

The Tragedy of the Commons: Inevitable or a Myth?

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Summary: *If rational actions by individuals lead to socially sub-optimum result, what is the most effective way to govern a common property resource? Privatization, Government regulation or some other systematic framework? This article attempts to summarize Ostrom's thesis with respect to the common pool resources that debunk the belief of the inevitability of 'the tragedy of the commons' as proposed by Hardin.*

“What is common to the greatest number has the least care bestowed upon it. Everyone thinks chiefly of his own, hardly at all of the common interest”- Aristotle

This statement by Aristotle adequately reflects the sentiment and logic of Garrett Hardin, when he first proposed the theory of ‘the Tragedy of the commons’ in 1968, which has come to signify the inevitable destruction of the natural resources when many individuals use the resource in common. The intrinsic nature of the common pool resources such as forest, groundwater, fisheries, pastureland and global environment makes costly or impossible the exclusion of potential beneficiaries. Thus, the total amount of resource withdrawn is greater than the optimal amount. This is where the theory of ‘the logic of collective action’ proposed by Mancur Olson comes in, which propounds that “rational, self interested individuals will not act to achieve their common or group interest”

Thus, paradoxically individually rational strategies will lead to collectively irrational outcomes and this is what constitutes the basic premise of Garrett Hardin's theory of ‘the tragedy of the commons’. Hardin makes use of the example of cattle grazing on common property to illustrate the logical structure of his argument. He asserts that because each cattlemen benefits from increasing the size of the herd and bears only a small portion of the negative cost that is inflicted on resource due to overuse; exploitation of the

common pool resource is inevitable. Thus, according to Hardin,

“Ruin is the destination towards which all men rush, each pursuing his own best interest in a society that believes in the freedom of commons.”

The policy prescription given by Hardin to overcome this paradox and hence, prevent the potential destruction of resources involved the independent formulation of either of the two institutions each in insolation to other, private markets or the use of Leviathan (government coercion). The first required the introduction of private property rights and was hailed by many scholars as means via which optimal solution for common pool resources could be achieved. The latter institution required that central governments control most natural resource systems. Heilbroner (1974) went as far as to say that it would take iron governments to manage the common pool resources.

However, Elinor Ostrom has recently debunked this long held popular view with respect to the inevitable destruction of common pool resources in the absence of private market or government control. Ostrom through documentation of various communities that sustainably managed their common resources without use of private market or government control has arrived to the conclusion that the phenomenon of the tragedy of the commons is not inevitable as it is orthodoxly held to be.

OSTROM'S THEORY

In order to propose a solution to the problem of finding effective ways to limit the use of natural resources so as to ensure their long-term economic viability, Ostrom demonstrated that within communities, rules and institutions of non-market and not resulting from public planning can emerge from the bottom up. This, according to her could ensure a sustainable, shared management of resources, as well as an economically efficient outcome. Rather than presuming the situation to be one of a remorseless tragedy and focusing on policy prescriptions with models such as that of a

prisoners dilemma game or the logic of collective action which serve more as metaphors than sound solutions to the problem of governing commons, Ostrom suggested a system of polycentric governance i.e. the existence of a plurality of interdependent decision making centers on the management of the resource.

According to her theory the great dichotomy of state and market is partial and too narrow and hence untenable. Ostrom challenges this over-simplification of the public-private nexus. Indeed “governance” is neither markets nor state. Ostrom points out that the conventional solutions proposed to the problem of the tragedy of the commons are two contradictory positions. While one set of advocates favor centralization, the other presents privatization as the panacea to the issue but both centralization advocates and privatization advocates accept as a central tenet that institutional change must come from outside and be imposed on the individuals affected. Despite sharing a faith in the necessity and efficacy of “the state” to change institutions so as to increase efficiency, the institutional changes they recommend could hardly be further apart. Ostrom’s point is that contradictory positions cannot both be right and her theory recognizes the fact that often, institutional arrangements do not work in the field as they do in abstract models unless the models are well specified.

Ostrom and the new institutionalism: rethinking institutions and incentives

Individuals are rational actors who respond to incentives which are shaped largely by institutions—both formal and hard institutions such as the system of property rights or legal systems and soft institutions such as cultural attitude. Economists have traditionally focused on the role of institutions and incentives, but have often approached the interrelationship between them in a simplistic way. Most analysts have assumed that all common-pool resources suffer from the same deficient incentive structure, which leads to widespread ‘free riding’ that forms the basis of all tragedy of the commons problems. Ostrom’s work represents a direct challenge to this form of theorizing because, while recognizing that incentives matter, she argues that incentive structures are more varied and complex than conventional analysis assumes. To illustrate her viewpoint she cites the instances where

communities or users have devised ingenious exclusion methods to avoid the tragedy of the commons such as the commonly owned pastures of Swiss Alps, sustainable management of inland fisheries by cooperatives in U.S. She also cites several examples of how attempts to privatize or regulate common resources have at times led to disastrous consequences.

Rather than providing a simple ‘one size fits all’ prescription, Ostrom tries to address the question which seeks to discover the factors that can guide the decisions about when to rely on spontaneous processes of governance and when to rely on external generation of rules.

Design Principles for Common Pool Resources

Boundaries to facilitate exclusion

Exclusion mechanisms are the key to overcoming free riding, and resource boundaries increase the capacity for those who use a resource to limit access by those living outside the community in question. Thus, for common property management through community arrangements, it is important that we have well defined resource boundaries.

The importance of internal rules

Though the existence of boundaries to limit access by those outside a community of resource users is important, rules which prevent people within the community concerned from appropriating too much of the resource are crucial as well. There exists a need for the system of internal rules to prevent excessive use of the resource. Communities, which have been able to develop this form of internal legislation, are better suited to manage the common pool resources.

The importance of locally adapted rules

The smaller the population of resource users the easier it will be to detect people who are violating the rules. Similarly, a culturally homogeneous and relatively stable community where people have strong reputational and social ties and a commitment to long-term development is less likely to invite free-riding than a more mobile community with no strong sense of local or cultural identification. Groups, which possess a high degree of interpersonal trust or social capital, are more likely to arrive at commonly agreed

rules and adhere to these rules than those who lack such social capital. These kind of local culture based factors also play a major role.

The importance of monitoring and enforcement

Any kind of rule would cease to be effective in the absence of monitoring mechanism. The most successful systems for common pool resource management include strong monitoring and enforcement mechanisms. Without these, efficient management of resources is not possible.

Dispute resolution

The existence of clear and well-established procedures for dispute resolution may also increase the scope for the decentralized resolution of common-pool resource problems. Interaction between systems of effective rules are more likely to arise in situations where those who have an immediate stake in overcoming common-pool resource problems are actively involved in shaping and enforcing governance arrangements. When communities make rules for themselves they have strong incentives to make the rules work and to learn from their mistakes. When locally established rules and property rights are not respected by higher tiers of governance, and especially when higher authorities respond to the demands of external interest groups to allow access to a resource base, then common-pool resource systems may be highly fragile.

Based on these principles Ostrom talks about 'Action Situations' where decentralized community governance can work well. Specifically, when there are clear boundaries to a resource; where a community has high levels of interpersonal trust or social capital; where there are procedures for resolving disputes; and where the community concerned has sufficient decision making autonomy to create, monitor and enforce its own rules and to exclude outsiders, then incentives can operate to avoid the 'tragedy of the commons'. In these 'common property regimes' resources are exclusive to a particular community rather than being 'publicly owned', but, instead of parceling out the assets to individuals, the exclusive owner is a decentralized communal unit (McKean and Ostrom, 1995: 6).

When is privatization feasible?

The creation of individual property rights may prove more effective when there are clear boundaries to a

resource but where the community is highly mobile and culturally heterogeneous thus rendering incentives insufficient to enforce communal rules. In such situations the need for agreement between resource users doesn't exist and the individuals internalize the costs and benefits-earning rewards from conserving a resource and suffering losses from failing to do so.

When is government regulation feasible?

Government regulation is most likely to be feasible when there are no clear boundaries to the resource; where there is a large-scale and highly mobile and diverse population of resource users. This leads to a situation where the transaction costs of arriving at and enforcing decentralized solutions may be prohibitive. Regional and international problems of trans-boundary air pollution and the problem of anthropogenic climate change seem to be the most obvious candidates to fall into this category.

Arguments against Central Planning

1. Distant bureaucrats lack the knowledge of specific character of the assets to be managed and the nature of the incentives facing resource users. Also, knowledge of the cultural norms and values that structure the way in which people perceive and respond to resource-management issues and how these values evolve is embedded in the minds and everyday culture of those who inhabit the communities concerned. It is unlikely that external regulators will understand these factors.
2. The act of regulating from the centre undermines the incentive for resource users themselves to devise an appropriate set of rules. When the state takes over responsibility for managing an asset, individuals and groups that do not already have their own institutions in place will simply wait for the government to handle their problems for them.
3. A final and perhaps most important reason to presume against central planning is that it removes the scope for people to learn how to address common-pool resource problems more effectively. Decision-making over natural resources does not start from a situation where the most effective institutional form for managing the resource is 'given' in

advance. On the contrary, knowledge of the kinds of rules, institutions and technologies that can be combined in order to internalize externalities needs to be discovered through a dynamic, evolutionary process of trial-and error learning (Ostrom, 2005)

Ostrom and Classical Tradition

Ostrom's analysis goes beyond any kind of ideological labeling. The Classic liberal theory relies on protection of private property, extensive reliance on civil society and voluntary association, and a limited and decentralized form of government, based on the view that the dispersed (though unequal) ownership of property in a market system is more robust in the face of imperfections of limited knowledge of the actors and limited benevolence of the planners, than more centralized alternatives. Ostrom's research is not at all in refutation of this classical neoliberal belief about the importance of private property rights and at no point does Ostrom refute the case for private ownership per se, though she questions the wisdom of external agents imposing individualized property rights in communities which have evolved effective common property regimes. Common property regimes are themselves, according to Ostrom, a form of exclusive private property – it is just that private property rights should not always be equated with individual property rights. In the words of Ostrom and her co-author Margaret McKean, 'It is crucial to recognize that common property is shared private property .'.

Ostrom's theory and the relevance of new institutional economics

Ostrom's analysis is crucial in several respects. Not only for the issue of governance of commons but on a wider level too, her work has been instrumental in promoting a perspective that is beyond the textbook

theorists' world of quantized models often based on unrealistic assumptions of hyper rationality and ideal conditions. Rather than basing the theories on the standard assumptions of an ideal world, Ostrom in her work has sought out new institutional arrangements that could be used by people, communities and societies facing real world problems. When Ronald Coase expressed -"Existing economics is a theoretical system which floats in the air and which bears little relation to what happens in the real world" - he clearly shared the same opinion about economic theory building that it was detached from reality. But Ostrom went out into the field to see what people and communities were doing differently —and then thought about how it worked. Her logic challenged math.

Milton Friedman had once said: "Economics has become increasingly an arcane branch of mathematics rather than dealing with real economic problems." Ostrom's work isn't mega quantitative. Rather, it is mega *qualitative*, packed with rich, sharply unexpected new insights about how models should be built. Evolution is intrinsic to economics and Elinor Ostrom's thesis on the management of the common pool resources is yet another example of embracing the heterodox and questioning the old.

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Austerity: The Bitter Medicine that Doesn't Cure

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Summary: By being minimalistic, austerity aims to curb the deficit in the economy through policies like spending cuts, cutting taxes or both. But it's not as

great an idea as it seems. Greece is testimony to this. Cutting spending during depression may not be the best idea after all!