**The Tragedy of the Commons – Abridged Version**

by Garrett Hardin. Edited for high school use by Craig Kohn, Waterford Union High School, 2009. *Published in Science, December 13, 1968*. *The author is professor of biology, University of California, Santa Barbara. This article is based on a presidential address presented before the meeting of the Pacific Division of the American Association for the Advancement of Science at Utah State University, Logan, 25 June 1968.*

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he tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the **carrying capacity** of the land. Finally, however, comes the day when the long-desired goal of social stability becomes a reality. At this point, the **inherent** logic of the commons **remorselessly** generates tragedy. As a **rational** being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, "What is the benefit to me of adding one more animal to my herd?"

The rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another.... But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit--in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all. Some would say that this is a cliché, a tired expression. Would that it were! Natural selection favors the forces of psychological denial. Education can counteract the natural tendency to do the wrong thing, but the inexorable succession of generations requires that the basis for this knowledge be constantly refreshed.

Even at this late date, cattlemen leasing national land on the western ranges demonstrate no more than an **ambivalent** understanding, in constantly pressuring federal authorities to increase the head count to the point where **overgrazing** produces erosion and weed-dominance. Likewise, the oceans of the world continue to suffer from the survival of the philosophy of the commons. **Maritime** nations still respond automatically to the shibboleth of the "freedom of the seas." Professing to believe in "the **inexhaustible** resources of the oceans," they bring species after species of fish and whales closer to extinction.

The National Parks present another instance of the working out of the tragedy of the commons. At present, they are open to all, without limit. The parks themselves are limited in extent--there is only one Yosemite Valley--whereas population seems to grow without limit. The values that visitors seek the parks are steadily eroded. Plainly, we must soon **cease** to treat the parks as commons or they will be of no value anyone. (Rephrased – *Because people are visiting the parks as much as they are, the beauty they come for is being destroyed by the popularity it creates. The more beautiful a park, the more likely it is to be destroyed by the public that comes to see it).*

What shall we do? We have several options. We might sell them off as private property. We might keep them as public property, but **allocate** the right enter them. The allocation might be on the basis of wealth, by the use of an auction system. It might be on the basis merit, as defined by some agreed-upon standards. It might be by lottery. Or it might be on a first-come, first-served basis, administered to long **queues**. These, I think, are all the reasonable possibilities. They are all objectionable. But we must choose--or **acquiesce** in the destruction of the commons that we call our National Parks.

### Pollution

In a reverse way, the tragedy of the commons reappears in problems of pollution. Here it is not a question of taking something out of the commons, but of putting something in--sewage, or chemical, radioactive, and heat wastes into water; noxious and dangerous fumes into the air, and distracting and unpleasant advertising signs into the line of sight. The calculations of utility are much the same as before. The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of "fouling our own nest," so long as we behave only as independent, rational, free-enterprises.

The tragedy of the commons as a food basket is averted by private property, or something formally like it. But the air and waters surrounding us cannot readily be fenced, and so the tragedy of the commons as a **cesspool** must be prevented by different means, by **coercive** laws or taxing devices that make it cheaper for the polluter to treat his pollutants than to discharge them untreated. We have not progressed as far with the solution of this problem as we have with the first. Indeed, our particular concept of private property, which **deters** us from exhausting the positive resources of the earth, favors pollution. The owner of a factory on the bank of a stream--whose property extends to the middle of the stream, often has difficulty seeing why it is not his natural right to muddy the waters flowing past his door. The law, always behind the times, requires elaborate stitching and fitting to adapt it to this newly perceived aspect of the commons.

The pollution problem is a consequence of population. It did not much matter how a lonely American frontiersman disposed of his waste. "Flowing water purifies itself every 10 miles," my grandfather used to say, and the myth was near enough to the truth when he was a boy, for there were not too many people. But as population became denser, the natural chemical and biological recycling processes became overloaded, calling for a redefinition of property rights.

### Mutual Coercion Mutually Agreed Upon

The social arrangements that produce responsibility are arrangements that create coercion, of some sort. Consider bank-robbing. How do we prevent such action? Certainly not by trying to control his behavior solely by a verbal appeal to his sense of responsibility. Rather than rely on **propaganda** we follow Frankel's lead and insist that a bank is not a commons; we seek [laws] that will keep it from becoming a commons. No one regrets **infringing** on the freedom of would-be robbers.

The morality of bank-robbing is particularly easy to understand because we accept complete prohibition of this activity. But **temperance** also can be created by coercion. Taxing is a good coercive device. To keep downtown shoppers temperate in their use of parking space we introduce parking meters for short periods, and traffic fines for longer ones. We need not actually forbid a citizen to park as long as he wants to; we need merely make it increasingly expensive for him to do so. Not prohibition, but carefully biased options are what we offer him.

To say that we mutually agree to coercion is not to say that we are required to enjoy it, or even to pretend we enjoy it. Who enjoys taxes? We all grumble about them. But we accept **compulsory** taxes because we recognize that voluntary taxes would favor the conscienceless. We institute and (grumblingly) support taxes and other coercive devices to escape the horror of the commons.

We can never do nothing. That which we have done for thousands of years is also action. It also produce evils. Once we are aware that [keeping things the same as before] is action, we can then compare its discoverable advantages and disadvantages with the predicted advantages and disadvantages of the proposed reform, discounting as best we can for our lack of experience. On the basis of such a comparison, we can make a rational decision which will not involve the unworkable assumption that only perfect systems are tolerable.

**Recognition of Necessity** Perhaps the simplest summary of this analysis of man's population problems is this: the commons, if justifiable at all, is **justifiable** only under conditions of low-population density. As the human population has increased, the commons has had to be abandoned in one aspect after another. First we abandoned the commons in food gathering, enclosing farm land and restricting pastures and hunting and fishing areas. These restrictions are still not complete throughout the world.

Somewhat later we saw that the commons as a place for waste disposal would also have to be abandoned. Restrictions on the disposal of domestic sewage are widely accepted in the Western world; we are still struggling to close the commons to pollution by automobiles, factories, insecticide sprayers, fertilizing operations, and atomic energy installations.

Every new enclosure of the commons involves the infringement of somebody's personal liberty. Infringements made in the distant past are accepted because no contemporary complains of a loss. It is the newly proposed infringements that we vigorously oppose; cries of "rights" and "freedom" fill the air. But what does "freedom" mean? When men mutually agreed to pass laws against robbing banks, mankind became more free, not less so. Individuals locked into the logic of the commons are free only to bring on universal ruin; once they see the necessity of mutual coercion, they become free to pursue other goals. "Freedom is the recognition of necessity."

**Tragedy of the Commons Vocab Definitions**

The following words are bolded in the article.

Carrying capacity 🡪 the maximum population that an area will support without declining

Inherent 🡪 basic; part of the natural character of something

Remorselessly 🡪 without mercy or regret

Rational 🡪 having the ability to reason or think things through clearly

Inexorable 🡪 can’t be stopped; relentless

Ambivalent 🡪 torn between two conflicting emotions; uncertain of which path to take

Overgrazing 🡪 when animals eat too much grass or too many plants and the area is damaged

Maritime 🡪 borders the sea or ocean

Shibboleth 🡪 a widely held belief that’s not necessarily true

Inexhaustible 🡪 can’t be exhausted or used up

Cease 🡪 to stop or bring to an end

Allocate 🡪 to assign or portion out; to distribute

Queues 🡪 waiting lines

Acquiesce 🡪 to agree or accept; to come around

Cesspool 🡪 a filthy place

Coercive 🡪 to achieve something by force or threat

Deters 🡪 to prevent or discourage something from happening

Propaganda 🡪 ideas or statements that are often false or exaggerated and that are spread in order to help a cause, political leader, or government

Infringing 🡪 to restrict someone’s actions; to wrongly limit another person’s rights

Prohibition 🡪 the act of forbidding something to be done; restriction

Temperance 🡪 restraint; the practice of controlling your actions

Compulsory 🡪 mandatory; enforced

Justifiable 🡪 excuseable; able to be proven right

**Tragedy of the Commons Questions**

Read the abridged version of “Tragedy of the Commons” all the way through once. Then, read it through again to answer the questions below. Each question has a paragraph number next to it to help guide you to the appropriate section of the article.

1. Describe the idea of the “tragedy of the commons” in your own words (paragraph 1-3).
2. What is the human flaw that keeps the tragedy of the commons going? Why can’t we prevent it from happening? (paragraph 2)
3. The first example the author gives, to illustrate the tragedy of the commons, is that of herdsmen, cattle, and a share pasture. What are **two more** examples (from the article) that demonstrate the tragedy of the commons? (paragraph 3-4)
4. Pick **one** of the examples from #3 and explain how it specifically reflects the tragedy of the commons.
5. What does the author mean when he says “we are locked into a system of ‘fouling our own nest’”? (Under **Pollution**, paragraph 1)
6. The author acknowledges that pollution wasn’t always a problem, but that now it is worse than ever. What is the reason for this? (**Pollution**, paragraph 3)
7. The author claims that taxes and parking meters are two examples of coercive devices. They limit people’s use of resources by charging them money. With these metaphors in mind, how does the author think we should regulate the use of natural resources? (Under **Mutual Coercion Agreed Upon**, paragraphs 2-3)
8. The author claims that “every new enclosure of the commons involves the infringement of somebody’s personal liberty. Infringements made in the distant past are accepted because no contemporary complains of a loss. It is the newly proposed infringements that we vigorously oppose; cries of rights and freedom fill the air.” What are some current examples of “infringements” that make people upset? What are some laws or environmental regulations cause some people to object? (Under **Recognition of Necessity**, paragraph 3).
9. What is an example of the tragedy of the commons in your own life? What do you share with others that gets depleted or polluted due to over use and abuse?
10. How do *you* think we should try to regulate the exploitation of our common areas such as forests, oceans, air, etc.? Use one of the example situations from the reading to support your answer.