

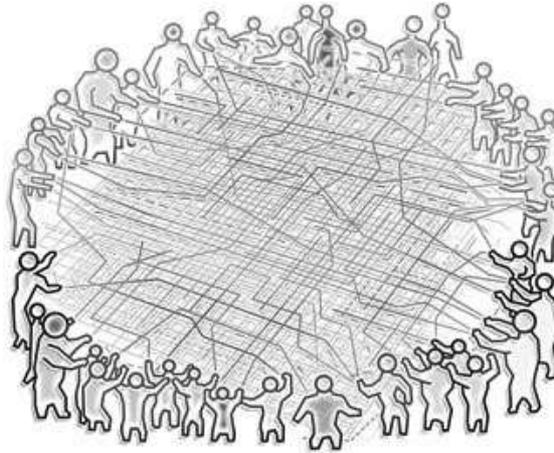
Economics focus**Commons sense**

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Why it still pays to study medieval English landholding and Sahelian nomadism

Illustration by Jac Depczyk



IN 1968 Garrett Hardin, a professor of biology, published an article in the journal *Science* that was to have a profound impact on the social sciences, including economics. In it, he explained "The Tragedy of the Commons". "Picture a pasture open to all," he wrote. A herdsman grazing his animals on the land will have an incentive "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 herdsman captures all the benefit from an extra animal but the cost of overgrazing is borne by all.

Hardin's example was not new. It was first mentioned by a mathematician, William Foster Lloyd, in 1833; the idea goes back to Aristotle. But it struck a chord. The idea seemed plausible in itself and was borne out by history. Britain had had a system of common land before the 18th century; its enclosure (privatisation by landowners) made possible the agricultural revolution.

Hardin's analysis suggested two things. First, that the commons are somehow backward, characteristic of tribes living in rainforests, or of pastoral nomads in African drylands. Second, that tragedy is inevitable. From the point of view of efficiency, the commons should probably be replaced by systems of public or personal ownership. An unsolvable problem of the past might not seem like fertile ground for debate. But 40 years after Hardin's article, the problem of the commons is still pressing.

It is not simply that three-quarters of those living on less than \$2 a day still depend in some way on commonly held resources. The concept of the commons is also spreading to new areas. Their essential feature is that they share one characteristic with private property and one with public goods. Like public goods, they are not "excludable": the common resource is too extensive to keep people out very easily. But they are also "subtractable" (or "rivalrous"), like private property: if one person uses them, another's access is diminished. (With a classic public good, such as street lighting, one person's usage does not affect anyone else.) Many things other than rainforests or drylands share these attributes.

Indeed an entire industry seems to have sprung up to identify "new commons" (such as the internet) or to claim as commons things not always seen that way. Silence, for example, should arguably be seen as a commons, because if one person interrupts it, there is less of it for others to enjoy. At the biennial meeting of the International Association for the Study of the Commons in July, Charlotte Hess of Syracuse University extended the concept of the commons from traditional natural resources to things such as medicine, knowledge and what are usually seen as global public goods, like the oceans and Antarctica.*

The other implication of Hardin's analysis—that the commons are doomed—came under attack early on. When economists began to look at how systems of commonly managed resources actually worked, they found to their surprise that they often worked quite well. Swiss Alpine pastures; Japanese forests; irrigation systems in Spain and the Philippines. All these were examples of commons that lasted for decades. Some irrigation networks held in common were more efficiently run than the public and private systems that worked alongside them. Though there were failures, too, it seemed as if good management could stave off the tragedy. Before he died, Hardin admitted he should have called his article "The Tragedy of the Unmanaged Commons".

In "Governing the Commons", which was published in 1990, Elinor Ostrom of Indiana University described the rules needed to keep a commons going. She showed that there are almost always elaborate conventions over who can use resources and when. What you take out of a commons has to be proportional to what you put in. Usage has to be compatible with the commons' underlying health (ie, you cannot just keep grazing your animals regardless). Everyone has to have some say in the rules. And people usually pay more attention to monitoring abuses and to conflict resolution than to sanctions and punishment.

The comedy of the commons

Defining the commons is also vital. In systems run by a few families, people are very precise about which bit of forest or seashore they manage. In systems too large for a single group, there are layers of decision-making: the nomads of the Sahel, for example, used to have overlapping informal authorities up and down the Niger river. Tragedy often occurs when governments come along in hobnailed boots and trample over these informal systems, as happened in the Sahel during a dreadful drought in the 1970s.

The big unanswered question is how far the things that economists have learnt about traditional commons apply to the "new commons". In the case of global warming, the commons is the whole earth. It is not easy to see how rules that encourage shared responsibility can be made to stick. Yet this has happened in other international examples. Mrs Ostrom suggests the so-called "miracle of the Rhine"—the clean-up of Europe's busiest waterway—should be seen as an example of successful commons management because it was not until local pressure groups, city and regional governments and non-governmental organisations got involved that polluters were willing to recognise the costs they were imposing on others, and cut emissions. An inter-governmental body (the International Commission for the Protection of the Rhine) did not have the same effect.

The economics of the new commons is still in its infancy. It is too soon to be confident about its hypotheses. But it may yet prove a useful way of thinking about problems, such as managing the internet, intellectual property or international pollution, on which policymakers need all the help they can get.

* More information is available at <http://dlc.dlib.indiana.edu>