

2.3 & 2.9 Population Composition

Objective and Essential Learning

2.3 Describe elements of population composition used by geographers.

- Patterns of age structure and sex ratio vary across different regions and may be mapped and analyzed at different scales.

2.3 Explain ways that geographers depict and analyze population composition.

- Population pyramids are used to assess population growth and decline and to predict markets for goods and services.

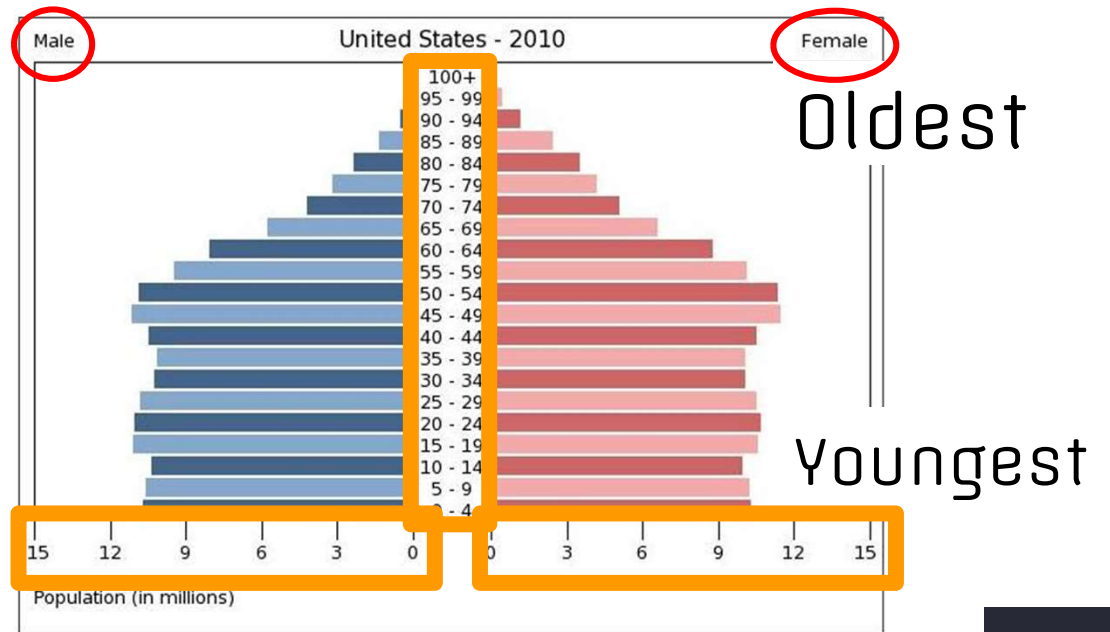
2.9 Explain the causes and consequences of an aging population.

- Population aging is determined by birth and death rates and life expectancy.
- An aging population has political, social, and economic consequences, including the dependency ratio.



Population Pyramids

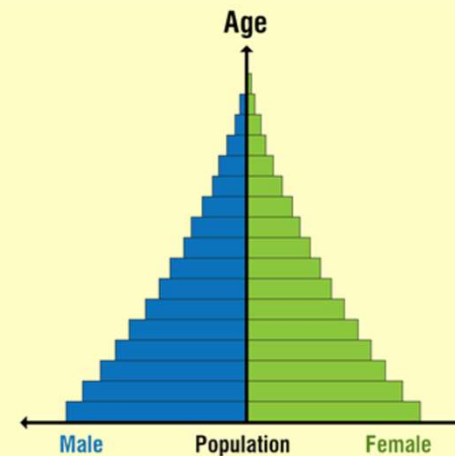
- Depicts Age Structure of a given population
- Uses age categories (in groups of 5)
- Divided by gender
 - Males on left side
 - Females on right side



Expansive Pyramid

- **Wide base = very high birth rate**
- **Narrows very quickly = high death rate**
- **Very few reach old age**
- **Example: Nigeria**

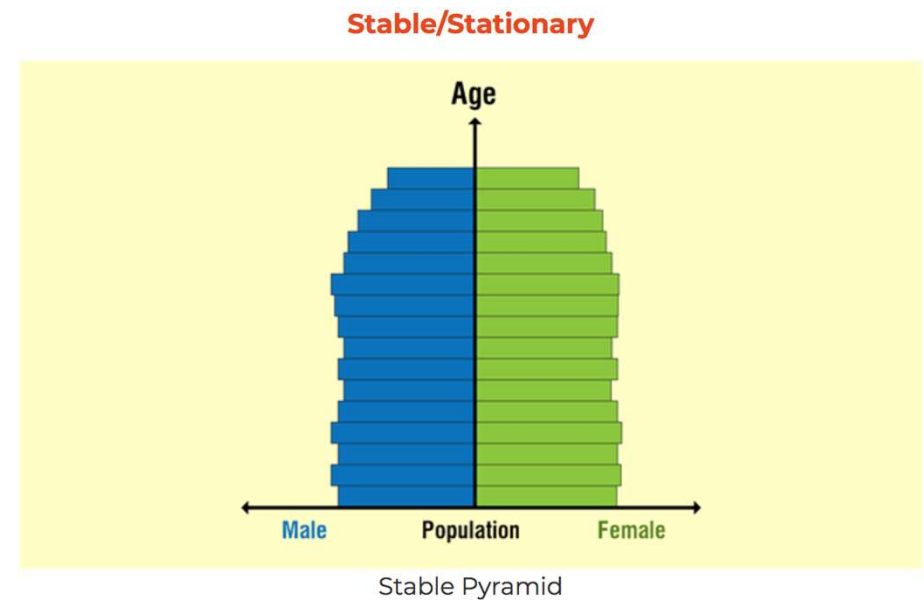
Expansive



Expansive Pyramid

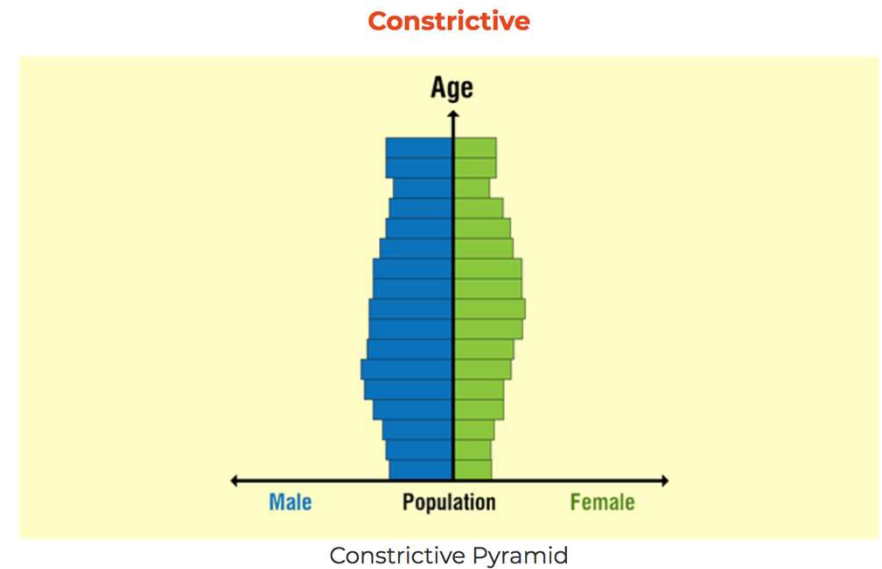
Stable/Stationary Pyramid

- Equal distribution of population
- Low birth rate
- Low death rate
- Stable/slow population growth
- Example: USA



Constrictive Pyramid

- Larger older pop. than younger pop.
- Extremely low birth rate
- Low death rate
- Negative population growth
- Example: Germany



THE POPULATION PYRAMID

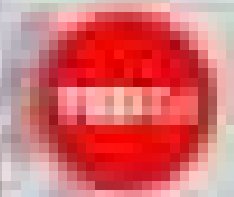
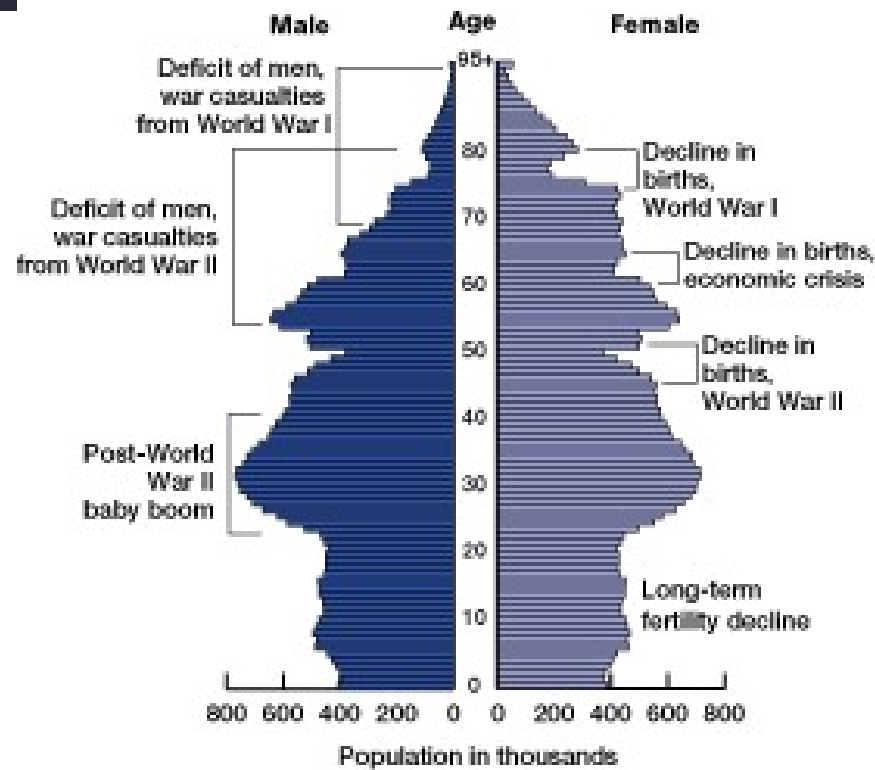


Figure 7

Germany's Population by Age and Sex, 1996



Dependency Ratio

Dependency Ratio: The number of people in a dependent age group divided by the number of people in the working-age group multiplied by 100.

- under the age of 15 and over the age of 65
- What is the demand being placed on the working age population to provide for the dependent population?
 - Youth dependency
 - Elderly dependency



Dependency Ratio

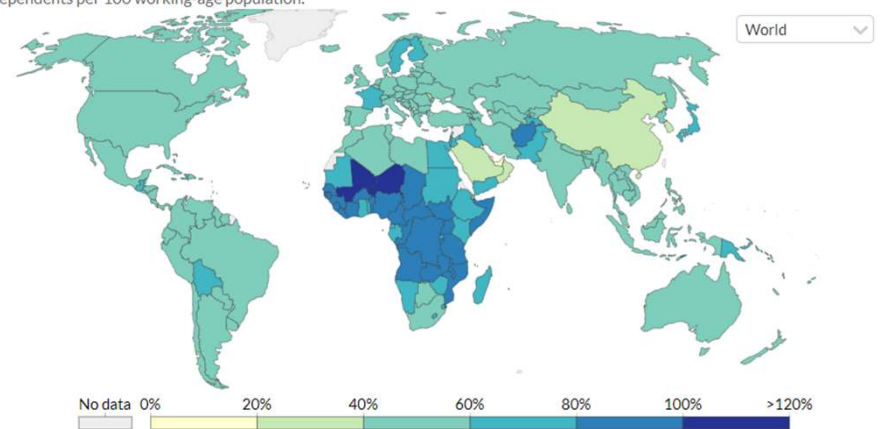
Impacts of Dependency Ratio

- **High dependency ratio =**
 - # of people NOT working
 - Not earning an income
 - Not paying taxes
 - Dependent on state healthcare?
 - Schools?
 - Living facilities?
 - Hospitals?
- **Working population face =**
 - Higher taxes

Age dependency ratio, 2017

The age dependency ratio is the sum of the young population (under age 15) and elderly population (age 65 and over) relative to the working-age population (ages 15 to 64). Data are shown as the number of dependents per 100 working-age population.

Our World
in Data



Source: World Bank

OurWorldInData.org/world-population-growth • CC BY

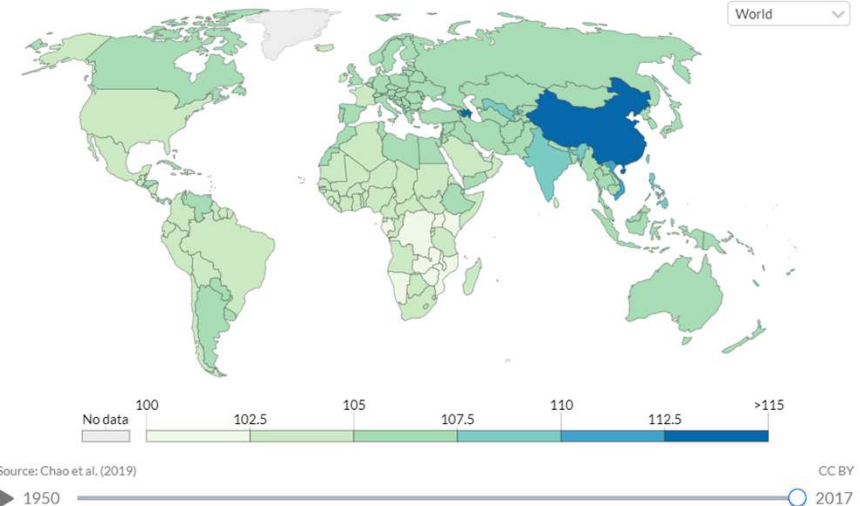
Sex Ratio

Sex Ratio: The proportion of males to females in a population.

- Important to examine at multiple scales!
- What would cause fewer women or fewer men in a society?
 - War
 - Insufficient healthcare for women
 - Migration
 - Gendercide/Sex-Selective Abortions

Sex ratio at birth, 2017

Sex ratio at birth, measured as the number of male births per 100 female births. Birth ratios are slightly male-biased, with an expected biological ratio of 105 male per 100 female births.

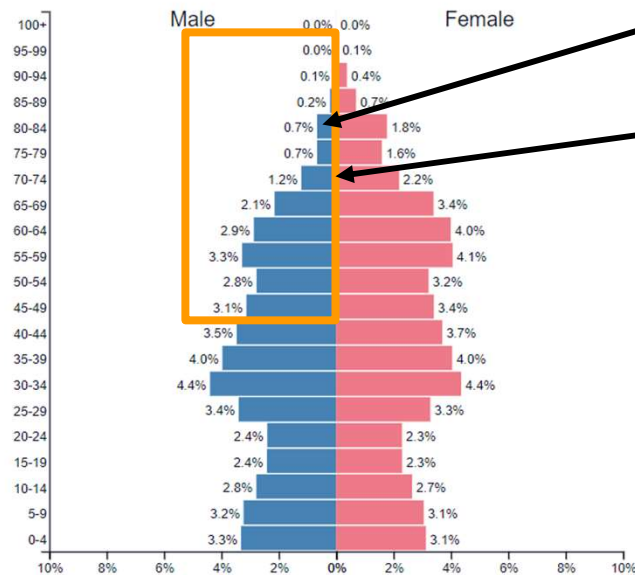


Sex Ratio

Russian Federation ▼

2019

Population: 145,872,259



There are more women ages 80 & up alive because many men in that age group were killed during World War II.

1950 - The Cold War is underway. Soviets get involved in wars and invasions in their sphere of influence: Korea, Vietnam, Czechoslovakia, Afghanistan, etc. More men serve in the military and die.

Life Expectancy for Russian Women: 76 years old

Life Expectancy for Russian Men: 64 years old

- Alcoholism, suicide, disease (cardiovascular, cancer, tuberculosis)