17.2D: Malthus’ Theory of Population Growth

Learning Objectives

- Discuss Malthus’s controversial theory on population growth, in terms of the concept of “moral restraint”

Early in the 19th century, the English scholar Reverend Thomas Malthus published “An Essay on the Principle of Population.” He wrote that overpopulation was the root of many problems industrial European society suffered from—poverty, malnutrition, and disease could all be attributed to overpopulation. According to Malthus, this was a mathematical inevitability. Malthus observed that, while resources tended to grow arithmetically, populations exhibit exponential growth. Thus, if left unrestricted, human populations would continue to grow until they would become too large to be supported by the food grown on available agricultural land. In other words, humans would outpace their local carrying capacity, the capacity of ecosystems or societies to support the local population.

As a solution, Malthus urged “moral restraint.” That is, he declared that people must practice abstinence before marriage, forced sterilization where necessary, and institute criminal punishments for so-called unprepared parents who had more children than they could support. Even in his time, this solution was controversial. According to Malthus, the only alternative to moral restraint was certain disaster: if allowed to grow unchecked, population would outstrip available resources, resulting in what came to be known as Malthusian catastrophes: naturally occurring checks on population growth such as famine, disease, or war.
**Overpopulated Urban Slums:** Malthusians would cite epidemics and starvation in overpopulated urban slums, like this one in Cairo, as natural checks on growing populations that have exceeded the carrying capacities of their local environments.

Over the two hundred years following Malthus’s projections, famine has overtaken numerous individual regions. Proponents of this theory, Neo-Malthusians, state that these famines were examples of Malthusian catastrophes. On a global scale, however, food production has grown faster than population due to transformational advances in agricultural technology. It has often been argued that future pressures on food production, combined with threats to other aspects of the earth’s habitat such as global warming, make overpopulation a still more serious threat in the future.

**Key Points**

- Thomas Malthus warned that without any checks, population would theoretically grow at an exponential rate, rapidly exceeding its ability to produce resources to support itself.
- Malthus argued that an exponentially growing population will self-correct through war, famine, and disease.
- Malthus cautioned that in order to avoid catastrophe such as famine and war, people should enact deliberate population control, such as birth control and celibacy.
- Malthusian catastrophes refer to naturally occurring checks on population growth such as famine, disease, or war.
- These Malthusian catastrophes have not taken place on a global scale due to progress in agricultural technology. However, many argue that future pressures on food production, combined with threats such as global warming, make overpopulation a still more serious threat in the future.

**Key Terms**

- **carrying capacity:** The number of individuals of a particular species that an environment can support.
- **exponential growth:** The growth in the value of a quantity, in which the rate of growth is proportional to the instantaneous value of the quantity; for example, when the value has doubled, the rate of increase will also have doubled. The rate may be positive or negative.
- **Malthusian catastrophes:** Malthusian catastrophes are naturally occurring checks on population growth such as famine, disease, or war.