

Tragedy of the Commons

People often seek to justify environmental regulation by using a story told by Garrett Hardin entitled "The Tragedy of the Commons."¹ The tragedy develops this: Picture a huge, lush pasture open to everyone. Many people survive by raising cattle; they take their cattle to the common pasture to graze. Each herdsman keeps as many cattle as possible. For a while, disease, famine, and tribal wars keep the number of cattle down to a reasonable level. Eventually, however, the day of reckoning comes. There is just enough land to support all the cattle.

The rational herdsman, however, asks himself, "What is the utility of adding one more animal to my herd?" Because the herdsman receives all the proceeds from the sale of the animal, he has powerful incentive to add to his herd. The negative effect of adding one more animal is the harm that results to all the herdsmen from the resultant overgrazing. Because all herdsmen share in this negative effect, the negative consequences to the individual herdsman are minimal. Consequently, herdsmen tend to keep adding to their herds. As the same conclusion is reached by each herdsman, each continues to increase his herd without limit. But the space for the herd is limited. Herein lies the tragedy. They are locked into a system that guarantees the destruction of the commons and thus their own ruin. Thus, Hardin concludes, "Ruin is the destination to which all men rush, each pursuing his own interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all."²

How, you may ask, is the tragedy of the commons related to environmental protection? Without environmental laws, the rational manufacturer finds that because the cost of a polluted river is borne by everyone, he pays only a fraction of the cost of dumping waste into a stream. On the contrary, if he chooses to not pollute by properly treating his waste, he bears the whole cost of proper disposal. Therefore, he will pollute. Because the calculations are the same for everyone, we are trapped in a system of destroying our environment as long as we behave only as independent, rational, free enterprisers.

Just as with the tragedy of the commons, as long as there were few polluters relative to the size of the water and air, the absorptive capacities of these resources were not taxed and there were no problems. As population and industry increased, environmental tragedy emerged. Rivers became polluted, as did the air and the land. Nature's absorptive capacities were exceeded in many areas.

Free-Rider Problem

Rather than using analogies such as "The Tragedy of the Commons," some people justify the need for environmental laws by pointing out that clean air and clean water are public goods. Public goods are goods that are nonrival and nonexcludable—that is, once they are produced, others' consumption of the good does not affect another's consumption of the good and others cannot be excluded from using the good. Thus, when someone pays to produce the public good, not only the payer but also everyone else gets to use it. Those who do not pay become free riders. They get benefits paid for by others. No one, therefore, is going to pay for clean air and water, because every rational person would prefer to be a free rider. Each person will pollute and let everyone else pay to clean up the environment. The problem is that as everyone seeks to become a free rider, no one but a few "irrational" saints will be willing to pay

for clean air and water. Because nonrival and nonexcludable goods inhibit private markets, either the good will not be produced or the government must act to provide the good. Absent government intervention, our environment will become degraded.

Pollution as an Externality

One common justification for any government intervention in the market is to eliminate negative externalities. In the market, buyers and sellers interact to determine prices for goods and services. Buyers, through demand, communicate that certain resources should be allocated to the production of certain goods. Price is supposed to reflect the interest in allocation of resources to the production of those goods. However, sometimes third parties have an interest in a good or service, but the market listens only to buyers and sellers. Third parties have no impact on market prices; either government gives their interests a voice in production decisions or they have no voice. Thus, some argue that the government needs to step in to impose the costs of pollution on the polluting firm, so that it will have to increase the price of the product to reflect the true costs of producing the product. If the producer must pay to properly dispose of the hazardous waste created by producing the product, citizens who would have otherwise been adversely affected by the improper waste disposal will not have to pay by incurring losses to their health. The important point here is that the marketplace by itself has no mechanism for providing public goods, such as clean water, and accounting for the cost of externalities, such as the cost to third parties associated with improper waste disposal.

Environmental Ethic

Proponents of an environmentalist perspective believe that too often important decisions affecting the environment are made while taking into account only short-term impacts and economic factors, with little concern for the ongoing maintenance and enhancement of the viability of ecosystems.

Environmentalists are heavily influenced by ecology, the study of the relationships of living organisms to their environments. In ecology, land is viewed as a biotic pyramid:

Plants absorb energy from the sun. That energy flows through a circuit called the biota, which may be represented by a pyramid of layers. The bottom layer is the soil. A plant layer rests on the soil, an insect layer on the plants, a bird and rodent layer on the insects, and so on up through the various animal groups to the apex layer, which consists of larger carnivores. . . . Land, then, is not merely soil; it is a fountain of energy flowing through soil, plants, and animals. Food chains are the living channels that conduct energy upward; death and decay return the energy to the soil. The circuit is not closed. . . . [I]t is a sustained circuit, like a slowly revolving fund of life.³

When a change occurs in one part of the circuit, all other parts of the circuit must respond. Most changes that occur through evolution happen slowly, thus giving the circuit time to adapt. The more gradual and less violent the change, the more likely the successful readjustment in the pyramid.⁴ The fear of ecologists is that humankind