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Sociology

Module 13: Population, Urbanization, and the Environment

Reading: Demographic Theories

Demographic Theories

Sociologists have long looked at population issues as central to understanding human interactions. Below we will look at four theories about population that inform sociological thought: Malthusian, zero population growth, cornucopian, and demographic transition theories.

Malthusian Theory

Thomas Malthus (1766–1834) was an English clergyman who made dire predictions about earth's ability to sustain its growing population. According to **Malthusian theory**, three factors would control human population that exceeded the earth's **carrying capacity**, or how many people can live in a given area considering the amount of available resources. Malthus identified these factors as war, famine, and disease (Malthus 1798). He termed them "positive checks" because they increase mortality rates, thus keeping the population in check. They are countered by "preventive checks," which also control the population but by reducing fertility rates; preventive checks include birth control and celibacy. Thinking practically, Malthus saw that people could produce only so much food in a given year, yet the population was increasing at an exponential rate. Eventually, he thought people would run out of food and begin to starve. They would go to war over increasingly scarce resources and reduce the population to a manageable level, and then the cycle would begin anew.

Watch the following video about Malthus' *Essay on the Principle of*

Population to learn more about his theory.

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Of course, this has not exactly happened. The human population has continued to grow long past Malthus's predictions. So what happened? Why didn't we die off? There are three reasons sociologists believe we are continuing to expand the population of our planet. First, technological increases in food production have increased both the amount and quality of calories we can produce per person. Second, human ingenuity has developed new medicine to curtail death from disease. Finally, the development and widespread use of contraception and other forms of family planning have decreased the speed at which our population increases. But what about the future? Some still believe Malthus was correct and that ample resources to support the earth's population will soon run out.

Zero Population Growth

A neo-Malthusian researcher named Paul Ehrlich brought Malthus's predictions into the twentieth century. However, according to Ehrlich, it is the environment, not specifically the food supply, that will play a crucial

the environment, not specifically the food supply, that will play a crucial role in the continued health of planet's population (Ehrlich 1968). Ehrlich's ideas suggest that the human population is moving rapidly toward complete environmental collapse, as privileged people use up or pollute a number of environmental resources such as water and air. He advocated for a goal of **zero population growth** (ZPG), in which the number of people entering a population through birth or immigration is equal to the number of people leaving it via death or emigration. While support for this concept is mixed, it is still considered a possible solution to global overpopulation.

FURTHER RESEARCH

To learn more about population concerns, from the new-era ZPG advocates to the United Nations reports, check out [Population Connection](#) and the [UN Population Division](#).

Cornucopian Theory

Of course, some theories are less focused on the pessimistic hypothesis that the world's population will meet a detrimental challenge to sustaining itself. **Cornucopian theory** scoffs at the idea of humans wiping themselves out; it asserts that human ingenuity can resolve any environmental or social issues that develop. As an example, it points to the issue of food supply. If we need more food, the theory contends, agricultural scientists will figure out how to grow it, as they have already been doing for centuries. After all, in this perspective, human ingenuity has been up to the task for thousands of years and there is no reason for that pattern not to continue (Simon 1981).

Demographic Transition Theory

Whether you believe that we are headed for environmental disaster and the end of human existence as we know it, or you think people will always adapt to changing circumstances, we can see clear patterns in population growth. Societies develop along a predictable continuum as they evolve from unindustrialized to postindustrial. **Demographic**

they evolve from unindustrialized to postindustrial. **Demographic transition theory** (Caldwell and Caldwell 2006) suggests that future population growth will develop along a predictable four-stage model.

In Stage 1, birth, death, and infant mortality rates are all high, while life expectancy is short. An example of this stage is the 1800s in the United States. As countries begin to industrialize, they enter Stage 2, where birthrates are higher while infant mortality and the death rates drop. Life expectancy also increases. Afghanistan is currently in this stage. Stage 3 occurs once a society is thoroughly industrialized; birthrates decline, while life expectancy continues to increase. Death rates continue to decrease. Mexico's population is at this stage. In the final phase, Stage 4, we see the postindustrial era of a society. Birth and death rates are low, people are healthier and live longer, and society enters a phase of population stability. Overall population may even decline. For example, Sweden is considered to be in Stage 4.

The United Nations Population Fund (2008) categorizes nations as high fertility, intermediate fertility, or low fertility. The United Nations (UN) anticipates the population growth will triple between 2011 and 2100 in high-fertility countries, which are currently concentrated in sub-Saharan Africa. For countries with intermediate fertility rates (the United States, India, and Mexico all fall into this category), growth is expected to be about 26 percent. And low-fertility countries like China, Australia, and most of Europe will actually see population declines of approximately 20 percent. The graphs below illustrate this trend.

Changes in U.S. Immigration Patterns and Attitudes

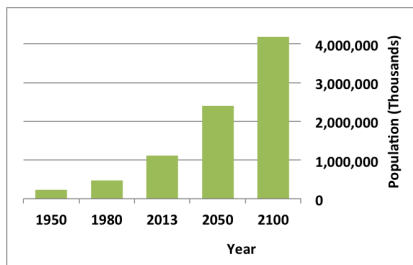


Figure 2. Projected Population in Africa:

This graph shows the population growth of

countries located on the African continent, many of which have high fertility rates. (Graph courtesy of USAID)

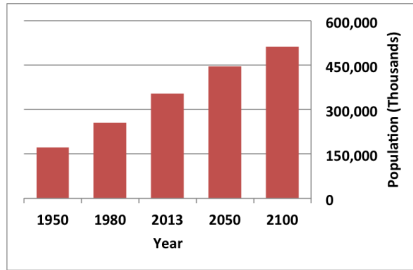


Figure 3. Projected Population in the United States: The United States has an intermediate fertility rate, and therefore, a comparatively moderate projected population growth. (Graph courtesy of USAID)

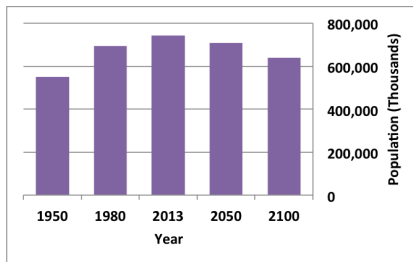


Figure 4. Projected Population in Europe: This chart shows the projected population growth of Europe for the remainder of this century. (Graph courtesy of USAID)

Worldwide patterns of migration have changed, though the United States remains the most popular destination. From 1990 to 2013, the number of migrants living in the United States increased from one in six to one in five (The Pew Research Center 2013). Overall, in 2013 the United States was home to about 46 million foreign-born people, while only about 3 million U.S. citizens lived abroad. Of foreign-born citizens emigrating to the United States, 55 percent originated in Latin America

emigrating to the United States, 55 percent originated in Latin America and the Caribbean (Connor, Cohn, and Gonzalez-Barrera 2013).

While there are more foreign-born people residing in the United States legally, as of 2012 about 11.7 million resided here without legal status (Passel, Cohn, and Gonzalez-Barrera 2013). Most citizens agree that our national immigration policies are in need major adjustment. Almost three-quarters of those in a recent national survey believed illegal immigrants should have a path to citizenship provided they meet other requirements, such as speaking English or paying restitution for the time they spent in the country illegally. Interestingly, 55 percent of those surveyed who identified as Hispanic think a pathway to citizenship is of secondary importance to provisions for living legally in the United States without the threat of deportation (The Pew Research Center 2013).

PRACTICE

1. What does carrying capacity refer to?
 - a. The ability of a community to welcome new immigrants
 - b. The capacity for globalism within a given ethnic group
 - c. The amount of life that can be supported sustainably in a particular environment
 - d. The amount of weight that urban centers can bear if vertical growth is mandated

Show Answer

2. What three factors did Malthus believe would limit human population?
 - a. Self-preservation, old age, and illness
 - b. Natural cycles, illness, and immigration
 - c. Violence, new diseases, and old age
 - d. War, famine, and disease

Show Answer

3. What does cornucopian theory believe?
 - a. That human ingenuity will solve any issues that

- a. That human ingenuity will solve any issues that overpopulation creates
- b. That new diseases will always keep populations stable
- c. That the earth will naturally provide enough for whatever number of humans exist
- d. That the greatest risk is population reduction, not population growth

[Show Answer](#)

[Show Glossary](#)

Self-Check: Demography and Population

You'll have more success on the Self-Check, if you've completed both Readings in this section.

Check Your Understanding: Demography and Population

According to Malthusian theory, three factors would control human population that exceeded the earth's ability to sustain the growing population of humans. These are

- war, famine, and disease.
- birth control, pregnancy, and celibacy.
- immigration, migration and emigration.

How sure are you of your answer?

Just A Guess

Pretty Sure

Very Sure

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