

3. Garrett Hardin's tragedy of the unregulated commons

Before we can examine the question of whether the commons provide us with a reasonable alternative to the social institutions that underlie democratic capitalism, we must firstly analyze what is widely assumed to be the necessary failure of commons, as expressed in Garrett Hardin's influential 1968 article *The Tragedy of the Commons*. Although the concept of the commons can be traced back much further, Hardin's article has greatly increased the contemporary interest in the topic and has framed a heated debate that has lasted until today.¹ In this short chapter I therefore firstly analyze Hardin's argument as to why commons are inadvertently overused. In a second step, I discuss his suggestions of how to overcome this tragedy. In a nutshell, I will demonstrate that Hardin's theory is not a critique of the commons per se, but rather of unregulated commons, which bring about open and competitive social arrangements.

3.1 The tragedy: maximization strategies and the double C-double P game

To begin with, it is worth mentioning that Garrett Hardin's theory implicitly repeats the basic arguments of Malthus' *Essay on the Principle of Population* from 1798. Accordingly, Hardin opens his theory of "The Tragedy of the Commons" by assuming two general yet conflicting principles. His first premise is based on the laws of conservation and postulates that resources on earth are scarce. His second premise is based on biologists' observations that all living organisms have an inherent tendency to perpetually increase their population in order to secure their survival (Hardin 1968: 1243). Understood mathematically, this existential drive leads to the

1 According to Elinor Ostrom, "Hardin's article is one of the most cited publications of recent times as well as among the most influential for ecologists and environmental policy researchers. Almost all textbooks on environmental policy cite Hardin's article and discuss the problem that Hardin so graphically identified." (Ostrom 2008b)

exponential growth of populations. In nature, however, this tendency is kept in check by limited resources and other scarcity-related mechanisms such as hunger, disease, predators and, ultimately, death. In comparison to other animals, humans are reflexive beings that must make choices between the forms of their consumption, or rather between the amount of resources they utilize per person and their population size. For this reason, Hardin dismisses the utilitarian principle of “the greatest good for the greatest number” and declares that we must choose between maximizing our offspring and maximizing goods – or that we find a middle way between these extremes. With this reasoning, Hardin sets the stage for his critique of “laissez-faire” policies in reproduction and, more generally, of unregulated commons.

Hardin explains this conflict between limited ecological resources and both demographic and economic growth by envisaging a scenario involving a pastoral commons. In Hardin's scenario, a pasture is held in common and is “open to all” (Hardin 1968: 1244), to be used by herders for the grazing of their privately-owned cattle. Hardin borrows this “heuristic image” (Hardin 1977a: 68) from William Foster Lloyd's pamphlet *Two Lectures on the Checks of Population* that was first published in 1833 and utilizes it as a model to portray and understand the relationship between humans and their environment. For us to comprehend the underlying problem, Hardin's two premises need to be reformulated. Firstly, the scarcity of resources implies that the carrying capacity of a pasture is limited. Hardin therefore defines the carrying capacity of a resource as “the maximum number of animals that can be sustained by this food source *year after year, without a diminution of the quality of the pasture*” (Hardin 1993: 207; original emphasis). The second premise, postulating the supposedly natural exponential growth in the population size of every species must be translated into the size of the herds that are bred and controlled by the herders. While this second premise originally assumed an innate biological drive to increase one's own population size, we must now ask ourselves why herders desire and choose to increase the number of their cattle.

Hardin answers this question within a general framework of methodological individualism and in both biological and utilitarian terms. Although not explicitly formulated by Hardin, his biological reasoning provides us with a Social Darwinist and ‘existential’ understanding of the tragedy of the commons. In contrast to other animals, in humans, an innate drive to survive can manifest itself either in the increasing number of human offspring produced or in the amount of resources accumulated for future production and consumption. When population sizes and consumption levels are far below the carrying capacity of the available resources, abundance prevails and the use of commons provides no serious problems. In Hardin's words: “So long as there is a great sufficiency of pastureland, commonized real estate is efficient: no fences need be maintained and there is little call for human supervision.” (Hardin 1993: 216) This implies that although the

carrying capacity creates a limitation to economic and demographic growth, if human existence remains largely below these boundaries, people should nevertheless experience a certain sufficiency or even abundance. Yet, owing to the supposedly natural urge to survive through the growth in population size or wealth accumulation, resources become scarcer. This increase in scarcity, however, ironically leads to a greater existential threat and an intensified attempt to secure one's own survival through increased growth and accumulation.

Although the foundation of Hardin's argumentation is based on this 'biological' reasoning, he resorts to utilitarian terms and rational choice theory to explain the tragedy of the commons. Accordingly, Hardin declares that "as a rational being, each herdsman seeks to maximize his gain" (Hardin 1968: 1244). Along this line of thought, he assumes that each herder calculates the utility of increasing the number of animals in their herd and that they realize that one additional animal increases the individual's utility (meat, milk etc.) by +1 while the negative effects of overgrazing are distributed among all herders, creating a fraction of -1 utility for themselves. In other words, the responsibilities for losses do not correlate with the gains of one's actions. For this reason, Hardin calls this situation the "double C–double P game", in which costs are communized and profits are privatized (Hardin 1993: 237). By assuming that other humans are also rational beings and that they will act accordingly, each herder realizes that resources will predictably become scarce and that they *must* act in this manner so as not to be a 'sucker'. Hardin explains this dynamic and its problematic outcome in this key passage:

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another.... But this is the conclusion reached by every each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is *locked* into a system that *compels* him to increase his herd *without limit* – in a world that is limited. *Ruin is the destination toward which all men rush*, each pursuing his own best interest in a society that believes in the freedom of the commons. *Freedom in a commons brings ruin to all.* (ibid.: 1244; emphasis added)

The tragedy of the commons can thus be understood as a 'race to the bottom' in which each herder attempts to gain as much as possible from the common pasture before its resources are completely depleted. While individuals strive to survive in the short term, the conditions necessary for the long term reproduction of the group are undermined and destroyed. In other words, the tragedy of the commons portrays a type of Hobbesian state of nature in which supposed subjective rationality ultimately leads to an objective, social and ecological irrationality. Due to the assumed functioning of human nature in such a social setting, Hardin declares that this destructive dynamic in the tragedy of the commons is "inevitable" (ibid.).

3.2 Social institutions against tragedy: privatism or socialism

Yet in spite of this supposed inevitability, Hardin argues that the situation can be changed. In this sense, Hardin sees the problem not necessarily in a supposedly egotistical human nature or in a lack of individual morality but in the institutional organization of society and of its resources (Hardin 1993: 218). As Hardin admitted in an article published thirty years later, the actual problem of the commons is not the commons per se, but rather that they are *unmanaged* and open to all (Hardin 1998). Particularly, the problem of the tragedy of the commons is that the use of its resources is institutionally structured in an open and highly competitive manner. In this sense, the tragedy of a pastoral commons is not limited to an agricultural society but can be understood as metaphor for the general problem of open and competitive social arrangements in which profits can be privatized and costs spread onto the rest of society (Hardin 1979). Interestingly, Hardin also sees this problem in Adam Smith's "laissez-faire" policies of unregulated free enterprise and its adverse effects on pollution levels² (ibid.; Hardin 1968: 1244; Hardin 1993: 223) and the supposedly Marxist principle of open-access: "to each according to his needs" (Hardin 1977b). According to Hardin, both principles create social arrangements in which rights and responsibilities fail to correlate and therefore ultimately lead to over-use and destruction. However, I would add here that the negative externalities of these open and competitive social arrangements also include social inequalities and other related social problems such as unemployment, economic crises and the like. The ability of all agents to appropriate an unlimited amount of resources implies that certain (stronger) parties can inevitably accumulate more, ultimately leading to the limitation of access to these resources for others. We will discuss the social effects of this mechanism in more detail when analyzing what I call the tragedy of the market. But for now, it is important to emphasize that Hardin demonstrates that this lack of regulation opens the possibility for a small minority to free ride and "bleed the jointly owned resource dry," which, in turn, forces others to "follow their lead" (Hardin 1979). According to Hardin, this problem cannot be resolved through a plea for more moral behavior because "a system that depends only on conscience rewards the conscienceless" (Hardin 1972: 129). Or, specifically, an open-access system penalizes the prudent and rewards the reckless and more powerful.

Hardin's answer to this problem is, at least at first glance, relatively simple: "mutual coercion, mutually agreed upon by the majority of the people affected"

2 In relation to the problem of externalities and pollution, Hardin writes that "we are locked into a system of 'fouling our nest,' so long as we behave only as independent, rational, free-enterprisers" (Hardin 1968:1245). For further thoughts on the problem of laissez-faire policies and externalities, see also page 240 in Hardin's *Living within Limits* (1993).

(Hardin 1968: 1247). In order to break this tragic vicious circle, everyone must agree to be forced to follow rules and regulations – without exception. Only through a democratic social contract that regulates and limits everyone's individual freedom can the freedom of everyone be secured in the long run. Here, we are reminded of Hobbes. But what is an institutional arrangement based on mutually agreed-upon coercion supposed to look like? Hardin's response to this question is, again, quite straightforward: “privatism” or “socialism” must replace all forms of unmanaged “commonism” (Hardin 1978: 315; Hardin 1979; Hardin 1993: 218-9). “Privatism” occurs, according to Hardin, when both the land and animals are owned by the same individual. Responsibilities and gains, resources and harvests correlate fully. This property regime, however, becomes problematic when ownership is separated from occupancy and operation, which can lead to new problems of over-use and exploitation. While “socialism” is similar to “privatism” in that responsibilities and gains correspond, it must be understood as a regulated common because it is collectively owned, managed and harvested. However, this property regime is problematic because larger groups often require appointed managers who administer and enforce rules. This delegation of power leads to the fundamental problem of *Quis custodiet ipsos custodios?* Or in English: Who will watch over the watchmen themselves?³ Due to the problems of both property regimes, Hardin argues that neither form is clearly better than the other. It is important to Hardin that the tragedy of unmanaged commons is avoided through either regime or – as is most often the case – through a mixture of the two, depending on the different empirical conditions.

Despite this openness towards both political systems and property regimes, Hardin's position must nevertheless be interpreted as Neo-Hobbesian (Ophuls 1977: 148). The reason for this is that in the case both of privatization and of socialization, Hardin argues that freedom must be limited by coercion implemented from ‘without’:

The persistent dream of freedom is the suicidal dream of a state in which individual conscience is the only coercive force. But in truth, when we are dealing with real human beings rather than paragons, if ruin is to be avoided in a crowded world, people must be responsive to a coercive force *outside their individual psyches*, a ‘Leviathan,’ to use Hobbes' term. [...] In a crowded world, this is the closest we can get to freedom. (Hardin 1978, 314; emphasis added)

Hardin argues that because it cannot be assumed that all humans are virtuous, human life and liberty can only be protected through coercive laws that precisely limit this freedom. And these limiting rules must ultimately be implemented from

3 The literal translation refers to guards and not watchmen, but the problem remains the same: the social control of those who must create and enforce rules.

without, from outside the affected individual's psyche and thus from outside the affected group.

In summary, it can be claimed that Hardin's approach leads to three rather significant fallacies. Firstly, it is often mistakenly assumed that commons inherently will be overused, while Hardin actually argues that the *unmanaged* commons leads to tragedy. Here, I would agree with Hardin. Secondly, it is often mistakenly believed that the destruction of common resources can only be averted if privatized or socialized. In this case, socialization is often interpreted as nationalization through the state. It can generally be said that this dualism has reinforced the often held assumption popular during and since the Cold War that the only options people have to organize society are either according to the principles of individual private property and the market or to those of a centralized nation-state. This is problematic, however, because it simply brings us back to the market–state dichotomy that we had hoped to escape in democratic capitalism. Lastly, Hardin assumes that while people are theoretically able to democratically agree on laws to limit their freedom and the destruction of the planet, the implementation of these laws must, however, come from an external sovereign, a Leviathan. If these options are truly the only possibilities available, three questions remain: Firstly, how are people able to enter a contract that might be rational for society in the long run, while being harmful or irrational for the individual in the short run? Secondly, are private property and state ownership truly the only forms of resource management available to humans? And thirdly, where will this virtuous, absolute Leviathan that can administer and enforce laws “from the outside” come from? Considering these problems, which remain unsolved in Hardin's work, it appears necessary to explore Elinor and Vincent Ostrom's research on the commons, which provides us with theoretical and empirical answers to these three questions – and opens the door to an alternative to democratic capitalism.