

## LIFEBOAT ETHICS — TO SINK, OR NOT TO SINK: THAT IS THE QUESTION\*

*No generation has viewed the problem of the survival of the human species as seriously as we have.*  
Garrett Hardin (1974)

*For the foreseeable future survival demands that we govern our actions by the ethics of a lifeboat. Posterity will be ill served if we do not.*  
Garrett Hardin (1974)

Hardin (1974) used a lifeboat metaphor to simplify the issues involved in living on a finite planet with finite resources. The human species hopes to remain on Earth for many generations (i.e., sustainable use without abuse of the planet), and the use of metaphors will help humankind understand and cope with vast temporal and spatial scales and complex multivariate data. Further, Hardin (1974) believed that rights and responsibilities must be congruent. He asserted (Hardin 1976): “lifeboat ethics is merely a special application of the logic of the commons.” He also provided some ways to avoid sinking the planetary lifeboat (Hardin 1985). Hardin’s numerous publications identified the major issues humankind must resolve in the 21<sup>st</sup> century — or suffer grievously. Hardin’s lifeboat metaphor is ideal for illustrating the consequences of individuals leaving (emigrate from) a sinking or badly overcrowded lifeboat to board (immigrate to) a lifeboat with more desirable conditions.

The metaphor is weak in that the lifeboats (islands and continents) cannot rise when the sea level rises. As Revkin (2004) notes, Greenland has an ice cap that is two miles thick; Revkin calls it a “freshwater Gulf of Mexico” that is frozen atop the world’s largest island. Equally important is that the influx of freshwater from this melting ice cap might block currents in the North Atlantic that help moderate the weather of the North Atlantic (Revkin 2004). The lifeboat metaphor does not convey the high probability that rising water will reduce food production while crowding people on a small land surface. Changing weather would also impair agricultural productivity, probably pushing it into instability. As Hardin (1974) noted, lifeboats should not be filled to capacity so that each will maintain a safety factor.

Sachs (2004) maintains the necessity for both understanding and resolving human catastrophe security threats arising from extreme poverty. The poor are on sinking or unsafe (i.e., not sustainable) lifeboats, which they will almost certainly be tempted to leave, even at great personal risk, if their circumstances are not improved. *The Camp of the Saints* (Raspail 1973) is an apocalyptic, but believable, vision of future events if the disproportionate allocation of planetary resources worsens or if damage to natural systems reduces Earth’s carrying capacity.

The quest for sustainable use of the planet is an attempt to avoid a post-human world. Many circumstances are contrary to achieving this goal; two of the most important follow. (1) An ecological “overshoot” has been caused by the human economy. Stated more directly, humankind is not living within the regenerative capacity of the biosphere (Wackernagel et al. 2002)—humankind is exceeding the long-term carrying capacity of the planet. (2) Access to the global commons is not regulated (Cairns 2003-2004). Hardin (1968) has eloquently described the tragic consequences of free access to the commons by people or organizations with little or no conscience.

Prestigious scientific groups (Union of Concerned Scientists 1992, Royal Society of London and the United States National Academy of Sciences 1992) and world-class scholars (e.g., Wilson 1993) have issued

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\*With apologies to William Shakespeare

warnings about the dangerous deterioration of environmental conditions. Myers (1996) has included national security as an environmental issue, and his book is not an isolated example of the connection between biospheric conditions and political conditions. Since culture has markedly shaped human evolution (e.g., Wilson 1998), humankind may be its own worst enemy. Arguably, the leaked Pentagon report that warns of climate wars (Environmental News Service, 23 February 2004, originally published by the British newspaper *The Observer*) is a dramatic force since the Pentagon is not viewed as an environmental organization.

Oddly, the Pentagon report has received little attention in the American news media even though the probability is high that global warming is almost certainly a greater threat to American security than terrorist attacks. Myers (1996) discusses why humankind chooses to ignore the environmental implications of its actions. He wisely avoids explicit policy statements (since the need for a policy on greenhouse gases and population stabilization, to mention two matters of urgency, have been evident for years), even though no remedial policies have been developed. Since world leaders respond primarily to emergencies, one or more environmental catastrophes will probably have to occur to initiate action on policies. Hanley (2004) provides an excellent summary of the views on global warming of prominent scientists and highly respected scientific organizations. As he notes, even skeptics agree that it is time to act, although research on global warming should continue.

Even the well publicized September 11 terrorist action (i.e., three hijacked planes crashed into the World Trade Center twin towers and the Pentagon in 2001) has not yet produced an effective policy to prevent such future incidents. Arguably, this inaction is due to policy makers who are addressing the symptoms rather than the underlying causes, partly because special interests protecting existing policies and practices are too formidable and their lobbyists are too entrenched. In addition, an environmental illiteracy problem exists which, when corrected, should elicit policy development from all sectors of human society. Myers (1996) does discuss failed policies on natural resources and profligate unsustainable use of these resources. What is not understood is that even moderate damage to the planet's biospheric life support system will severely impair global security and major damage might result in the final exit of *Homo sapiens*.

These thoughts are depressing, but humankind has the ability to change these circumstances by changing behavior patterns so that it neither exceeds carrying capacity nor irreversibly damages the biospheric life support system. These resolves will require leadership that can persuade and inspire the average citizen to make such changes. However, the United States, which has the world's largest ecological footprint, has carried out more than 150 impairments of environmental safeguards between January 2003 and March 2004 (National Resources Defense Council 2004). To assume that these impairments would have no interactive or cumulative effects would be madness. Globally, the probability of cascading tipping points is daunting. China has a rapidly growing economy, making it a major influence on the world grain market. The United States trade deficit with China is huge, so that much of the American grain surplus will probably go there. Since about 1,000 tons of water is needed to produce 1 ton of grain, the world shortage of freshwater will have an impact on grain production, as will desertification. Furthermore, in the United States, grain production is highly mechanized, so increases in energy prices will have a major effect on costs. Finally, global warming and other types of climate change may well have adverse effects upon grain production.

Orr (2004) describes the current crisis as political, although not in the traditional sense. He notes that American-style democracy is in tatters when trying to change unsustainable practices, since most American citizens (the majority) do not want dirty air and water; however, there is formidable opposition to changing practices that pollute and damage the environment. Ironically, as Mooney (2004) notes, there is an Orwellian aspect to any attempt to undercut scientists. Politicians who advocate "sound science" in support of their political agenda do not dare, at least at present, to call mainstream science poor, deficient, or fraudulent because they have no robust evidence to support this assertion. "Junk science" is best dealt with in professional journals by the scientific process involving credentialed scientists. A call for "sound science" is an attempt by politicians to denigrate scientific research that deviates from the dominant political ideology. The Union of Concerned Scientists (18 February 2004) released a report criticizing the Bush administration for distorting and denigrating scientific publications that differ from the administration's ideological agenda. Bartlett (2004) notes that there will be no satisfactory long-range solutions to problems of energy and the still increasing carbon dioxide emissions until population growth and sustainable energy policies have been developed. Since human society depends heavily on energy, this serious problem could destabilize human society if it is not addressed in the near future.

Orr (2004) discusses how the democratic public, on such crucial topics as climate change, hazardous chemicals, and environmental degradation, has had little or no influence on public policy in the United States. If democracy is to be established in non-democratic countries, the United States should serve as a model for sustainable use of natural resources. Orr (2004) attributes this situation to two key factors: (1) a marked

decline in public accountability and (2) a well funded campaign to denigrate alternate points of view. Both of these are acts of denial and are not limited to politics, advertising, or economics, but include politicizing of both scientific research and education. Berry (1977) discusses the perversion of the goals that led to the establishment of land-grant universities in the United States.

Ehrlich and Ehrlich (2004) discuss the belief that America can maintain its high level of affluence despite the rapidly increasing disparity between rich and poor. They believe that this situation (and other political stances) demonstrates a loss of contact with reality. Historic and archeological evidence is used to illustrate that a powerful, prosperous, and culturally advanced society (e.g., Nineveh, located in the nation-state of Assyria) can be replaced by a barren landscape if there is a marked decline in the natural resource base. Assyria had a powerful military establishment that played a major role in maintaining the flow of resources into it, and Assyrian kings used terror to deal with powerful foes. Living unsustainably globally threatens the quality of life of posterity and even its very existence.

Counter trends have surfaced (e.g., one article by Robert F. Kennedy, Jr. in the 11 December 2003 issue of *Rolling Stone* and also available at <http://www.commondreams.org/views03/1120-01.htm>). The United States Senate Climate Stewardship Act, S. 139 ([ssi@ucsUSA.org](mailto:ssi@ucsUSA.org)) is a bipartisan effort to set mandatory limits on greenhouse gases from relevant sectors of the American economy. Officers of some of the largest pension funds in the United States are attempting to have the United States Securities and Exchange Commission require disclosure of financial risks involving global warming to the stocks in their pension funds (Environmental News Service, April 2004).

These situations lead to some very puzzling questions. Why is humankind continuing unsustainable practices that put posterity at risk? Why risk a worst case scenario that places the human species at unnecessary risk? Why are nation-states and corporations favoring, even subsidizing, practices that put their citizens and customers at risk? Why is science denigrated when evidence is counter to political agendas and supported when it favors them? Why, when baboons have an emerging peaceful culture, can't humans (Sapolsky and Share 2004)? Why is humankind so reluctant to have a free and open discussion about the worsening environmental crisis?

One possibility for this reluctance is that answers to these questions would expose humankind's vulnerability to the consequences of an environmental destruction unprecedented in human history. Denial of the consequences of unsustainable practices is the best way to avoid major changes in societal behavior, which should, if implemented in time, substantially reduce the risks. Anxiety has not been eliminated—just suppressed. Natural systems should generate a sense of awe in humankind because it still does not understand them fully. Instead, natural systems are labeled “resources” to be used as humans choose.

Although it borders on the heretical to reflect on the decline, even extinction, of *Homo sapiens* in an era of exponential economic growth, a few questioners have done so. Hanh (1993) remarks on the intense anxiety about what the future holds. Berry (1996) considers how the dissolution of the present components of the environmentally destructive system might affect the future. Hill (1994) asserts that ultimately no refuge from nature's laws exists. Dixon and Adams (2003) have labeled the present era the “Human Era” and speculated, with the help of a number of scientists, what might inhabit a post-human world, i.e., humankind's domineering presence will not endure. Heifetz (1994) stresses the need to endure anxiety and pain so that one can learn from these emotional challenges. Humans need to confront their fascination with their environmentally destructive society and develop what Wilson (1984) calls biophilia.

It is reassuring that both Orr (2004) and Ehrlich and Ehrlich (2004) and, of course, all who believe sustainable use of the planet might well be achieved, have suggestions for changing unsustainable to sustainable practices. Orr (2004) remarks that a conference on the “State of the World” included much on the gloomy state of the environment and the human condition; he decided to list the legitimate reasons for optimism about the future. Orr concludes that many individuals are correct in affirming better prospects: “public opinion polls show determined majorities over three decades in favor of clean air, clean water, open spaces, preservation of species, climate stability, less traffic congestion, and solar energy” (Orr 2004, p. 133).

Much of the tolerance for unsustainable practices may be due to “cognitive dissonance”—the result of situations where the pieces of information about the same subject are inconsistent (e.g., Cooper 2004). Cooper (2004) notes that the human psychological need to reduce dissonance is one of the forces that compromises rationality. Humankind is enamored of many unsustainable practices (e.g., population growth, increased material consumption, disposable containers, and the like), but there is no “away” into which to throw or dispose of waste products (i.e., everything is interconnected). Consequently, if natural systems cannot utilize the waste products as a resource, then the wastes will cause problems. Cognitive dissonance is undoubtedly a major problem for politicians, especially those facing frequent elections of 2-4 years, and also for many citizens. Unsustainable practices are not obvious when numerous supermarkets are always well stocked with a variety of

foods, large discount stores carry a wide selection of merchandise, and no long lines form at gasoline stations. All these are frequented by a substantial number of customers, indicating that prices are not beyond the capabilities of the average citizen in some parts of the world (e.g., the United States).

I am comforted by persuasive evidence that life on Earth has survived five major extinctions and that the diversity of life has increased during this period. However, the sixth great extinction, now underway, will almost certainly drive many charismatic species into extinction and compromise the biospheric life support system so favorable to humankind. In terms of evolutionary time, the diversity of life forms will probably be restored, but *Homo sapiens* is unlikely to be the dominant species it is now and could even become extinct as did many hominids of the past. I am saddened and distressed that a species capable of producing superb literature, art, music, and science may disappear. However, this regret is diminished by the knowledge that humankind has been shockingly destructive of natural systems and has already driven many species to extinction. In addition, it is difficult to sympathize with a species that is leaving a less habitable planet for its descendants. Even in this sadness, all is not yet lost—humankind could develop a mutualistic relationship with natural systems, restore damaged ecosystems, live more sustainably, and give eco-ethics a much higher priority. More emphasis should be placed on growth of social capital, including a fair and equitable allocation of resources between humans and the planet's biospheric life support system, as well as within the species. Humankind must earn the privilege of being on the ecological stage in the evolutionary theater by admitting that it is not the only species in the drama, especially since it arrived only recently on the stage. Action not preceded by thought is dangerous at worst and unsatisfactory at best. Many emotional issues are involved, especially those of conflicting loyalties. The 21<sup>st</sup> century will be a transitional era for the human species, and suffering will occur, regardless of the outcome. Hope exists for sustainability, which is the ultimate quest for the human species. Lifeboat Earth can be managed for long-term use instead of short-term gain.

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