

The Tragedy of the Commons

PPE Gateway

What is the Tragedy of the Commons?

Commons: a resource (thing of value) that is either unowned or commonly owned. (In the language of economics, common resources are “non-excludable” and “rival” in consumption.)

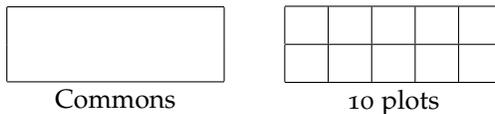
THE TRAGEDY OF THE COMMONS

When resources that are unowned or owned in common (and hence non-excludable) are overused and undermaintained.

Example: Grazing cattle on the commons [Hardin].

Why Does It Happen?

Suppose that the carrying capacity of the commons is 50 cows. Because there won't be enough grass to go around, an additional cow would slightly lowers the amount of milk the other cows can produce.



Because the pastureland is owned in common, each farmer has an incentive to graze additional cows even after the resource has reached its carrying capacity. Why?

ALL BENEFIT, SHARED COST

The benefits of using the resource go to each person individually while the costs are shared by everyone.

Even though grazing an additional cow lowers each cow's milk production, this is outweighed by the amount of milk gained from grazing the additional cow. So, each farmer has an incentive to graze additional cows.

But if every farmer grazes additional cows, the costs—taken collectively—outweigh the individual benefits. Even though everyone does what makes the most sense from their individual perspective, they all lose.

Lesson: What's best for each, can be bad for all.

The common resource is inevitably (and tragically) depleted.

A resource is *rival* in consumption if it cannot be used by more than one person at a time.

(Example: hamburgers are rival, TV shows are non-rival.)

A resource is *non-excludable* if non-paying consumers cannot be easily prevented from using it.

(Example: amusement parks are excludable, public parks are non-excludable.)

Suppose the commons are shared by 10 farmers.

Each farmer could graze 5 cows without depleting the commons.

Would it make sense for the farmers to graze their additional cows too?

With a common resource, using it produces a *negative externality*: the costs of using it aren't exclusively borne by the person who used it.

For each individual, the benefits of grazing an additional cow outweigh the costs *incurred by that individual*. But that's because the costs of grazing an additional cow are *shared*; none of the individuals bear the full costs of their decisions. This leads to overuse.

Individuals, all acting rationally, can produce outcomes that are worse for all of them.

The Tragedy of the Commons has the structure of a *Prisoners' Dilemma*: regardless of what the other farmers do, each has an incentive to graze an additional cow; but if they all do so, they'll each be worse off than they could've been had they instead all refrained from grazing the additional cow.

What Could Be Done?

1. Top-down Regulation.
2. Social Norms.
3. **Property rights.**

Example: hunting seasons. Often ultimately unsuccessful.

Elinor Ostrom. Only works in small, stable groups.

Can be too costly, too impractical to enforce in some cases.

Discussion Questions

1. What are some other examples of the Tragedy of the Commons? How many can you list?
2. What are some possible ways of avoiding tragedy? Which, if any, of the three categories above does it belong to? Do different examples require different solutions? And if so, why?