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GARRETT HARDIN

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GARRETT HARDIN (born in 1915 in Dallas, Texas) won a University of Chicago Academic Scholarship and was graduated in zoology in 1936. At Chicago, he studied under W. C. Allee. Hardin obtained the Ph.D. in microbial ecology from Stanford University in 1941. Microbiologist C. B. van Niel and geneticist G. W. Beadle were his most influential mentors. Hardin began research at Carnegie Institute of Washington's Division of Plant Biology Laboratory at Stanford University. In 1946, Hardin became an associate professor at the Santa Barbara campus of the University of California; he was granted a professorship in human ecology in 1963. Garrett (eighty-eight) and Jane (eighty-one) Hardin left "Lifeboat Earth" in September 2003. They are survived by their four children.

Nearly three decades before the concept of sustainable development attracted international attention, Garrett Hardin combined economics, resource allocation, environmental studies, ecology, and political science into the presidential address "The Tragedy of the Commons" (1968) at a meeting of the Pacific Division of the American Association for the Advancement of Science. He asserted that human suffering would increase if humankind failed to recognize that the planet and its resources are finite. In addition, he proclaimed that humankind did not have the right to consume resources in ways that would adversely affect posterity. This widely cited address has been reprinted more than a hundred times in twenty-seven languages and is even more relevant today than when Hardin gave it.

Hardin developed the ecological concept of "carrying capacity"; implementing his views would increase the probability of achieving sustainable use of the planet. He frequently mentioned the clash of ethical and sentimental values. Arguably, sustainability is both transdisciplinary and the ultimate environmental quest, and Hardin was its most eloquent proponent. Despite the diversity of Hardin's publications, they emphasized seven unifying themes:

1. The human population explosion will damage the environment, deplete natural resources, and markedly degrade the quality of human life.
2. Third-world countries will find that stabilizing human population growth is exceedingly difficult, although developed countries may achieve stabilization if they control immigration.
3. Multicultural societies inevitably experience social conflict, which is exacerbated by excessive immigration.
4. Not only must quantity of children be controlled, but also the quality of their lives.
5. Harsh penalties are the result of exceeding carrying capacity.
6. Individuals will exploit anything that is free in order to maximize their own advantage. The cost of this exploitation is paid by society as a whole.
7. Some form of coercion will almost certainly be necessary to control exponential population growth. This coercion is justified if humankind wishes to live sustainably.

Hardin both framed and integrated discussions of ethics, human rights, and government, which are superbly discussed in *Living within Limits: Ecology, Economics, and Population Taboos* (1993). Hardin's ecologic perspective was welcome neither to timid minds nor to those who felt threatened by it. He maintained that, since ecologists focus on the relationships between humankind and the many attributes of natural systems, economics is just one subdivision of ecology. He believed that economists

should be supporters of ecocentric thinking, but that the accidents of history have made economists the most powerful opponents of the concept.

Hardin wrote extensively on emotion-laden subjects such as abortion, population growth, immigration, lifeboat ethics, sustainability, and optimum population size. His book *Exploring New Ethics for Survival: The Voyage of the Spaceship Beagle* (1972) was prophetic in many ways, especially in the area of environmental interconnections.

Hardin noted that noble intentions do not justify stupid action. His views seem hard-hearted in the short term to many people; however, Hardin felt that, to leave a habitable planet for posterity, some unpalatable short-term decisions must be made. “Feel good” social, ethical, political, and ethnic rhetoric does not lead to sustainable use of the planet. Hardin’s ecological publications have laid the foundation for sustainable use of the planet, but the general public and its leaders have yet to embrace them, although Hardin was recognized as an intellectual leader.

Hardin was soft-hearted toward future generations. In *The Limits of Altruism: An Ecologist’s View of Survival* (1977), he defined four systems of societal organization: commonism (a replacement for “one-worldism”), altruism, privatism, and socialism. Hardin felt that the viability of each system is different and depends on whether the global or regional commons is crowded (as it now is) or sparsely inhabited (as it was for most of the time *Homo sapiens* has been present on the planet). Under the latter conditions, any of the systems can be workable; however, when resources are scarce, none work well.

In addition to “The Tragedy of the Commons,” articles such as “Carrying Capacity as an Ethical Concept” (1976), “Living on a Lifeboat” (1974), and “Discriminating Altruisms” (1982) and books such as *Living Within Limits: Ecology, Economics, and Population Taboos* (1993), *The Limits of Altruism: An Ecologist’s View of Survival* (1977), *The Immigration Dilemma: Avoiding the Tragedy of the Commons* (1995), *Exploring New Ethics for Survival: The Voyage of the Spaceship Beagle* (1972), and *Stalking the Wild Taboo* (1973) analyze the destructive impact of universalism on the American social system.

One of Hardin’s most startling conclusions (also noted by Charles Galton Darwin in 1960) is that, under certain circumstances, conscience may eliminate itself from a population. Hardin’s views on conscience are validated in the twenty-first century in many ways. Arguably, one of the best examples is the production of greenhouse gases. In the United States, some individuals purchase energy-efficient small automobiles, while others purchase sport utility vehicles (SUVs) that are not energy-efficient. These SUVs are, at present, being sold at a great rate in the United States because advertisements emphasize raw power and the ability to drive to the few remaining quality natural systems. At the political level, legislative proposals allow for increased annual amounts of greenhouse gases from steam-electric power plants until stricter controls are legislated and enforced. At the corporate level, stockholders envy those who invested in companies with large profits, even if profits are generated by despoiling the common ground (in the case of greenhouse gases, the atmosphere).

In “Living on a Lifeboat” (1974), Hardin remarks that rejection of the commons is both valid and necessary if humankind wishes to save some parts of the world from environmental ruin. By living unsustainably, humankind is stealing from both its descendants and those of the millions of non-human life forms with which it shares the planet.

In the article “The Survival of Nations and Civilizations” (1971), Hardin discussed the issue of humankind’s continued existence. He believed that, if the world is regarded as one huge commons, then all is lost. Although written more than thirty years ago, this discussion is a superb description of the present situation. Hardin’s ethics were for the long term, which is why they are as appropriate today as they were decades ago. Socratic Hardin often reversed the question of helping countries that were well beyond their carrying capacity. Instead of asking how they could be helped, he asked how they could be hurt. The answer to the latter question is to send grain and other resources that would encourage a further population increase. Ironically, the answer to both questions is identical. Humankind maintains unsustainable practices with subsidies that enable them to continue. Hardin noted that the greater the

distance between donor and recipient, the more likely it is that well-meant charity will cause more harm than good.

Hardin believed that, in the long-term, a prosperous society could be overcome by accepting immigrants from less prosperous countries and by sending aid to them. Over large temporal spans, the fitness of both giver and recipient is diminished. To avoid such situations, Hardin believed that increased environmental literacy is essential for a harmonious relationship with natural systems.

In *The Limits of Altruism: An Ecologist's View of Survival* (1977) Hardin states: “. . . coupling the concept of freedom to breed with the belief that everyone born has an equal right to the commons ‘locks’ the world into a tragic course of action.” He felt that the private enterprise system of childbearing generates so much misery among innocent children that it is not an ethically acceptable option for modern societies.

When advocating living within limits, Hardin felt that the engineering principle of a “safety factor” would reduce the damage of episodic or stochastic events. Climate change occurs naturally, but greenhouse gases and deforestation have probably accelerated the rate of change. Hardin’s lifeboat ethics—a lifeboat is limited in capacity and every nation has a limited carrying capacity—serves as a useful metaphor for a crowded world with rapidly dwindling natural resources. He acknowledged that the exact limit is a matter for argument, but already heard are calls for help from overpopulated countries, and many individuals seeking (and usually getting) admission to less crowded “lifeboats.” Hardin listed three possible ways their calls should be answered (1974):

1. Take all the needy into the lifeboat and swamp it;
2. If the lifeboat has unused excess capacity, use it at the risk of eliminating the safety factor (How are the ones chosen who are allowed on the lifeboat and what is said to those who are excluded?);
3. Admit no additions to the lifeboat and preserve a small safety factor (Hardin notes that this solution would be abhorrent to people who would feel guilty about their own good luck).

Hardin’s suggested reply to those advocating rescue is simple: Get out and yield your place to others.

Hardin (1963) replaced the widely used ecological statement that “everything is connected to everything else” with what the editors of *Fortune* called Hardin’s Law: “We can never merely do one thing.” This short sentence requires that one search any action or inaction for its unintended effects. Hardin contended that “And then what?” should be asked over and over again to estimate more accurately both intended and unintended consequences of humankind’s actions. He was a strong supporter of and commentator on Kenneth Boulding’s dismal and utterly dismal theories of economics. The dismal theory states that, if the only check on the growth of population is starvation and misery, then no matter how favorable the environment or how advanced the technology, the population will grow until it is miserable and starves. The utterly dismal theory states that, if the only check on population growth is starvation and misery, then any technological improvement will have the ultimate effect of increasing the sum of human misery, since it permits a larger population to live in precisely the same state of misery and starvation as before the change. Although Boulding first proposed both these theories in 1956 and Hardin reinforced them in 1968, the dangerous expectation still exists that a technological solution can be found to every problem.

Hardin devoted his entire professional career to analyzing these and many other related issues. Nevertheless, he believed that knowledge alone will not move nations; astonishing and unforeseen events will be required for humanity’s education. Persuasive, mounting evidence indicates that humankind now exists on the slope of logarithmic curves unprecedented in human history. Hardin persistently emphasized that infinite growth cannot occur on a finite planet and continually urged humankind to confront the finite limitations of Earth and the concept of optimal population size.

If catastrophe is necessary to produce a paradigm shift to sustainable use of the planet, what purpose do Hardin’s eloquent publications serve? Clearly, he was aware for decades that some lifeboats would sink and that the quality of life on those that do not will be diminished. At the very least, his

publications provide a sound foundation for living sustainably. His lifeboat ethics is merely a special application of the logic of the commons (1976), which analyzes both what not to do and what to do.

In *Nature and Man's Fate* (1959), Hardin pointed out that “the elimination of warfare by military means is tolerable only in a world that has outlawed reproductive warfare. The competitive use of human gonads in a pacificistic world is every bit as vicious and productive of human suffering as is the militaristic use of atomic bombs.” May humankind have the courage to take his advice.

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