

Absence of private property rights

The absence of private property rights is most clearly exemplified through ‘the tragedy of the commons’ – a classic example of over-fishing.

A game that clearly illustrates the problem can be played – this game is based on all sorts of internet based examples, such as: <https://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/education-programs/teachers/classroom-resources/Lesson-Plan-Property-Rights.pdf>

Instructions

A class is divided into sets of four to six students, who are each seated around a table. You will need a big box of paper clips or other set of small objects. If you want more control, you can ask a handful of volunteers to come out to the front and the others can watch what happens.

On a piece of paper on the table are placed around 15–20 paper clips (‘fish’).

The players receive the following instructions:

“The paper clips on the paper are fish. Your game has five periods. Your goal is to have as many fish for yourself as you can at the end of these five periods. Any player may take a fish at any point that the game is in play.

Each fishing period is ten seconds – I will tell you when you may start fishing and when you must stop. At the end of ten seconds play will stop, and the number of fish left in your pool will double. (You will need to go around and do this.) The game will then start again for another ten seconds and so on. The player with the most ‘fish’ at the end of the fifth period is the winner. You may not communicate with the other players.”

You may or may not get a prize depending on how kind you are. It is worth stressing that there will be one winner – it is not a group game.

What happens?

What has generally happened when I have played the game in the past is that in the first ten seconds, many of the pools instantly empty. Some will continue, but it is rare for students to be disciplined enough to make it through five periods.

I normally play the following video (in which some fishermen empty a lake completely in minutes) to illustrate their behaviour:

https://www.youtube.com/watch?v=_Tc6ywqoL6o

Next:

At this point you can get students to discuss what has happened, either in an open forum or in their groups, depending on how many students you have. It should be possible to refer to the absence of property rights (pointed questions like “why don’t we get ‘over-sheeping’” may help). Generally the students will blame someone for breaking the agreement and so on.

Then:

What I have generally done then is to give them five minutes to discuss how they might approach the game a second time. Usually they will come up with some rules, which break down at some point as a result of greed. Nevertheless, it gives them some more insight into the problem.

Finally, you can give them each a piece of their own paper with some fish on it, and let them play the game. Obviously they will now allow the fish to breed (you will now run out of paper clips, but it makes the point that private property rights are important).

After the game:

At this point you can sum up the problem as one of an absence of private property rights. You can now get them to work in small groups or pairs to come up with other examples where a free market might fail to allocate property rights/create the same problems as over-fishing.

Common examples that they may come up with include:

- rainforests;
- the atmosphere (CO₂);
- roads (really a quasi-public good);
- fly-tipping/dumping in rivers;
- exploitation of water sources further upstream – this video on the Aral sea shows this to devastating effect: http://www.upi.com/Science_News/2014/10/01/NASA-satellite-shows-scope-of-Aral-Sea-disaster/9871412140348/.

Follow-up

<http://www.youtube.com/watch?v=B3G839hT7NY>

This is a short YouTube video on the over-fishing of bluefin tuna in the Mediterranean. Ask the students to watch the video and spot possible solutions for over-fishing.

After the video has finished, you can then get the students in pairs/small groups to come up with solutions to over-fishing and you can discuss their relative merits – this may be useful to flag up the risk of government failure when schemes such as fishing quotas are discussed.

One theoretical point that it might be worth making is the contrast with public goods (which are non-excludable and non-diminishable). Here we have ‘common goods’ which are non-excludable but diminishable – hence they get used up).