

II. Population and Migration

Enduring Understandings	Learning Objectives	Essential Knowledge	
A. Knowledge of the geographic patterns and characteristics of human population facilitates understanding of cultural, political, economic, and urban systems	Analyze the distribution of human populations at different scales	Factors that explain patterns of population distribution vary according to the scale of analysis (i.e. local to global)	
		Physical factors (e.g. climate, landforms, water bodies) and human factors (e.g. cultural, economic, historical, political) influence the distribution of people	
	Use population density to explain the relationship between people and the environment	The three methods for calculating population density are arithmetic, physiological, and agricultural .	
	Explain the implications of population distributions and densities	Population distribution and density influence political, economic, and social processes (e.g. redistricting, provision of services such as medical care)	
		Population distribution and density impact the environment and natural resources (e.g. carrying capacity)	
		Population distribution and density affect the need for infrastructure (e.g. housing) and urban services (e.g. sanitation)	
	Analyze population composition	Age, sex, and ethnicity are elements of population composition that may be mapped and graphed at various scales	
		Population pyramids are used to project population growth and decline and to predict markets for goods and services	
	B. Populations grow and decline over time and space	Explain contemporary and historical trends in population growth and decline	Demographic factors that determine population growth and decline are fertility, mortality, and migration
			Rates of natural increase and doubling-times are used to explain population growth and decline
		Social, cultural, political, and economic factors influence fertility, mortality, and migration rates	
Interpret and apply theories of population growth and decline		The demographic transition model may be used to explain population change over time and space	
		Malthusian theory is used to analyze population change and its consequences	
		The epidemiological transition explains causes and changing death rates	
Evaluate various national and international population policies		Types of population policies include those that promote or restrict population growth (e.g. pronatalist, antinatalist)	
Analyze reasons for changes in fertility rates in different parts of the world		Changing social values and access to education, employment, healthcare, and contraception have reduced fertility rates in most parts of the world	
	Changing social, economic, and political roles for women have influenced the patterns of fertility, mortality, and migration		

	Explain the causes and implications of an aging population	Population aging is influenced by birth and death rates, and life expectancy
		An aging population has social (e.g. retirement), economic (e.g. dependency ratio), political (e.g. voting patterns) implications
Causes and consequences of migration are influenced by cultural, demographic, economic, environmental, and political factors	Explain how push and pull factors contribute to migration	Push and pull factors can be cultural (e.g., religious freedom), demographic (e.g., unbalanced sex ratios, overpopulation), economic (e.g., jobs), environmental (e.g., natural disasters), or political (e.g., persecution)
		Push factors are often negative (e.g., poor economic conditions, warfare), while pull factors are often perceived as positive (e.g., a better quality of life, economic opportunities)
	Apply the concepts of forced and voluntary migration to historical and contemporary examples	Forced migrations include those involving refugees, internally displaced persons, and asylum seekers
		Voluntary migrations may be transnational, internal, chain, step, and rural to urban
		Patterns of voluntary and forced migration may be affected by distance and physical features
	Analyze major historical migrations	Major historical migrations include forced migration of Africans to the Americas, immigration waves to the U.S., and emigration from Europe and Asia to colonies abroad
	Analyze the cultural, economic, environmental, and political consequences of migration	Governments institute policies to encourage or restrict migration
		Migration has consequences (e.g., remittances ; spread of languages, religions, innovations, diseases) for areas that generate or receive migrants

From <<https://sites.google.com/a/lphs.org/lphumangeo/unit-ii---population-and-migration>>

Vocabulary

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arithmetic population density	also called pop density, total population relative to land size
physiologic population density	number of people per unit of arable land
population distribution	arrangement of people on Earth's surface
megalopolis	large urban area, Boston to DC
census	formal count of the population
Thomas Malthus	believed population was growing exponentially and food linear, population would outgrow food
natural increase	number of births minus the number of deaths
total fertility rate	number of children a woman has during her child bearing years
old-age dependency ratio	number of people over 65 to the number of people who are working age (15-64)
child dependency ratio	number of children (to age 14) to the working age population (15-64)
doubling time	time for the population to double
zero population growth	population is maintained at a constant level
crude birth rate CDR	live births per 1000 people
crude death rate CBR	number of deaths per 1000 people
demographic transition model	shift in population, 4-5 stages
stage 1 transition	high CBR, high CDR, low population growth
stage 2 transition	high CBR, lowering CDR, high pop growth
stage 3 transition	lowering CBR, slightly lower CDR, pop grows
stage 4 transition	lowering CBR and CDR, low pop growth
stage 5	declining pop Lowering CBR, CDR
stationary population level	population level stays consistent
population pyramid	represent population traits, males on the left, females on the right
poor population pyramid	lots of children, more triangular
wealthy population pyramid	lopsided vase, larger middle
infant mortality rate	number of children who die by year 1 per thousand births
child mortality rate	number of children who die between age 1-5 per thousand births
infectious diseases	illness from invasion of parasites
chronic (degenerative) diseases	illness affecting wealthier countries, maladies of longevity
genetic (inherited) diseases	illnesses passed through ancestry
endemic	disease over a small area
epidemic	disease spread over a region
pandemic	global disease
vectored diseases	infectious disease passed by a vector like a mosquito
non vectored diseases	diseases transmitted by direct contact, person to person
malaria	vectored infectious disease, spread in subtropics and tropics by mosquitoes
AIDS	causes lower life expectancy, most common in sub-Saharan Africa, damages immune system
expansive population policies	government programs meant to encourage citizens to have larger families
eugenic population policies	population policies adopted by governments that favor one sector

restrictive population policies	government sponsored policies to reduce population by encouraging less children
one-child policy	China's program to reduce population increase
A	B
Bracero Program	1940s Us program designed to encourage Mexican laborers to come to the US to work
refugee camp	temporary settlements set up to accommodate people who flee their countries because of civil war, unrest or oppression
remittances	money migrants send back home, important to the home country's economy
reverse remittances	Remittances from foreign lands to the U.S. The struggling migrant asking back home for money.
emigration	person moving away from a country or area
immigration	act of a person moving to a new country or area
cyclic movement	closed loop movement, ususally seasonally or annually (like nomads)
periodic movement	temporary recurrent movement, like college or military
migration	change in residents, designed to be permanent
nomadism	movement among a defined set of places
transhumance	seasonal periodic movement of pastoralists and livestock between highland and lowland pastures
international migration	movement across international borders
internal migration	movement inside of a state
cyclic movement examples	commuting, people who go south for the winter, nomadism
periodic movement examples	migrant workers, transhumance, college students, military
colonization	process in which an entity takes over another place and installs its own government
guest workers	migrant workers from other places
islands of development	place built up by a government or corporation to attract foreign investments, has high paying jobs and infrastructure
Russification	attempt to assimilate all people in Soviet territory into Russian culture
refugee	people who have fled their country because of political persecution and seek asylum in another country
internally displaced persons	people who must flee their homes and remain in their country
asylum	shelter and protection in one state for refugees from another
repatriation	refugee(s) returning to their country, usually with assistance
genocide	intentional and organized attempt to kill an entire group
immigration laws	laws and regulations of a state designed to control immigrations
selective immigration	process to control immigration; usually bars a group from entering

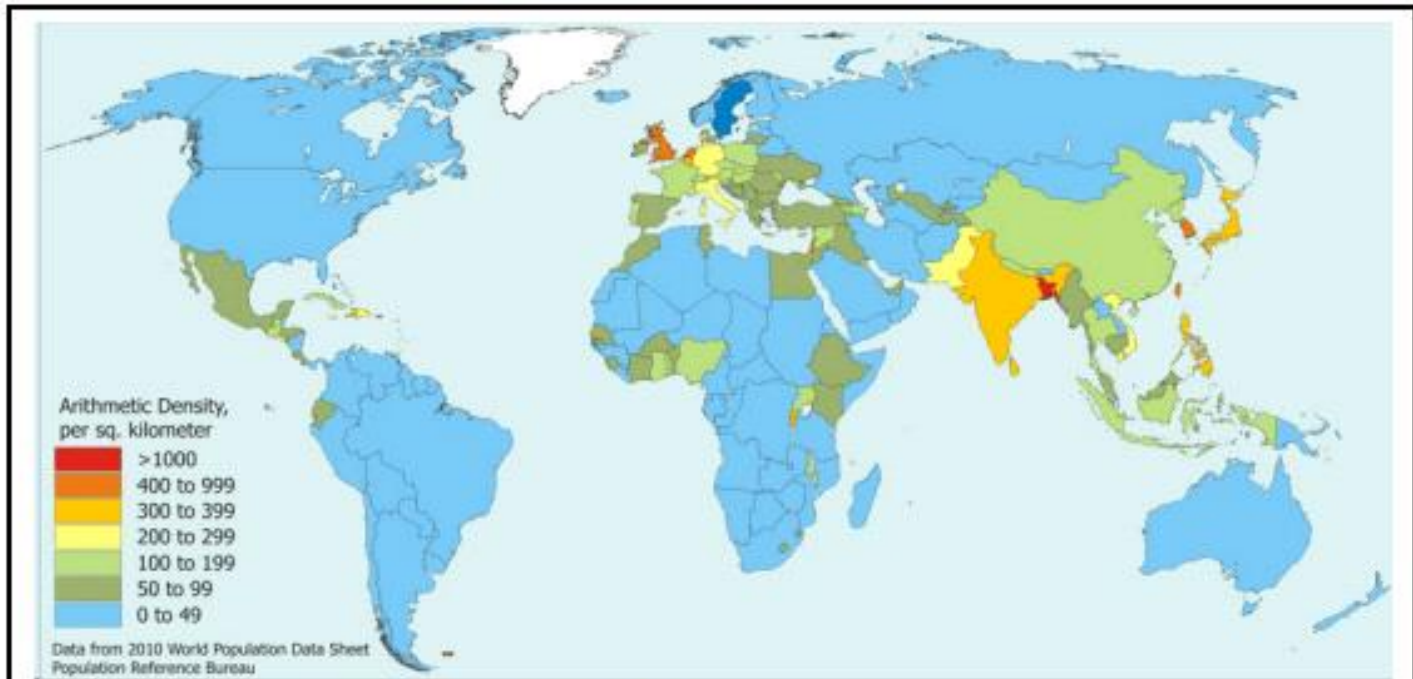
Population Densities

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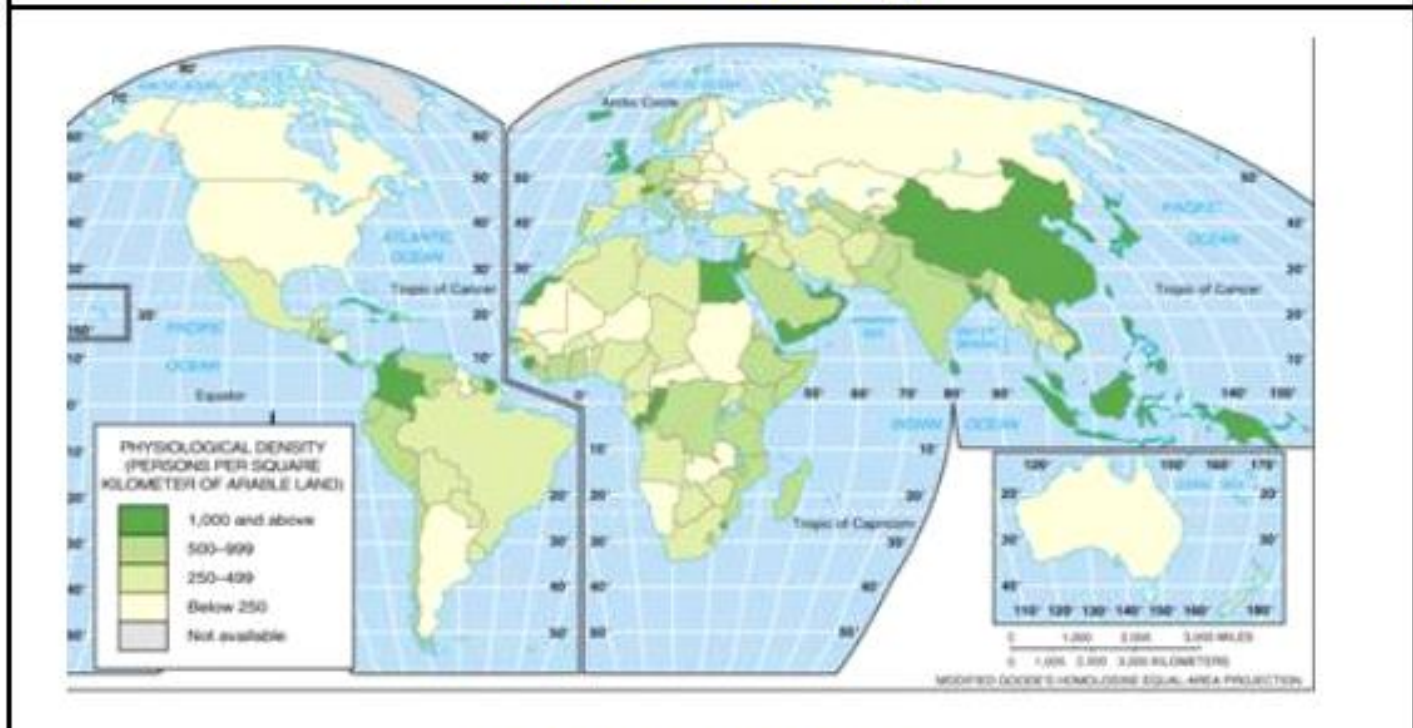
Two main ways to measure population density:

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

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



World's Arithmetic Density



World's Physiological Density

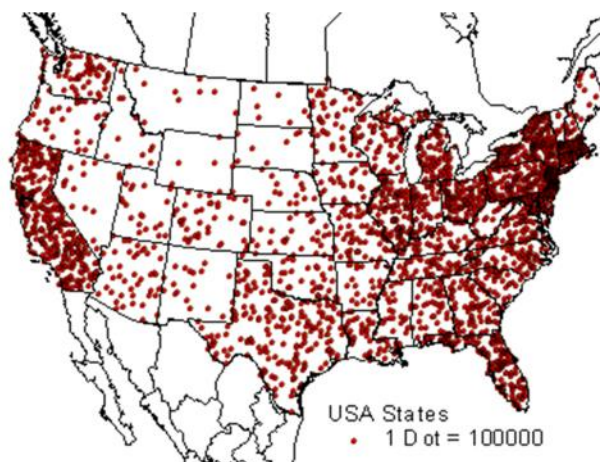
Areas of Population Concentration

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There are several major and one minor cluster of high density population. Some geographer consider South East Asia a high population center while others consider Southeast Asia to be part of South and East Asia.

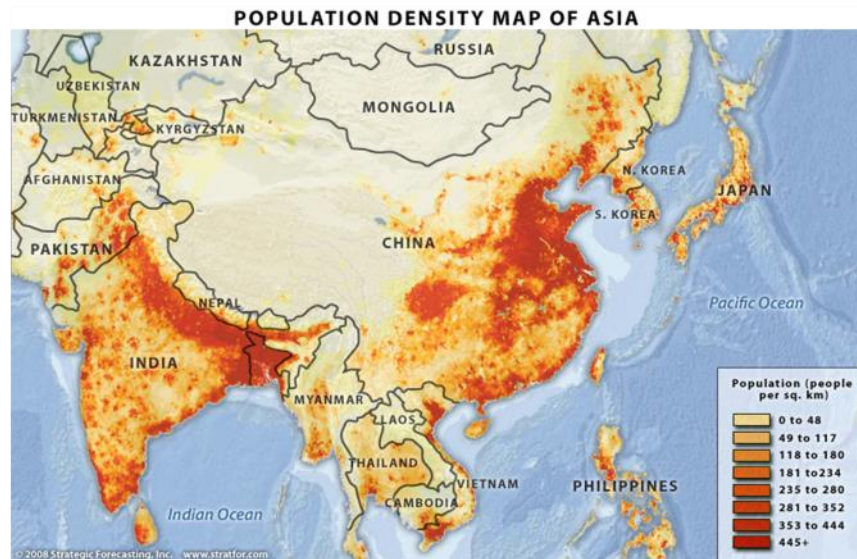
Population Distribution

- Arrangement of people on the Earth's surface
- Often uses dot maps



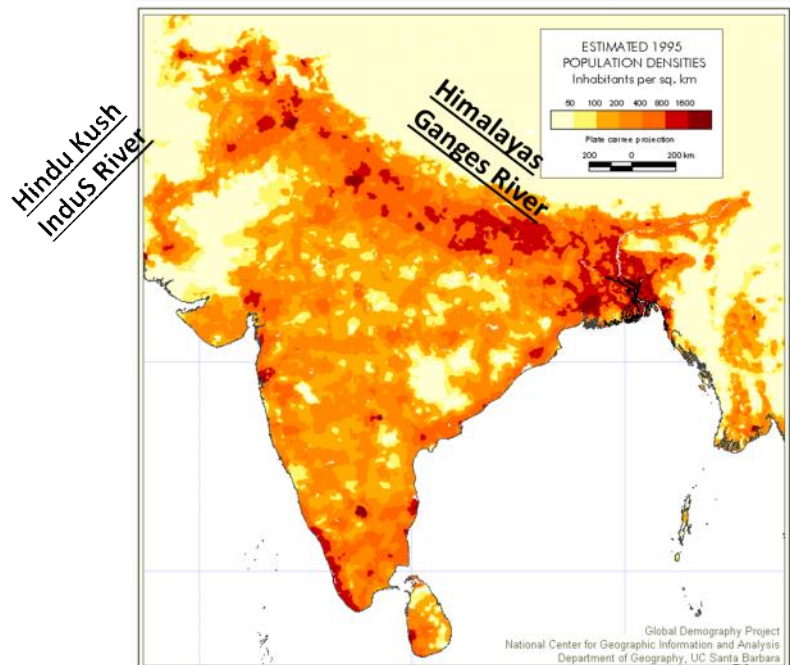
Population Cluster East Asia

- Most China, also Korea, Japan
- 1.36 in China Alone
- Mainly river valleys and Cities



Population Cluster South Asia

- India, Bangladesh, Pakistan, Sri Lanka
- Mainly Indus & Ganges River Valleys, cities
- Bounded by mountains (Hindu Kush & Himalayas)
- India growing fastest in world



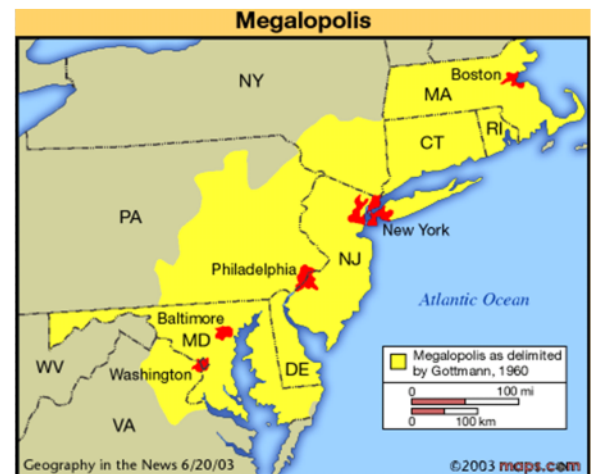
Population Cluster, Europe

- not centered around geographic features like Asia
- More evenly spread and urban than Asia
- Around coal mine towns



Minor Cluster, North America

- Megalopolis
- Count only as reliable as census



Please note that while the main megalopolis runs from Boston to Washington DC, many geographers note there is a another megalopolis forming on the west coast of the United States. The center of the US geographically has moved west and south since the

earliest settlers.

Demographic Transition Model

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NO MODEL IS REAL BUT THEY GIVE A US A GOOD FRAME TO WORK WITH. KNOW THIS MODEL. LOVE THIS MODEL.

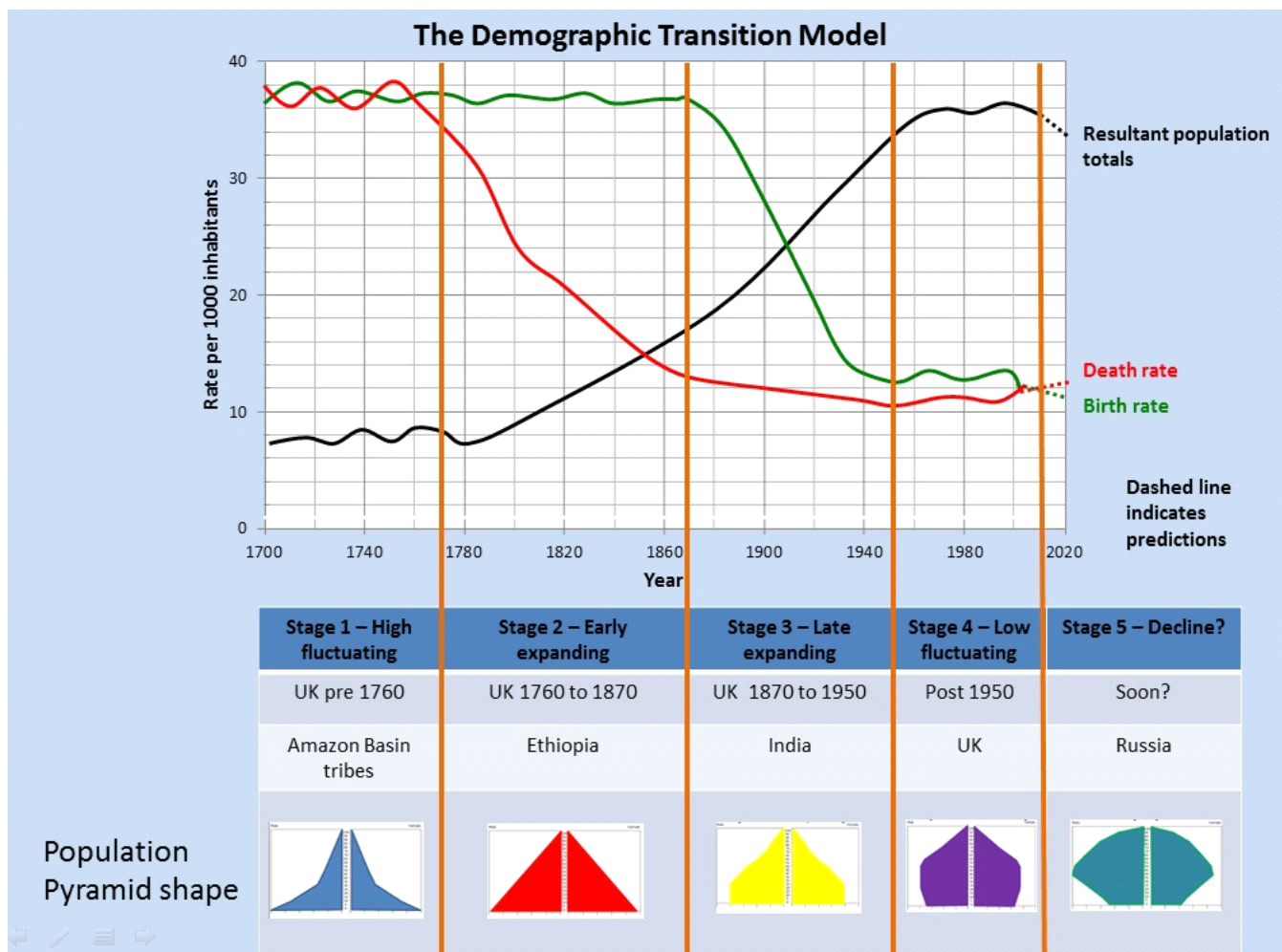
In stage 1 most people are subsistence farmers. One can grow old (assuming high child mortality rates). US in 1700s and early 1800s would be a good example. Most people would be farmers. No country is in stage 1 currently.

In stage 2 happens in great part to clean waters and sewers. Clean water is very important. Some technology emerges - can be very simple. Birth rate is still high because children are still an asset as workers and retirement system. Late stage 2 or early 3 we see a huge drop in death rates. Families have high rates of children.

Stage 3 - Start of the Industrial Revolution and urbanization becomes common by the later part, perhaps commercial agriculture (2nd Agriculture Revolution). Children are not as big of an asset. They are mouths to feed. Stage 2 to 3 will see the highest population increase and heavy, heavy immigration for jobs.

Stage 4 - Population growth is slow. Women typically have more equality. This is a developed nation. The US is likely a 4. If there was no longer immigration entering the country, we might be a Stage 5.

Stage 5 would be countries like Japan, Spain, and perhaps Italy.

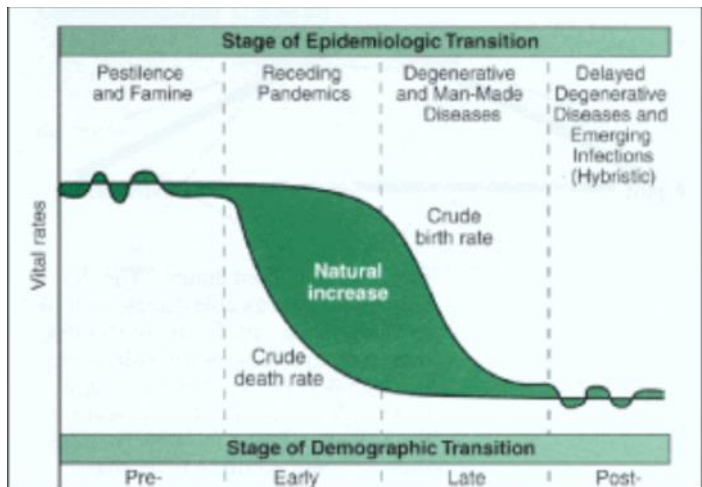


Demographic Transition Model Song Link

From <http://newellta.weebly.com/demographic-transition-model.html>

Epidemiological Transition Model

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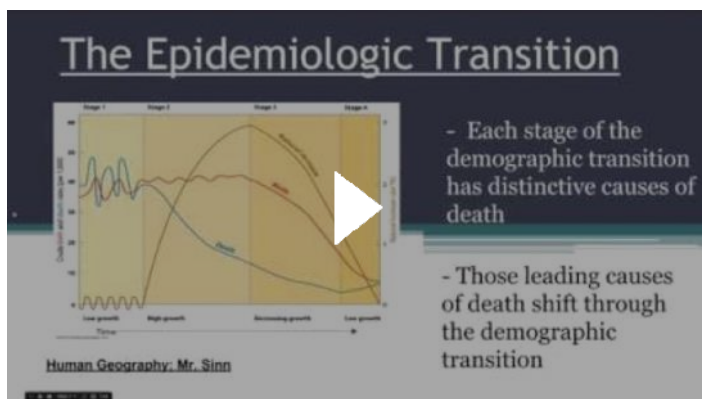
Epidemiological transition model-Distinctive causes of death in each stage of the demographic transition model.

1. The first transition occurs because the human population and growth numbers depart from the usual cycle because of maybe death, famine, or war.
2. While in the second transition there seems to be the receding of the pandemic.
3. While in stage 3 there seems to be a decline of deaths through famine and disease, and there seems to be more chronic disorder deaths, such as heart attacks, tumors, or aging in general.
4. In stage four is the stage of delayed degenerative diseases, but the leading causes of death would be cardiovascular diseases and distinct types of cancers.
5. In stage 5 there is the reemergence of the pandemic because of anti-biotic resistant bugs. Such as insects which are immune to insect pesticides, and produce more baby insects which would also be resistant.

Flaws – heart disease in MDCs, AIDS/HIV (in both LDCs and MDCs), obesity in U.S. impacting the rich

Population Unit: The Epidemiologic Transition Model

Mr. Sinn



[Disease! Crash Course World History 203](#)



From <http://newelta.weebly.com/epidemiological-transition-model.htm>

Population Pyramids

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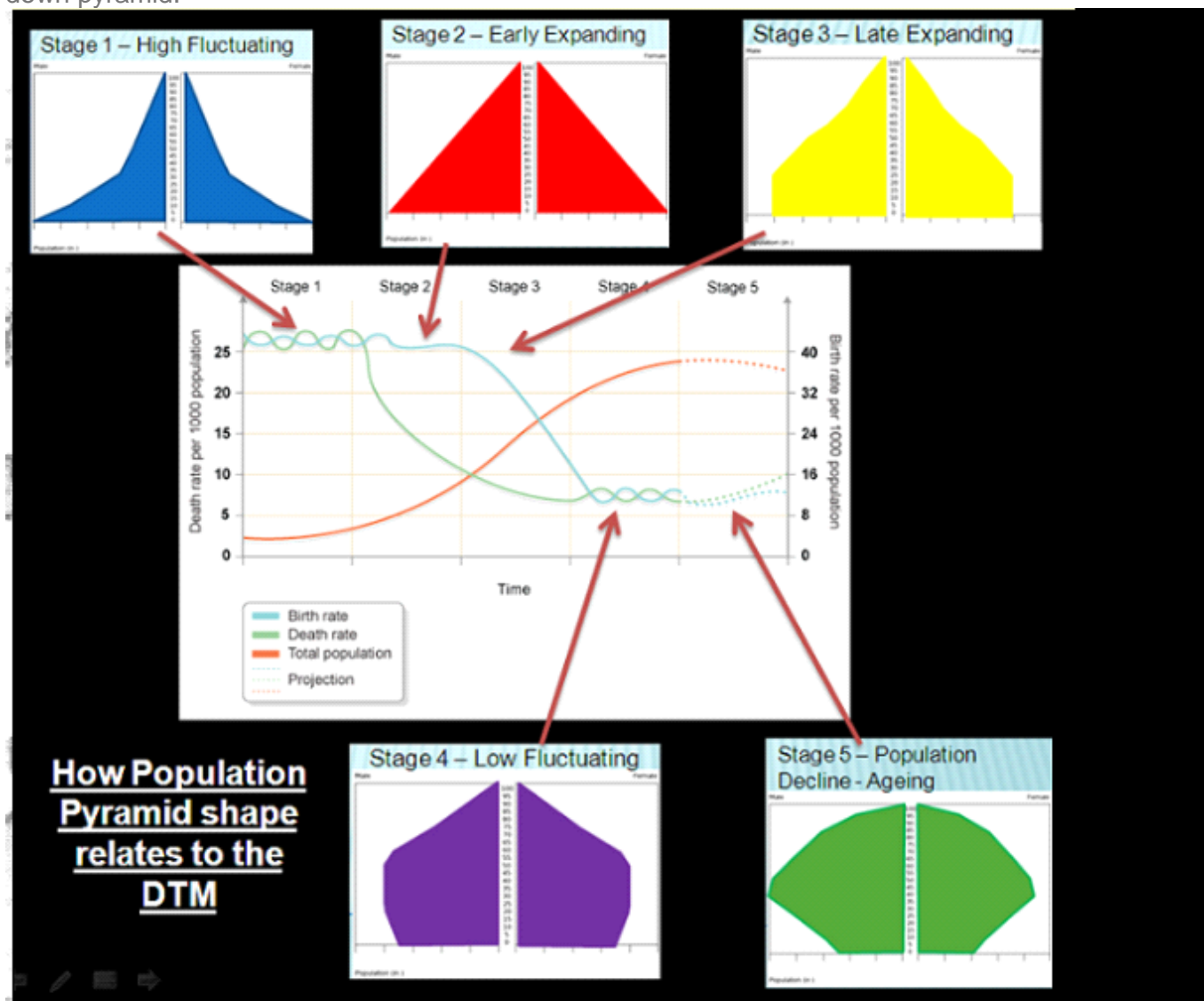
adapted from: http://www.bbc.co.uk/schools/gcsebitesize/geography/population/population_change_structure_rev1.shtml

Analysing population pyramids Key things to know about population pyramids

- The shape of a population pyramid can tell us a lot about an area's population.
- It gives us information about birth and death rates as well as **life expectancy**.
- A population pyramid tells us how many dependants there are. There are two groups of dependants; young dependants (aged below 15) and elderly dependants (aged over 65).
- Dependants rely upon the economically active for economic support.
- Many LEDCs have a high number of **young dependants**, whilst many MEDCs have a growing number of **elderly dependants**.

How do pyramids change over time?

- A population pyramid that is very triangular (eg Mozambique in 2000) shows a population with a high number of young dependants and a low life expectancy.
- A population pyramid that has fairly straight sides (more like a barrel) shows a population with a falling birth rate and a rising life expectancy.
- Over time, as a country develops, the shape changes from triangular to barrel-like.
- Places with an ageing population and a very low birth rate would have a structure that looks like an upside-down pyramid.

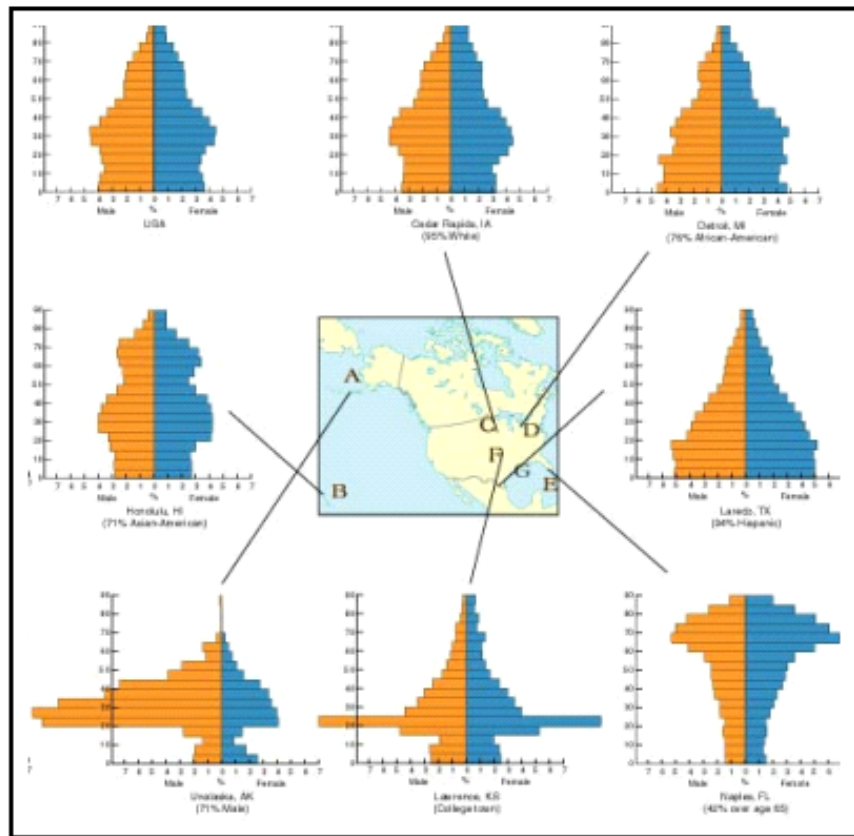




*The chart above shows the variance between countries, while the chart to the right shows how things like having an extremely dangerous main industry (Unalaska, AK), a college town (Lawrenceville, KS) or a retirement community (Naples, FL) can skew a population pyramid.

Other definitions:

- ~ **Replacement Rate:** The number of children necessary to maintain the current population.
- ~ **Dependency Ratio:** The percent of people in non-working ages (under 15 or over 65) divided by the number of working age people (15-65)
- ~ **Sex Ratio:** It is simply the ratio of males to females.



World Pyramids Pyramid Practice

[Population pyramids: Powerful predictors of the future - Kim Preshoff](#)



From <http://newellta.weebly.com/population-pyramids.html>

Three main types of Population Policies

I. Expansive Population Policies (Pro-Natalist 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)

B. Examples:

1. Nazi Germany to favor 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

Pro-Natalist Propaganda



Anti-Natalist Propaganda

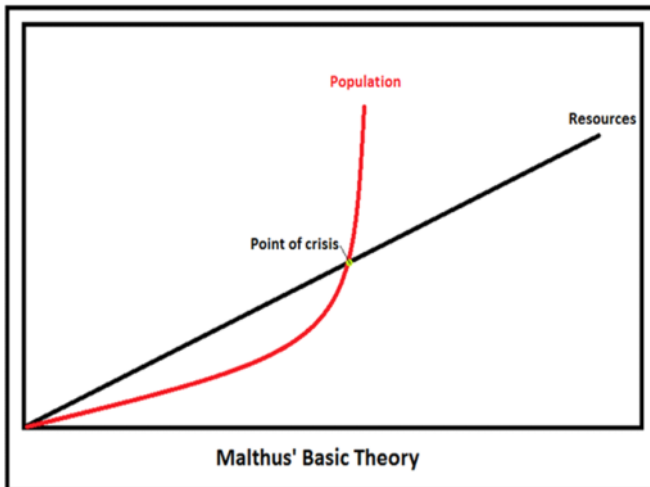


Eugenics Propaganda



Thomas Malthus (1766-1834)

- a. British economist and demographer who wrote *Essay on the Principle of Population* (1798) and created the term “overpopulation”
- b. Food production increases arithmetically (linear) but human population increases exponentially => human population growth will eventually outpace people’s ability to produce food => widespread starvation and disease
 - **Linear growth:** Occurs evenly across each unit of time (100 people per year)
 - **Exponential growth:** Growth as a percentage of the total population (10% every year)



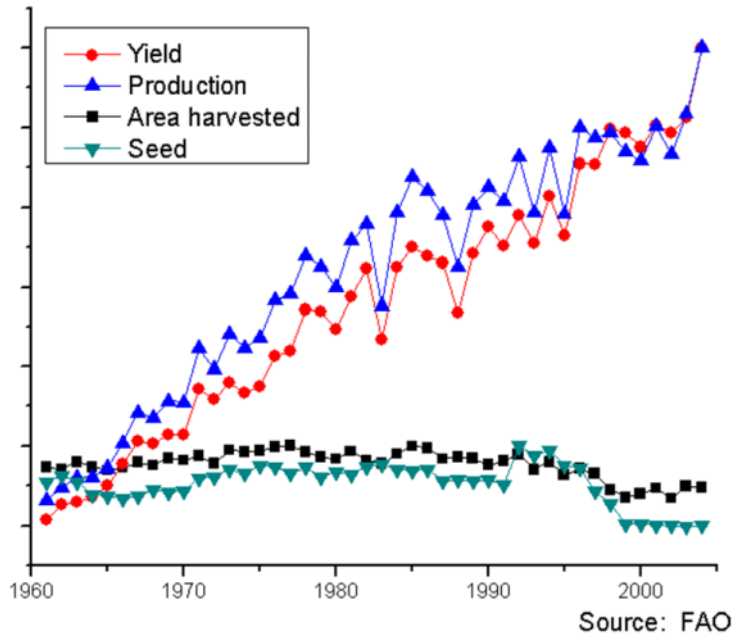
c. Neo-Malthusians'

- 1) High birthrate/population in LDCs outpace their resources
=> mass migration from LDCs to MDCs => increased birthrate/population in MDCs
=> strained resources and food supplies in MDCs
- 2) The world is running out of all resources, not just food

d. Arguments against Malthus

- 1) Technological advances in agriculture (including Green Revolution)
- 2) Creation of reliable birth control
- 3) Globalization of food supply

Total world production of coarse grain, 1961-2004



“The power of population is so superior to the power of the earth to produce subsistence for man that premature death must in some shape or other visit the human race. The vices of mankind are active and able ministers of depopulation. They are the precursors in the great army of destruction, and often finish the dreadful work themselves. But should they fail in this war of extermination, sickly seasons, epidemics, pestilence, and plague advance in terrific array, and sweep off their thousands and tens of thousands. Should success be still incomplete, gigantic inevitable famine stalks in the rear and, with one mighty blow, levels the population with the food of the world.”

– Thomas Malthus

[Population, Sustainability, and Malthus: Crash Course World History 215](#)





- ~ **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.

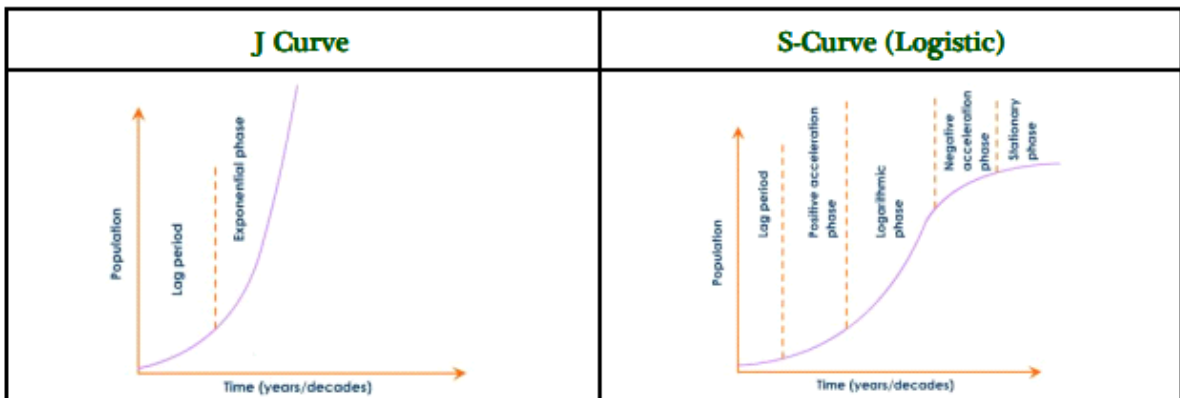
*****This is Malthus' Population Theory*****

~ The **J-Curve** shows how population grows slowly and then skyrockets

Explanation of difference between arithmetic growth and geometric/exponential 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/exponentially 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)	Conucopian Theory (Disagree with Malthus)
<p>~ Think Malthus predictions will come true by 2050.</p> <p>~ Created the S-Curve (logistic model) to show how at higher population densities, limited resources lead to competition and eventual end to population growth</p>	<p>~ Ester Boserup argued in the 1960s that increase in population would create increase in work force and thus more food.</p> <p>~ The Corucopian Theory suggests human invention and innovation will help expand food supply</p>

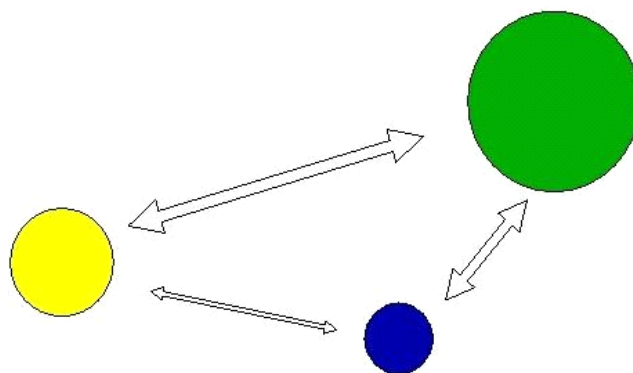


Predicts interaction between places on the basis of their population size and distance between them.

Assumes that spatial interaction (such as migration) is directly related to the populations and inversely related to the *distance* between them

Gravity Model

Illustration of the Gravity Model



The shorter the distance between two objects, and the greater the mass of either (or both) objects, the greater the gravitational pull between the objects.

Ravenstein's Laws of Migration

1) Most migrants only move a short distance.

2) There is a process of absorption where people immediately around a rapidly growing town move into it and the gaps they leave are filled by migrants slightly further away and so forth.

3) Once in cities, people disperse out. (Dispersion opposite of absorption)

4) Each migration flow produces a compensating counter-flow

5) Long-distance migrants go to one of the great centers of commerce and industry

6) People are less likely to migrate from urban areas than they are from rural area

7) Females are more likely to migrate than men

8) Economic factors are the main cause of migration

Cyclic Movement

Involves journeys that begin at our home base and bring us back to it

Regular sequences of short moves within a local area = **activity spaces**

Commuting, Seasonal movement, Nomadism

Periodic Movement

Involves a longer period of time away from the home base than cyclic movement

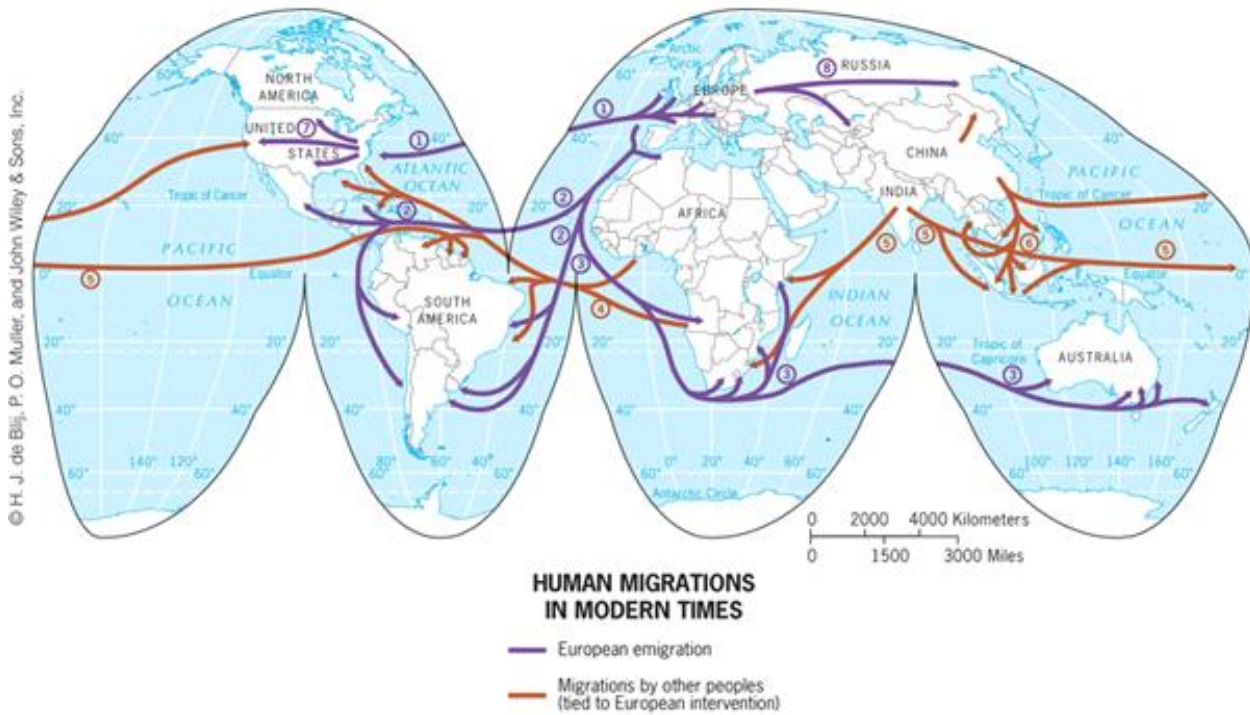
Transhumance, a system of pastoral farming where ranchers move livestock according to the seasonal availability of pastures

College attendance, Migrant labor, Military service

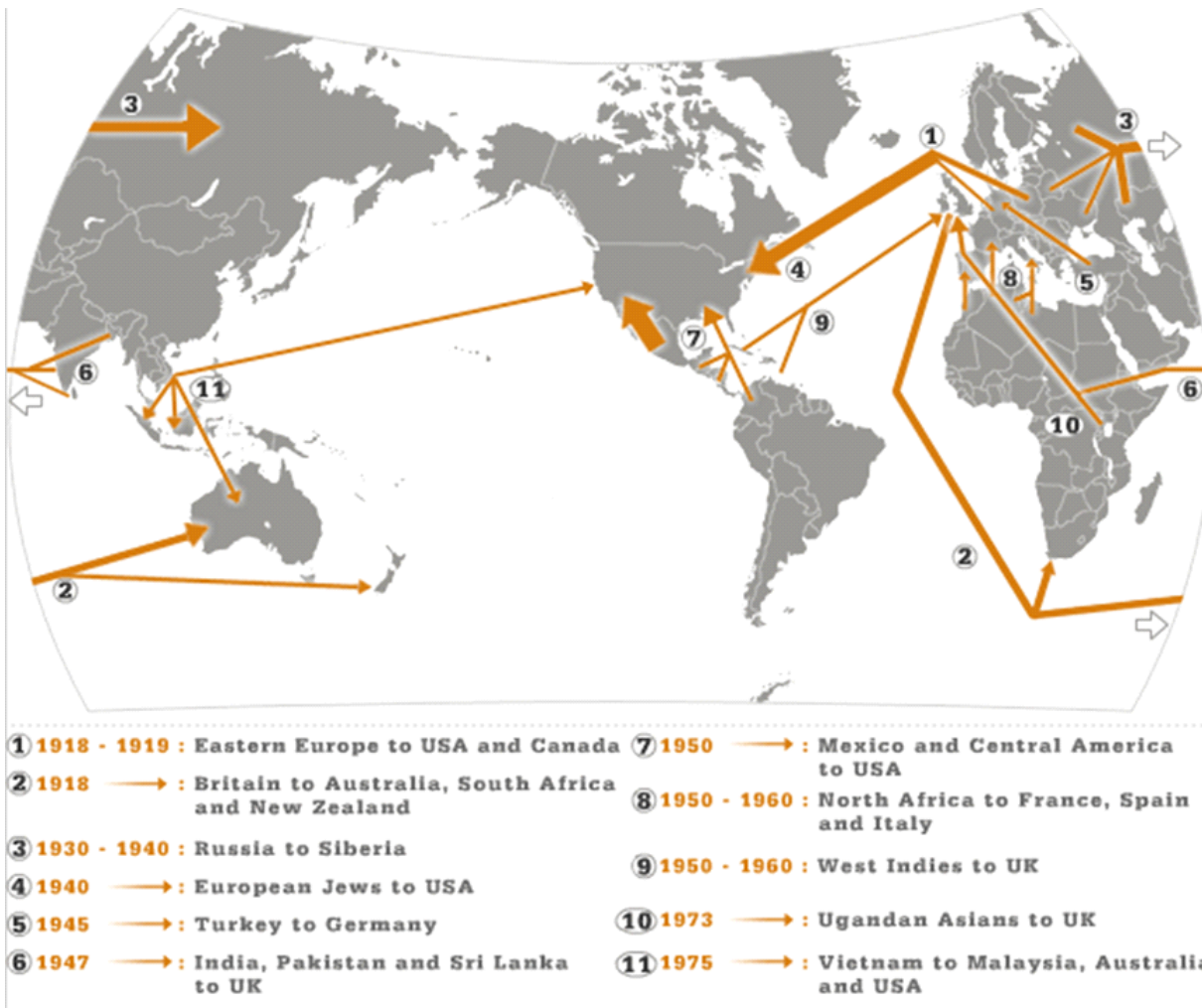
From <<http://newellta.weebly.com/migration-and-refugees.html>>

Major Migration Flow

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first wave of European immigration	1800-1880, western and northern Europeans
second wave of European immigration	1880-1921, eastern and southern Europeans
Europe to America	settled, colonists, post-colonial flow
Iberia (Spain and Portugal)	middle and southern Americas
Britain	North America, New Zealand, Australia, South Africa
West Africa	Americas, Atlantic Slave Trade
India	South Africa, forced indentured
China	to SE Asia and the Americas
North America	manifest destiny, push to move westward
Russia	sent people east to settle central Asia



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	In the early 1800s, immigrants to the U.S. came from Europe, especially Northern Europe (Scandinavia) and Western Europe (Ireland, Germany, Great Britain, France) . Later in the 1800s, they came from Eastern Europe (Russia, Poland) and Southern Europe (Italy, Spain, Portugal) .	Migration slowed down before the Great Depression. 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.

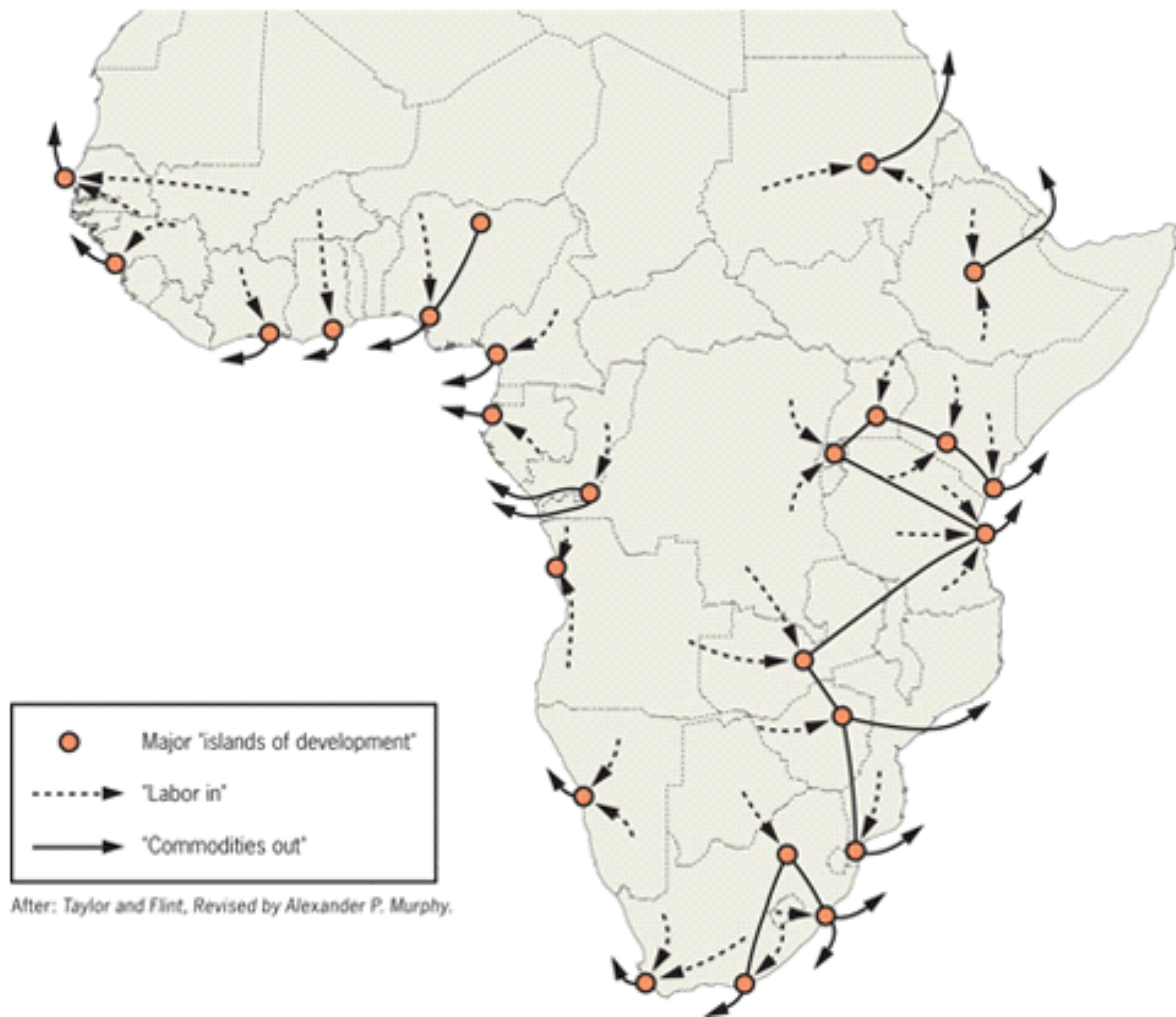
Eastern Europe (Russia, Poland)
and **Southern Europe (Italy, Spain,**
Portugal).

Caribbean going to Florida and New
York and **Chinese** heading to New
York and California.

From <<https://www.quia.com/jg/2787191list.html>>

Islands of Development

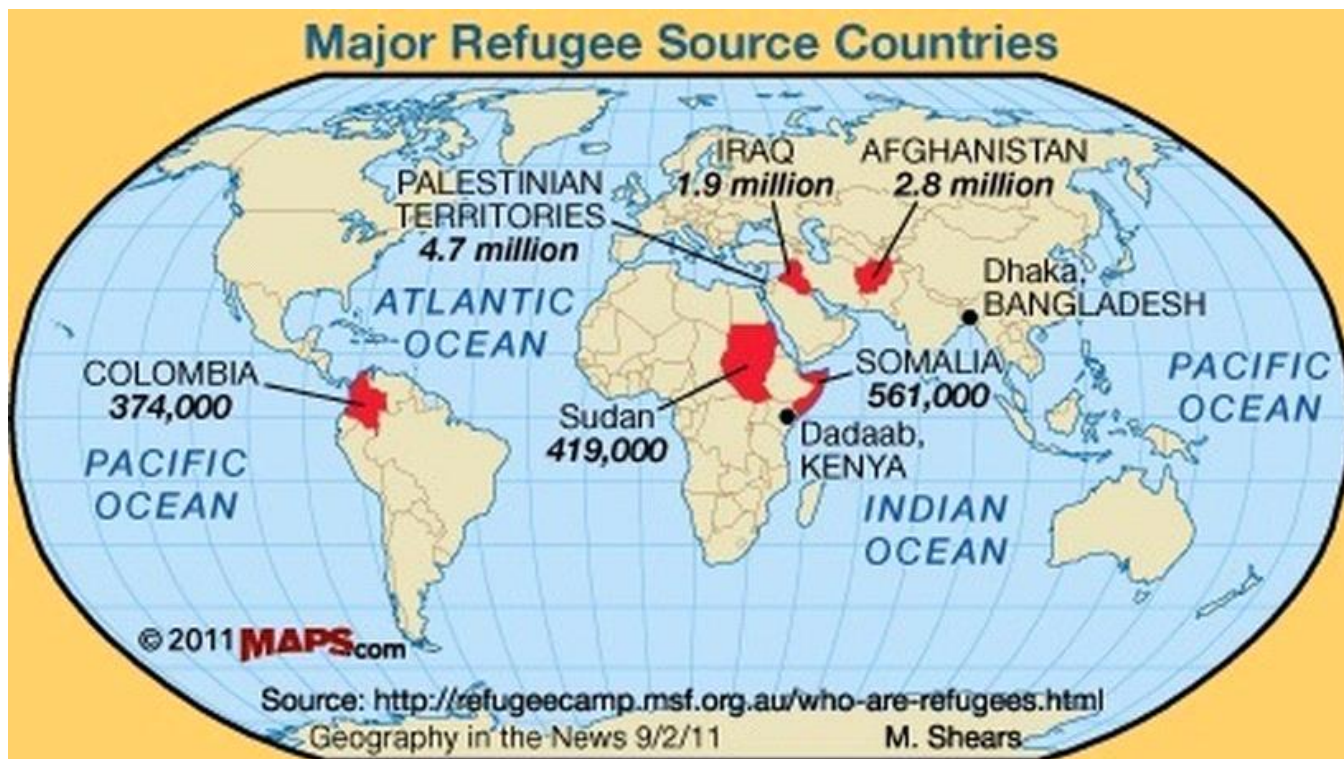
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These are examples of regional movements. Islands of development prove Ravenstein's immigrants move to cities for opportunities. Many Islands of development are bolstered by transnational corporations or the government. These cities have a built up infrastructure in comparison to surrounding areas.

Refugees and IDPs

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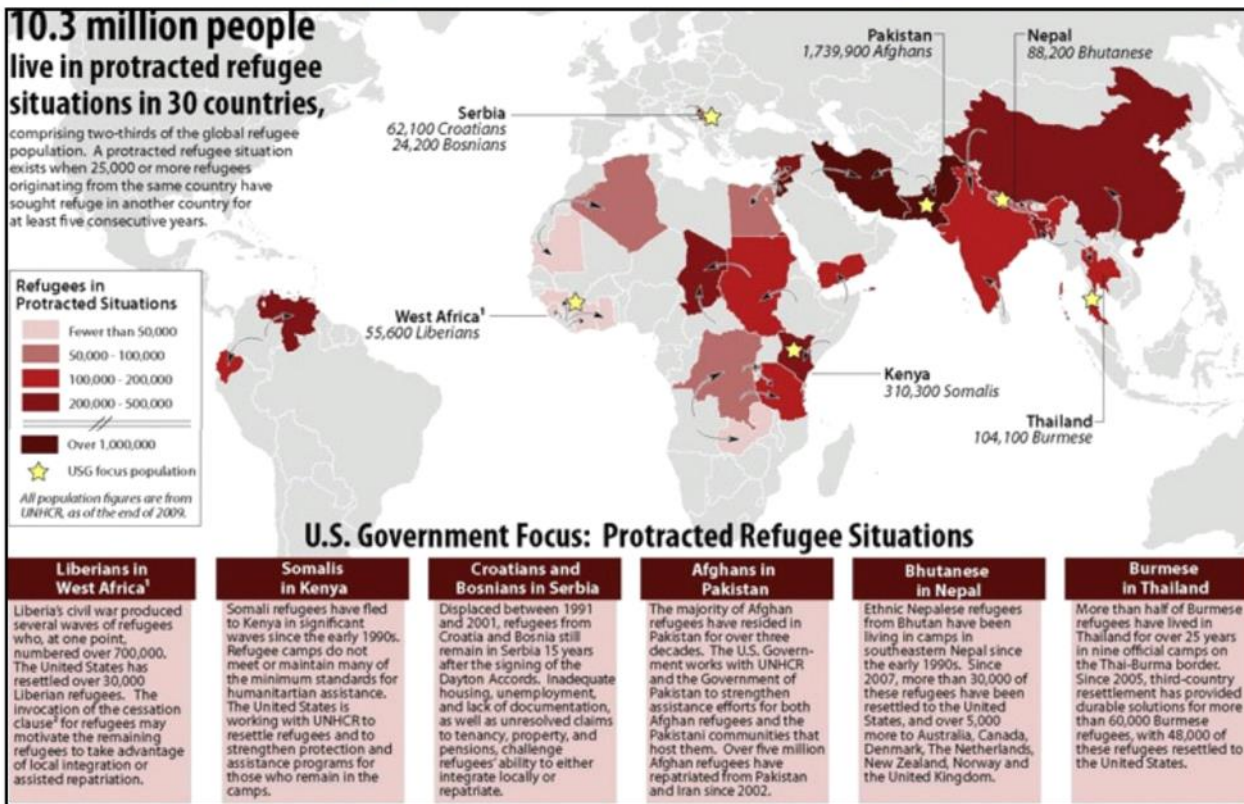


Forced Migration – Refugees

Key Terms:

- ~ **Forced migration:** Migration in which the individual or group migrating have no say about where they are going or when
- ~ **Refugee:** An individual that leaves his/her 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 Refugee (IDP):** Refugee that did not escape their country

**U.S. Chart of protracted refugee situations
(Refugee situations that have lasted more than 5 years)**



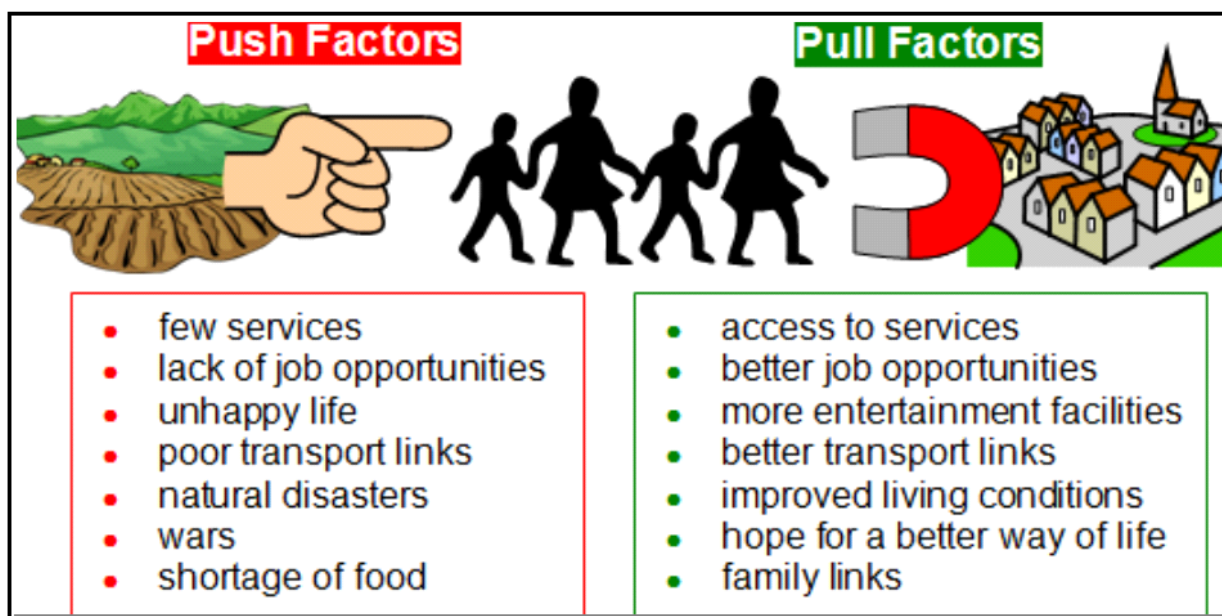
Causes of Forced Migration	Examples to Correspond
<ul style="list-style-type: none"> ~ Natural or manmade disaster ~ Human trafficking ~ War and civil war ~ Fleeing persecution ~ Slavery ~ Development Projects 	<ul style="list-style-type: none"> ~ Hurricane Katrina ~ International Sex Trade ~ Civil War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

Push and Pull Factors

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Basic terms:

- ~ **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
- ~ **Internal migration** – Migration that occurs within a country's borders
- ~ **External migration** – Migration from one country or continent to another



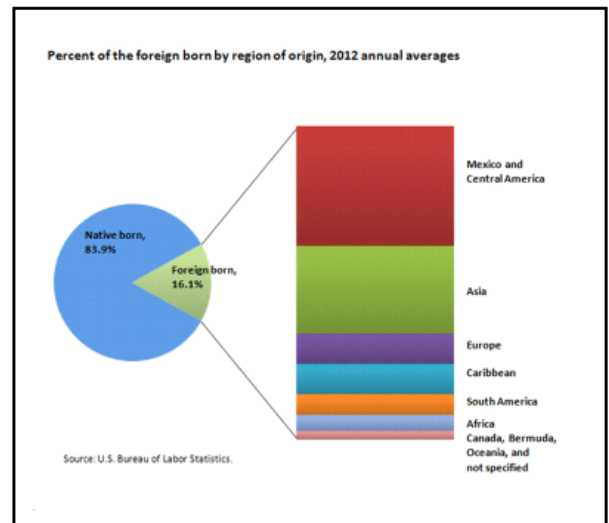
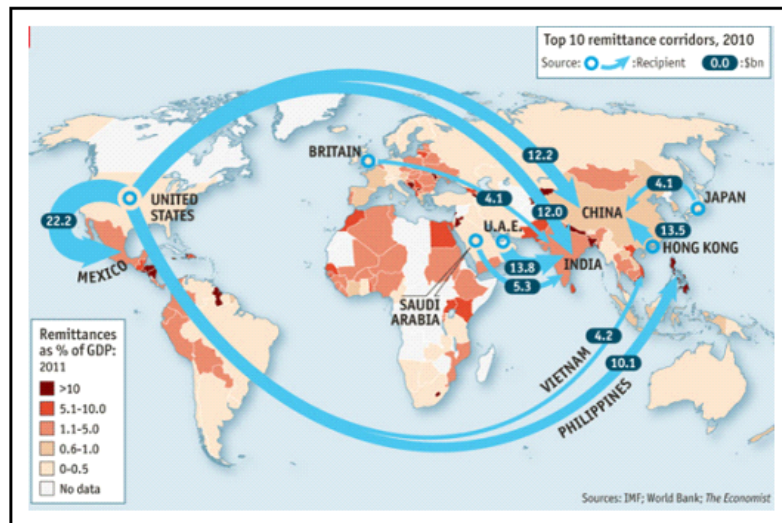
The largest reason for people moving is economic. If a migrant finds a good opportunity and stops their movement early it is called an intervening opportunity. If they reach a difficulty and stop their migration short it is called an intervening obstacle.

Impacts of Migration

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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"> ~ remittances ~ return or counter migration (return to home county) ~ reduced unemployment ~ brain drain ~ loss of young workers



- ~ 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)
- ~ remittance: when a migrant worker sends money back to their home family
- ~ guest (temporary) workers: temporarily live and work in host country
- ~ chain migration: more people related socially to the migrant will also migrate (like Chinatown)
- ~ acculturation: migrants adding some of their new home's culture to their original culture
- ~ brain drain: when the most educated people of a country migrate elsewhere for "better" life