

POPULATION DYNAMICS

Ecology

Definition: Crude Birth Rate

- Crude birth rate:
 - Number of births occurring per year, per 1000 people.



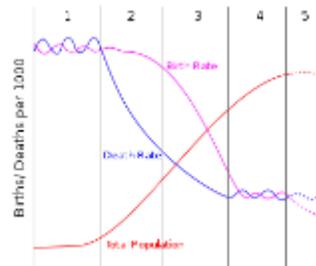
Definition: Crude Death Rate

- Crude death rate: number of deaths per year per 1000 people.



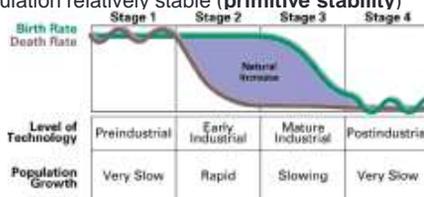
Demographic Transition

- When birth rates are greater than death rates, population increases rapidly.
- Countries undergo demographic transition as they become more developed and industrialized.



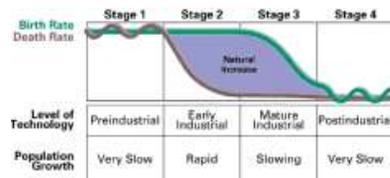
Demographic Transition: Stage 1

- Stage One:** High crude death rate and high crude birth rate – why?
 - Drought, famine and disease
 - Children contributed to the household and worked (\$\$\$ benefit)
- Population relatively stable (**primitive stability**)



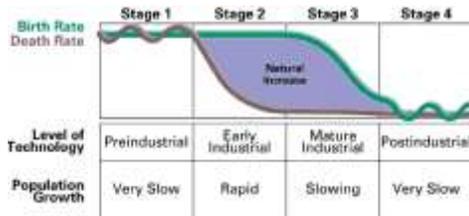
Demographic Transition: Stage 2

- Stage Two:** Crude death rates begin to decline
 - Due to agricultural/industrial revolution
 - Advances in medicine, science and sanitation
- Population begins to increase rapidly



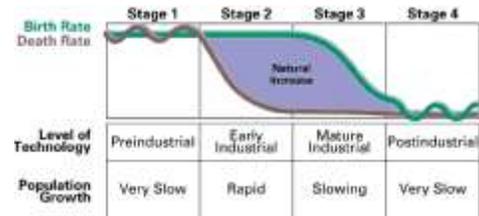
Demographic Transition: Stage 3

- Birth rate is decreasing; why?
 - Rural → urban societies
 - No child labor
 - Costs of education
 - Expectation of low childhood mortality



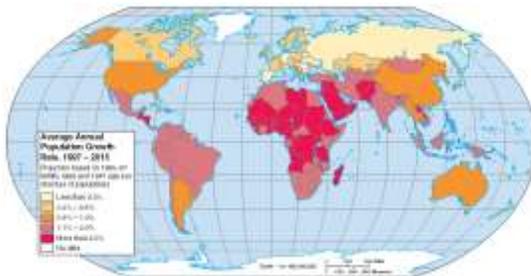
Demographic Transition: Stage 4

- Crude birth rate decreases
 - More or less becomes equal to crude death rate
- Population stabilizes
 - Called "modern stability"



Global Demographic Transition?

- Globally, have we reached Stage Four?
- Not really, because different countries are at different stages of demographic transition.



Developing Countries

- Developing or "Less-Developed" countries are:
 - Lower income
 - Low manufacturing
 - Less industrialized
 - Tend to have lower levels of literacy, per capita income, life expectancy, and general standard of living.



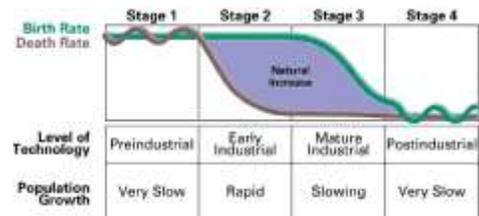
Developed Countries

- Higher income
- More industrialized
- Connected to global economies
- Higher standards of living, literacy, life expectancy, and more



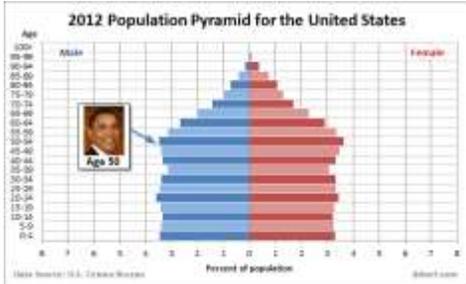
Development and Demographic Transition

- Developing countries are in phase 2 – 3 of the transition
- Developed countries are in phase 4

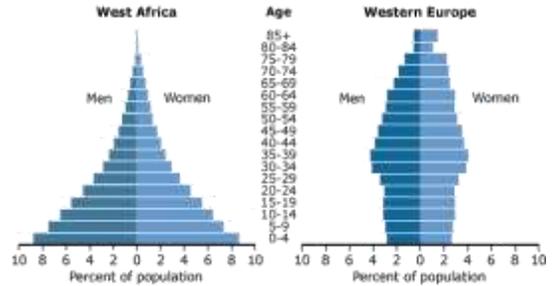


Population Profiles

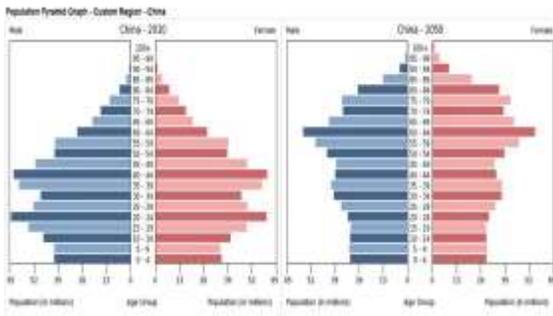
- Shows the distribution of a population
- Each bar represents a "cohort" of people at a given age and time
- Also called population pyramids



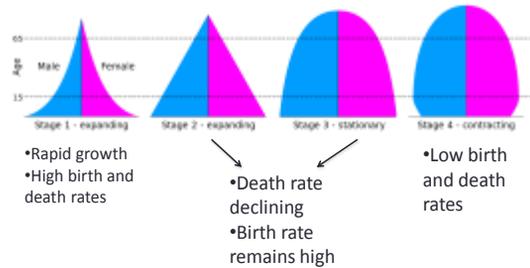
What is the difference between these two population profiles?



What is predicted to happen to China's population over time?



Pyramid Shape



NOVA Video

- How do population dynamics affect societies?
- What social and economic consequences will there be for changing population dynamics?
- What are some of the population-related problems the world is facing?
 - Developed vs. developing countries