate population changes from one year to the next in a given area, based on number of births, deaths, and migrations.

~ **Doubling Time:** The projected amount of time that it will take for a given population to double.

~ **Rule of 70:** Associated with the calculation of doubling time. If you divide 70 by the annual percent growth of a country, you will get the number of years it will take its population to double.

The Demographic Balancing Equation

Change in Population =
 $(\text{Births} - \text{Deaths}) + (\text{Immigration} - \text{Emigration})$

Of course you can also calculate it this way:

Change in Population =
 $\text{Total Population Now} - \text{Total Population Before}$

Therefore, since both equal Change in Population:

$\text{Total Population Now} - \text{Total Population Before}$
Must Equal
 $(\text{Births} - \text{Deaths}) + (\text{Immigration} - \text{Emigration})$

If it doesn't then one of your numbers is wrong!

Immigration Policy

Obviously, the amount of migration to an individual country is greatly influenced by that country's immigration policy. The United States has seen many swings in immigration policy through the years, with consistent bouts of **nativism** (policies protecting the interests of native-born over immigrants) that often are fueled by **xenophobia** (fear of strangers or the unknown). While this is a hot button issue currently, the cartoon below from 2014 shows it isn't a new phenomenon.



Two types of legal U.S. immigrants:

Permanent: As a lawful permanent resident (LPR), one receives a "green card" is eligible to work, and may later apply for citizenship.

Temporary: diplomats, tourists, students, and workers with temporary visas.

Priority immigrants:

- 1) People with family in U.S.
- 2) Workers in high demand areas
- 3) Refugees from political, racial, or religious persecution
- 4) People from a diverse set of countries

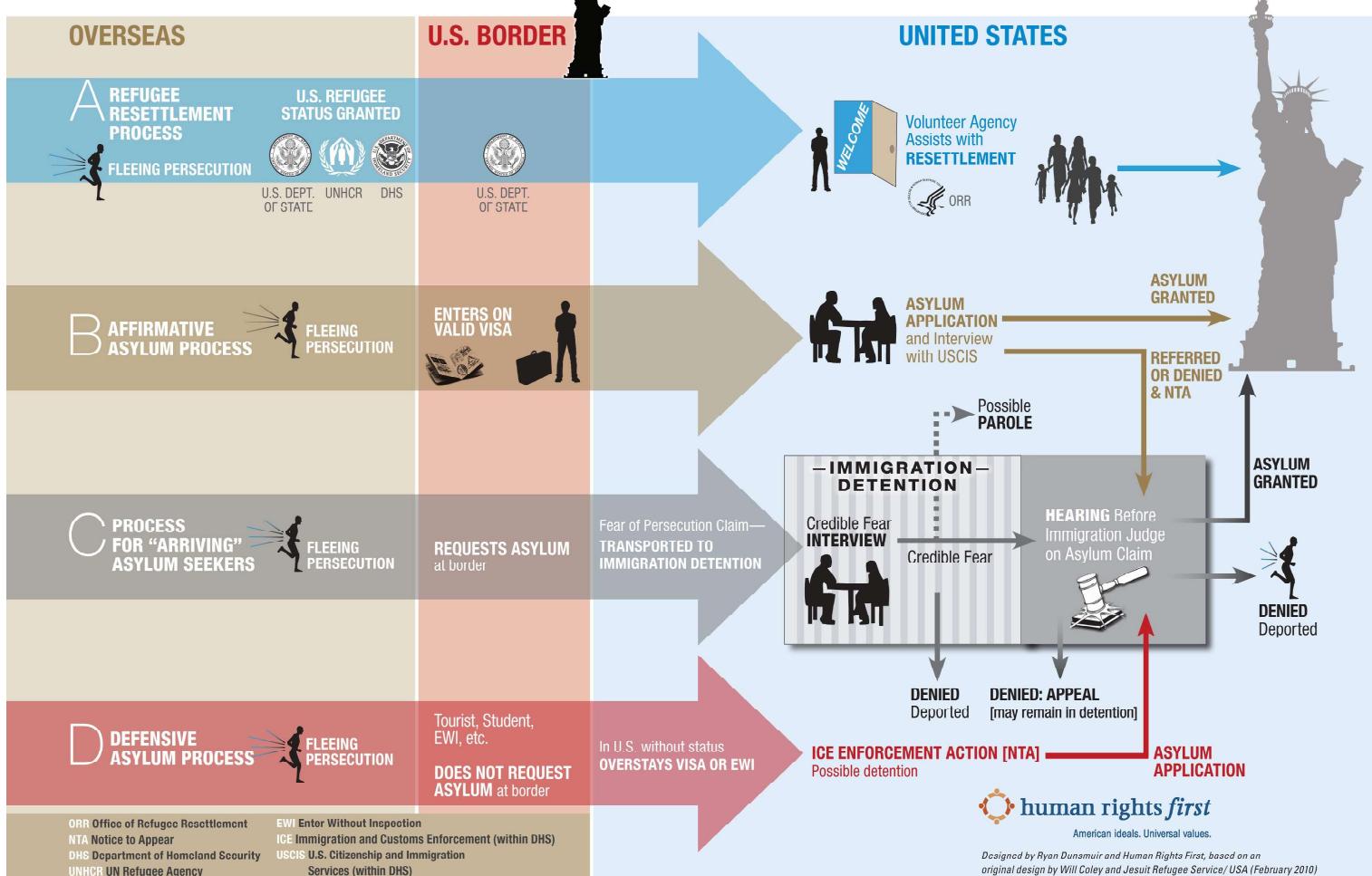
Forced Migration, Refugees

Key Terms:

- ~ **Forced migration:** Migration in which the individual or group migrating has no say about where they are going or when
- ~ **Refugee:** An individual that leaves their homeland to avoid persecution or out of concern for their own personal safety
- ~ **Asylum:** Shelter from physical harm and persecution that one country gives to a refugee from another country
- ~ **Internally Displaced Person (IDP):** Refugee that did not escape their country

Causes of Forced Migration	Examples to Correspond
<ul style="list-style-type: none"> ~ Natural or manmade disaster ~ Human trafficking ~ War and civil war ~ Fleeing persecution ~ Slavery ~ Development Projects 	<ul style="list-style-type: none"> ~ Hurricane Katrina ~ International Sex Trade ~ Civil War in Rwanda ~ Afghans fleeing the Taliban ~ Atlantic Slave Trade ~ Three Gorges Dam construction in China

How Refugees Get to the U.S.



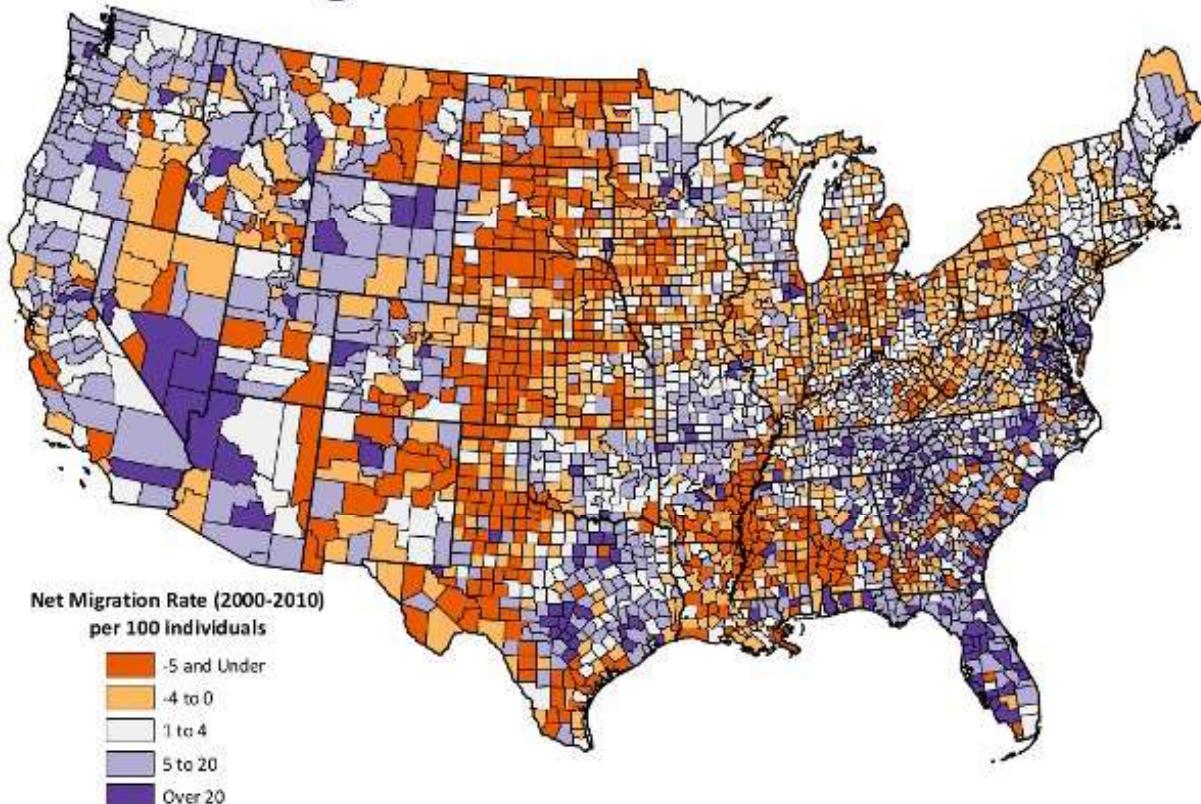
Historical U.S. Migration

U.S. Migration

~ On average every American citizen moves about once every six years

Type	Early Migration	More Recent Migration
Internal	In the early 20 th century, tens of thousands of African Americans migrated from the South to the industrial cities of the Northeast and the Midwest.	In recent decades, more internal migration has occurred to economically dynamic regions of the Sunbelt and Far West.
External	<p>In the early 1800s, immigrants to the U.S. came from Europe, especially Northern Europe (Scandinavia) and Western Europe (Ireland, Germany, Great Britain, France).</p> <p>Later in the 1800s, they came from Eastern Europe (Russia, Poland) and Southern Europe (Italy, Spain, Portugal).</p>	<p>Migration slowed down before the Great Depression.</p> <p>Currently, more Asians and Latin Americans are migrating to the U.S. than Europeans, with Hispanics going to California, Texas, Illinois, and New York, people from the Caribbean going to Florida and New York, and Chinese heading to New York and California.</p>

Internal Migration of the United States 2000-2010



Migratory Effects

Impacts of Migration

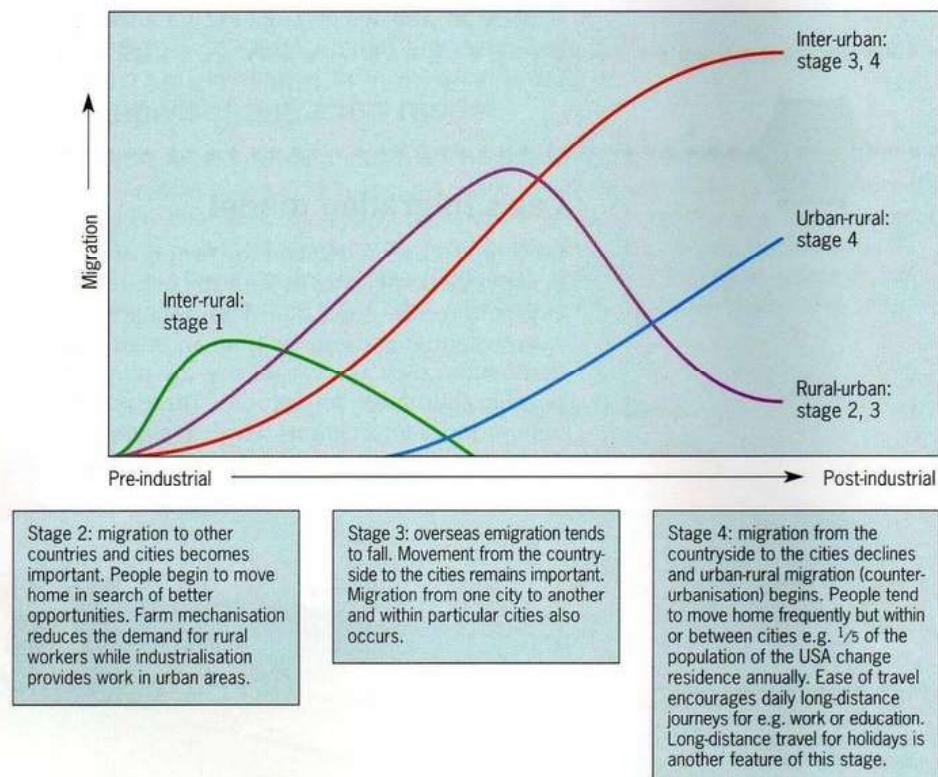
Impacts on the destination country	Impacts on source country
<ul style="list-style-type: none"> ~ help alleviate shortages of workers ~ stimulate the economy (new workers pay taxes and buy goods) ~ new ideas/innovations/cultural diversity ~ willingness to take low pay ~ migrant exploitation ~ strain on public services ~ cultural conflicts 	<ul style="list-style-type: none"> ~ reduction of overcrowding ~ remittances ~ return or counter migration (return to home county) ~ reduced unemployment ~ brain drain ~ loss of young workers

Zelinsky's model of mobility transition

This theory parallels the demographic transition model defining major changes in migration type over time from the pre-industrial to the advanced industrial society.

Zelinsky's mobility transition model

Stage 1: occurs mostly in a subsistence economy. People move about very little and usually only make daily journeys to work in the fields, or less frequent journeys from village to village to sell farm produce.



Stage 2: migration to other countries and cities becomes important. People begin to move home in search of better opportunities. Farm mechanisation reduces the demand for rural workers while industrialisation provides work in urban areas.

Stage 3: overseas emigration tends to fall. Movement from the countryside to the cities remains important. Migration from one city to another and within particular cities also occurs.

Stage 4: migration from the countryside to the cities declines and urban-rural migration (counter-urbanisation) begins. People tend to move home frequently but within or between cities e.g. 1/5 of the population of the USA change residence annually. Ease of travel encourages daily long-distance journeys for e.g. work or education. Long-distance travel for holidays is another feature of this stage.

*The **Zelinsky model** basically demonstrates how people tend to migrate from LDCs with explosive population growth and toward MDCs, which offer more job opportunities.