

Right to Exclude and Efficiency

In this memo, I want to offer one explanation for the right to exclude based on economics. In the process, I hope to help you understand a few basic vocabulary words that economists use.

These are: externality, free rider, hold out, internalization, transaction cost, collective action problem, and tragedy of the commons.

The main ideas I will share were developed by a UCLA economics professor named Harold Demsetz. When writing about property – and especially the right to exclude, he said

"A primary function of property rights is that of guiding incentives to achieve a greater internalization of externalities."

Demsetz begins his argument for private property and the right to exclude by imagining a simple arrangement of shared ownership, which he called communal ownership. On his account, communally owned land could be used by anyone. But if someone took resources from the land, those resources could be privately consumed or sold.

For example, imagine that there are ten people living in a remote area near a very small forest, so small that it has only 100 trees. The trees are large enough to cut down and sell, but not as valuable as they will be in a few more years.

One problem with communal ownership of these trees is that we may chop them all down too soon. The reason, says Demsetz, has to do with externalities and transaction costs.

Externality is a simple idea. It is an effect of something I do that is not an effect on me, and so not something I need to consider as I decide what to do – at least not if I am a selfish person. If I like loud music late at night and it keeps you awake, your sleeplessness is an externality – an external harm – to me because I do not need to consider it as I decide whether to make noise (at least not unless there are laws, or you come to visit me with a baseball bat). If I plant a lovely garden in my yard, just outside your window, the beautiful view you now have is an external benefit to me – external since it is not a benefit to me and therefore not something I need to consider in making decisions about my garden.

How is this relevant to the trees. Well, if I chop down a tree and sell it. I get to keep all the money. Of course, I now have access to fewer trees in the future. But since I was only a 10% owner of each tree – there are 9 others with access to the forest – most of the harm of having fewer trees in the forest is a harm to other people, something that I can ignore if I am selfish.

If there were no other people with access to this forest, I might hesitate before chopping the tree. I would still keep the profits. But I would be the one suffering the entire cost of lost inventory – since the tree was entirely mine.

The trouble with communal ownership is that all ten of us have an incentive to chop the trees -- since each of us can keep 100% of what we chop, and suffer only 10% of the cost of our own

reduced inventory. And since we all know that we all know this, we may rush to chop trees before others do it. We will deplete the forest immediately, rather than waiting to let the trees grow larger, which might be better for all of us. All of this is because of the externality.

But things are actually even worse. Having chopped down the trees, we would be wise to replant, so that eventually we will have another harvest. But externalities get in the way here too. If I replant, I experience all of the costs of doing so. But I only get 10% of the benefit, since I will share the newly planted crop with nine others. The externality that led to excess harvest was an external harm – my harvest imposed a harm on others, so I do too much of it. With planting, there is an external benefit – my planting gives a benefit to others, so I do too little of it.

The external costs and benefits that plague communal property mean that there will be over consumption (because of external harms) and under production (because of external benefits). This pattern is called the tragedy of the commons. It is probably why, when you live with six roommates, no one ever does the dishes.

Given all the bad things that Demsetz forecasts, why would the members of the group not just agree to limit the number of trees they cut, delay cutting trees until they are mature, and to replant a tree for every one that they cut?

They might. But reaching and then enforcing this agreement might be costly. All of the practical barriers to reaching this agreement are called *transaction costs* by economists.

First, getting people to agree about anything can be difficult. Even getting them to sit down and talk could be expensive and time consuming.

Second, there may be *free-riders*, persons who refuse to limit and delay their cutting and to replant, but who want to benefit from the limits, delays, and replanting that the others agree to.

Third, there will be *hold-outs* -- individual members who refuse to agree to limit or delay their cutting or to replant trees-for-tree unless the others in the group pay them to do so.

Fourth, even if the group were willing to do so, it may have trouble raising funds to pay off the hold-outs because of the free rider problem -- each person in the group preferring to let others contribute the needed funds.

Fourth, monitoring and enforcing the agreement might be difficult and expensive.

Together, these issues are called the *collective action problem*. According to Demsetz instituting private property will mitigate this problem. How?

Private property solves or mitigates these difficulties by imposing (many of) the costs of cutting trees on the individual. i.e. *internalizing* the costs.

For example, if the forest were divided into 10 equal portions, and given as private property to the 10 members of the community, all of the incentives would change. The costs would be internalized in the sense that each member would take account of the entire cost of a lost tree in making decisions.

The incentive to over cut would disappear. Because each person could exclude others from her property, she could engage in calculations of whether it was wise to cut trees now or to wait for later harvest. She would know that no one else would prevent the plan from being effective, and that she would realize the benefit of the planning. The external harm of cutting has been internalized by imposing the entire loss from reduced inventory on one person.

She would also have an incentive to replant. Although she would still bear all cost of replanting, she would also get all of the benefit, since she could be sure that the tree she plants would not be harvested by anyone else, and would keep all of the proceeds from eventual harvest. The external benefit of planting has disappeared – has been internalized by private ownership with a right to exclude.

Private property has an additional benefit for externalities. So far, the argument has shown why there will be fewer externalities if we have a right to exclude. But many will still exist. You and I might be neighbors. You want to hunt in the morning (on your own land). And I want to use my chain saw to make animal sculptures out of tree stumps. Unfortunately, my chain saw scares away all the animals you want to hunt. This noise is an externality to me – something I can ignore as I decide what to do if I am selfish.

Private property helps us solve this problem too.

If I own the land where I am making noise, you might offer to pay me to be quiet so you can hunt. My ownership of this land might make it easier for you to find me.

It also allows me to make a binding promise – not just that I will not make noise, but that no one will do so on my land, even if I sell it to someone else. That binding promise is one that you might pay for. But if I did not own the land -- I was just there – I could only make a promise about my own behavior. I could not guarantee that someone else will not come along to make noise. This give you far less confidence about the future and makes a bargain between us less likely. In this way, private property makes it easier for us to settle disputes about the externalities that remain and to plan for our futures.

The fact that there are only two of us who need to be party to this negotiation may also make it easier for us to strike a deal than if we had to negotiate with the larger group of all persons who might make noise on the property. The transaction costs to the deal we need to make might be lower.

You can now understand more clearly what Demsetz had in mind when he said "[a] primary function of property rights is that of guiding incentives to achieve a greater internalization of externalities." By privatizing land, there are fewer external harms and benefits than there were under a communal regime. As well, the remaining externalities are easier to address by private negotiations, since it is possible to make binding agreements, and easier to make those agreements with a smaller group of people.

In addition, the discussion of the noise externality in the last few paragraphs previews a discussion we will have later of the *Coase Theorem*. According to the Coase Theorem, when transaction costs are low, persons will negotiate efficient solutions regardless of the legal rule. In the context of the tree-cutting noise/hunting dispute, the Coase Theorem predicts that, if transaction costs are low (as they would seem to be), the neighbors would be able to negotiate an efficient solution to the noise, regardless of whether the law allows people to be so noisy as to scare game animals or not.