

SUSTAINABILITY ETHICS AND THE 21ST CENTURY HUMAN LIFESTYLE

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Sustainability ethics is a developing effort to ascertain the prerequisites for sustainable use of the planet and also to determine the environmental literacy level necessary to persuade people to live sustainably. A major problem is that the word *development*, which once considered the activities essential to desirable social change, is now associated with economic growth, population growth, and increase in material possessions. At present, these activities are major obstacles to sustainable use of the planet.

Arguably, the acid test for sustainability ethics is global warming, which affects people and ecosystems over the entire planet. Robust evidence indicates that anthropogenic greenhouse gases could be markedly reduced by changes in behavior and that alternative energy sources are available (e.g., wind and solar power). The present rate of climate change (especially at the poles) is so rapid it may override all other sustainability issues if a sustainable energy policy is not developed and implemented.

The evidence for global warming is massive, and virtually all of it supports the concept. For example, the Associated Press (2005) reports that the US National Academy of Sciences joined similar groups from other nations in a call for prompt action. However, Revkin (2002a) reports that Philip A. Cooney (Chief of Staff for the US White House Council for Environmental Quality) was attempting to remove or adjust descriptions of climate research by government scientists. Cooney is a lawyer with an undergraduate degree in economics and has no credentialed scientific experience. The alteration of scientific reports so that they conform more closely to political ideology and the stance of some corporations is both regrettable and dangerous since doing so will place many humans and other species at greatly increased risk. Soon after this information was made public, Cooney resigned (Revkin 2005b).

Developing models sometimes appear to deviate from mainstream science, but further development typically confirms the concepts of mainstream science. Political ideologists often attempt to give the impression that global warming is new and has much uncertainty. However, the concept of warming began with the British physicist John Tyndall who studied the heat trapping properties of gases in 1859. The phenomenon that Tyndall defined is now called the "natural greenhouse effect," which has clearly been beneficial to humankind. Added to the natural gases, however, are anthropogenic greenhouse gases, which are the result of human lifestyle, particularly obtaining energy from fossil fuels that are increasing temperatures, especially in the polar regions. This phenomenon could be termed the "human initiated greenhouse effect." Ample evidence shows that glaciers and relics of past glaciations, such as the Greenland ice sheet, are melting. Feedback loops show that the rate of change is non-linear. These feedback loops could also be responsible for increases in global warming, even if anthropogenic emissions of greenhouse gases are curtailed. Nearly 25%, about 5.5 billion acres of the glacial landscape, is underlain by permafrost. In Alaska, permafrost ranges from a few hundred to a few thousand feet deep. In Siberia, permafrost may be as much as a mile deep. Much carbon is stored in permafrost, which, if released, could markedly accelerate the rate of global temperature increases. Fortunately, scientists are urging prompt efforts to reduce these emissions, and they emphasize that delays will be costly.

However, all this scientific evidence has not led to a significant policy response in the United States, which is a leading global contributor of greenhouse gases. Global warming is depicted as an uncertain scientific theory by high-ranking persons in the government rather than a concept endorsed by mainstream science and a carefully structured hypothesis. In short, scientific evidence will always be insufficient to justify even precautionary action if the evidence conflicts with ideology. Questioning is the sine qua non of science, but has been restricted to qualified scientists publishing in peer-reviewed journals. The general public and politicians cannot be expected to keep up with the literature on global warming, but they can be reasonably expected to determine: (1) who funds the scientists and political spoke persons on both sides of the debate, (2) what the position of mainstream science is and how far from this position are the detractors of mainstream science, (3) if detractors from the position of mainstream science have published in peer-reviewed professional journals (4) if detractors have proposed an alternative hypothesis to that of mainstream science in peer-reviewed scientific journals.

Pegg (2005) reports that James Hansen, Director of the Goddard Institute of Space Studies, called recent research on ocean temperature the "smoking gun" that should put to rest any lingering doubts about humankind's role

in global warming. The present detachment exhibited by humans has been called “slouching towards disaster” (McCarthy 2005a). Fortunately, as Lowy (2005) reports, US business and industry are examining the evidence and are beginning to favor measures to control emissions of carbon dioxide and other greenhouse gases, as are the mayors of many major US cities (Martin 2005). US Senator John McCain held global warming hearings in early 2005 that integrated science, social problems, and policy issues. All evidence pointed in one direction—global warming is already adversely affecting the lives of people from Alaska to the Pacific Islands, and the time for remedial action is long overdue. The availability of underused remedial measures illustrates the wide gap between societal practices and sustainability ethics.

Two other major issues are related to environmental mismanagement: (1) the exponential expansion of the human population, which has more than doubled in last 80 years, and (2) the exponential growth of natural resource consumption, which further exacerbates the deleterious effects of the dramatic human population growth. Sustainable use of the planet requires that mismanagement issues be resolved because, if they are not, all other sustainability issues will not be adequately addressed. News items are both encouraging and discouraging in this regard. The Environmental News Service (2005) reports that, for Europeans, a healthy environment is as important to their quality of life as economic and social factors. This aspiration does not go quite far enough because, if the biospheric life support system is seriously degraded, the global economic system will be dealt a serious, perhaps fatal, blow and societal stability will be lost. In contrast, most elected politicians in the United States give, in practice, economic growth the highest priority. Reid (2005) notes that the US West had an above average snow pack, upon which the flow of its streams depends, for the first time in years. Still, after a year of negotiations, the governors of California, Colorado, Wyoming, Nevada, Arizona, New Mexico, and Utah have not reached an agreement on sharing the water for human needs, while giving scant attention to the needs of the natural systems themselves. Use of Colorado River water is so high that water flowing from it into the Sea of Cortez is a rarity. Mismanagement of a natural resource is not the way to achieve sustainable use of the planet. McCarthy (2005b) notes that production of essential crops, such as wheat, rice, maize, and soybeans, is likely to be hit much harder by global warming than previously predicted. Mismanagement of the water supply will exacerbate this situation. The international conference held in London, UK, also noted that ground-level ozone has been shown to produce a loss of photosynthesis and a 20% yield loss. US President Bush and his administration announced that they are dropping a plan endorsed by former US President Clinton that had placed nearly one-third of the country’s national forestland off-limits to road building, logging, and oil and gas development (Boxall 2005). The Boston Globe notes that challengers of this new rule are calling it the “no tree left behind” rule (Editorial 2005). The deleterious effects of ecosystem fragmentation by roads have been established in the scientific literature for years, as has the severe stress of logging and gas and oil development. Thus, at a time when a significant ecological overshoot already exists (e.g., Meadows et al. 2005, Loh and Wackernagel 2005), cautious optimism is justified, despite such depressing news because alternative strategies and policies are available to alleviate the problems.

German Foreign Minister Joschka Fischer stated forcefully that global security can only be achieved if environmental and social problems are addressed. Resource wars have persisted throughout human history, but the exponential growth of the human population, coupled with use of natural resources beyond ecological regenerative capacity, have made the situation globally explosive. Resource wars accelerate the depletion of resources (Cairns 2003a), and war is incompatible with sustainable use of the planet (Cairns 2003b). Clearly, fair and equitable use and distribution of natural resources are preferable to war in the quest for sustainable use of the planet. The obstacles to achieving these goals are formidable, but the alternative is to let nature reduce human population as it does for other species. Famine and disease are among the unpleasant array of events associated with nature’s cutback of population size. These events would have dramatic deleterious effects upon global security. Moreover, the agricultural system, especially agribusiness, is especially vulnerable to terrorist attacks.

The obstacles are formidable to eliminating unsustainable practices. However, humankind needs only to develop a harmonious, mutualistic relationship with natural systems (of which humans are a part) and all members of the human species. The unifying principle should be ethics, guided by reason and intelligence.

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