Why does global population growth matter? In view of the current size of Earth’s population and the NIR, will there soon be too many of us? Will continued population growth lead to global starvation, war, and a lower quality of life?

Geographers are particularly well suited to address these questions because answers require understanding both human behavior and the physical environment. Further, geographers observe that diverse local cultural and environmental conditions may produce different answers in different places.

Malthus on Overpopulation

English economist Thomas Malthus (1766–1834) was one of the first to argue that the world’s rate of population increase was far outrunning the development of food supplies. Malthus’s views remain influential today.

Population Growth Versus Food Supply

In *An Essay on the Principle of Population*, published in 1798, Malthus claimed that the population was growing much more rapidly than Earth’s food supply because population increased geometrically, whereas food supply increased arithmetically. According to Malthus, these growth rates would produce the following relationships between people and food in the future:

- **Today:** 1 person, 1 unit of food
- **25 years from now:** 2 persons, 2 units of food
- **50 years from now:** 4 persons, 3 units of food
- **75 years from now:** 8 persons, 4 units of food
- **100 years from now:** 16 persons, 5 units of food

Malthus made these conclusions several decades after England had become the first country to enter stage 2 of the demographic transition, in association with the Industrial Revolution. He concluded that population growth would press against available resources in every country, unless “moral restraint” produced lower CBRs or unless disease, famine, war, or other disasters produced higher CDRs.

**NEO-MALTHUSIANS.** Contemporary geographers and other analysts are taking another look at Malthus’s theory because of Earth’s unprecedented rate of natural increase during the late twentieth century. Neo-Malthusians argue that two characteristics of recent population growth make Malthus’s thesis more frightening than when it was first written more than 200 years ago.

First, in Malthus’s time only a few relatively wealthy countries had entered stage 2 of the demographic transition, characterized by rapid population increase. Malthus failed to anticipate that relatively poor countries would have the most rapid population growth because of transfer of medical technology (but not wealth) from MDCs. As a result, the gap between population growth and resources is wider in some countries than even Malthus anticipated.

Many LDCs have expanded their food production significantly in recent years, but they have more poor people than ever before. For example, income in East African countries rose during the past three decades by approximately 2 percent per year above inflation, but the population grew by approximately 3 percent per year. Because population growth outpaced economic development, all the economic growth was absorbed simply in accommodating the additional population. Despite this economic growth, the average East African is worse off today than 10, 20, or 30 years ago.

The second argument made by neo-Malthusians is that world population growth is outstripping a wide variety of resources, not just food production. Neo-Malthusians Robert Kaplan and Thomas Fraser Homer-Dixon paint a frightening picture of a world in which billions of people are engaged in a desperate search for food and energy. According to neo-Malthusians, wars and civil violence will increase in the coming years because of scarcities of food as well as such resources as clean air, suitable farmland, and fuel.

Malthus’s Critics

Malthus’s theory has been severely criticized from a variety of perspectives. Criticism has been leveled at both the population growth and resource depletion sides of Malthus’s equation.

Many geographers consider Malthusian beliefs unrealistically pessimistic because they are based on a belief that the world’s supply of resources is fixed rather than expanding. According to the principles of possibilism discussed in Chapter 1, our well-being is influenced by conditions in the physical environment, but humans have some ability to choose courses of action that can expand the supply of food and other resources. A steady flow...
of new technology can offset scarcity of minerals and arable land by using existing resources more efficiently and substituting new resources for scarce ones.

Contemporary analysts such as Esther Boserup and Simon Kuznets criticize Malthus's theory that population growth produces problems. To the contrary, a larger population could stimulate economic growth and, therefore, production of more food. Population growth could generate more customers and more ideas for improving technology.

Julian Simon argued that population growth stimulated economic growth. More people means more brains to invent good ideas for improving life. Asked Simon, "Does anyone seriously doubt that Europe is more prosperous with a population of hundreds of millions than it would be with a population of hundreds of thousands?"

Marxists maintain that no cause-and-effect relationship exists between population growth and economic development. Poverty, hunger, and other social welfare problems associated with lack of economic development are a result of unjust social and economic institutions, not population growth.

Marxist theorist Friedrich Engels dismissed Malthus's arithmetic as an artifact of capitalism. Engels argued that the world possessed sufficient resources to eliminate global hunger and poverty, if only these resources were shared equally. Under capitalism, workers do not have enough food because they do not control the production and distribution of food and are not paid sufficient wages to purchase it.

The world is much better off economically with 6+ billion people than it was with 1 billion, argue Malthus's critics, because too few people can retard economic development as surely as can too many people. A large population of consumers can generate a greater demand for goods, which results in more jobs.

Some political leaders, especially in Africa, argue that high population growth is good for a country because more people will result in greater power. Population growth is desired in order to increase the supply of young men who could serve in the armed forces. On the other side of the coin, more developed countries are viewed as pushing for lower population growth as a means of preventing further expansion in the percentage of the world's population living in poorer countries.

Declining Birth Rates

Although the Malthus theory seems unduly pessimistic on a global scale, geographers recognize the diversity of conditions among regions of the world. Although the world as a whole may not be in danger of "running out" of food, some regions with rapid population growth do face shortages of food.

Malthus Theory and Reality

On a global scale, conditions during the past half-century have not supported Malthus's theory. Even though the human population has grown at its most rapid rate ever, world food production has consistently grown at a faster rate than the NIR since 1950, according to geographer Vaclav Smil (Figure 2-20). Smil has shown that Malthus was fairly close to the mark on food production but much too pessimistic on population growth.

Reasons for Declining Birth Rates

The NIR can decline for only two reasons—lower birth rates or higher death rates. Few people wish to see the NIR decline because of an increase in death rates. The only demographic