

CHAPTER 5

Biospheric Intergenerational Ethics

“...if we don't act quickly and determinedly to address climate change the world will face billions of climate refugees and extended world wars in a near future.” Lord Nicholas Stern

“The first lesson of economics is scarcity. There is never enough of anything to satisfy all those who want it. The first lesson of politics is to disregard the first lesson of economics.” Thomas Sowell

Intergenerational ethics must be based on the integrity and health of the biospheric life support system because humankind will almost certainly not survive if the present Biosphere is destroyed. Since the present Biosphere is indispensable to human life, a sovereign nation should protect vigorously the components under its control; however, this scenario is not the case. A subcomponent of the Biosphere, the human economy, is receiving a high priority and the environment a low one. The concepts of *food security*, *water stress* (quantity and potability), *spread of diseases*, and *environmental refugees* are becoming increasingly common. As resources rapidly decline, the gap between the wealthy and the poor increases, which produces social unrest at best and riots and anarchy at worst. Assaults on scientists and their evidence will not eliminate the global crises and will not divert attention from them except briefly.

Dangerous Complacency

Birol and Stern (2011) have sounded a warning: “There were worrying signs at the World Economic Forum in January that policymakers are becoming dangerously complacent about the scale of our climate change challenge. Now with political unrest, economic uncertainty and soaring oil prices understandably dominating the headlines, there is a risk of further distraction from the action required to meet our current climate change goals.” Why is humankind waiting for policy to decide whether to save the present Biosphere and by doing so save future generations? Where are the ethical/moral values that should transcend economic values? If reducing consumerism would reduce stress on the Biosphere, should the financial system be guiding civilization? If eliminating the subsidy on ethanol derived from foodstuffs (e.g., corn) would enable the poor to eat, should people be pumping corn into their automobile gas tanks?

Humankind is delusional if it actually believes in the comfortable future predicted by the technophiles. In addition, discussion about exponential human population growth is a taboo topic. If major lifestyle/behavioral changes are not made NOW, the next generations will face huge waves of environmental refugees who are driven by hunger, disease, and wretched living conditions. They will head to those countries they perceive as wealthy enough to provide a utopian lifestyle. Food shortages are already a major problem, especially in countries where the poor may spend up to 90% of their income on food.

Warning — Danger Ahead

Climate change is a major danger now. Most present warnings about climate change from climate scientists and those in related fields, plus warnings from some economists, have had little impact on the thinking of the general public and policy makers. The preponderance of scientific evidence indicates both danger now and extreme danger ahead if “business as usual” continues. However, attempts to suppress scientific evidence viewed as a threat to corporations and/or political ideologies are dangerous forms of censorship that will result in much human misery. The attempt to demonize scientists as conspirators who are perpetuating a hoax will not solve any of the global crises.

“The way humanity manages or mismanages its nature-based assets, including pollinators, will in part define our collective future in the 21st century” (UN Under-Secretary-General and UNEP Executive Director

Achim Steiner, as quoted in McCarthy 2011). Although the word *Biosphere* is not used specifically in this quote, the concept of “nature-based assets” is synonymous. Humankind is now experiencing a food crisis — “. . . of the 100 crop species that provide 90 per cent of the world’s food, more than 70 are pollinated by bees” (McCarthy 2011). Bees are declining in many areas of the planet, which has already had a negative impact on agriculture productivity through decreased plant pollination. The Biosphere must be nurtured — habitat degradation, excessive use of pesticides, air pollution, and the transformation of the countryside into a humanized environment has deprived humankind of nature’s (biospheric) services. Future generations will be incredulous at the mistakes made in the name of economic growth. Intergenerational ethics/morality should have prevented such mistakes. Some religions in the United States have embraced the task of saving the Biosphere (life on Earth) as a duty. However, their work has not substantively reduced the rate of biodiversity loss or biotic impoverishment because species numbers are still low.

Is Intergenerational Ethics a Hoax?

And so, once the EPA has cleaned up the country’s most glaring messes, once sea otters and peregrine falcons had rebounded from near extinction, once Americans had had a disagreeable taste of European-style regulation, the environmental movement began to look like just another special interest hiding in the skirts of the Democratic Party. It consisted of well-heeled nature enthusiasts, tree-spiking misanthropes, nerdy defenders of unfashionable values (thrift, foresight), invokers of politically unfungible abstractions (the welfare of our great-grandchildren), issuers of shrill warnings about invisible risks (global warming) and exaggerated hazards (asbestos in public buildings), tiresome scolds about consumerism, relies on facts and policies in an age of image, a constituency loudly proud of its refusal to compromise with others. Bill Clinton, the first boomer President, knew a stinker when he saw one. Unlike Richard Nixon, who had created the EPA, and unlike Jimmy Carter, who had set aside twenty-five million acres of Alaska as permanent wilderness, Clinton needed the Sierra Club a lot less than it needed him. In the Pacific Northwest, on lands belonging to the American people, the U.S. Forest Service was spending millions of tax dollars to build roads for multinational timber companies that were clear-cutting gorgeous primeval forest and taking handsome profits for themselves . . . (Franzen 2006, p. 174).

The above quote is Franzen’s humorous analysis of the state of the environmental movement at a particular point in time. His statement seems to be a superb expression of what appears to be a dominant, but less well stated, view in the United States. This situation continues, unfortunately, with little action to strongly protect the environment. A species (*Homo sapiens*) that has acquired the power to alter Earth’s climate and significantly damage the Biosphere would become a terrible threat to all life forms if that power were not accompanied by an ethical responsibility for the Biosphere. The complex, global society that humankind has created and the huge number (nearly 7 billion) of humans whose existence technology has made temporarily possible require a long training period (20-30 years) to even have a chance at a quality life. When children are brought into a complex, global society, their parents have an ethical/moral responsibility to prepare them for such a setting and an ethical/moral responsibility to nurture the environment that will sustain their lives.

The Ethical/Moral Responsibility to Avoid Tipping Points

Every time a global tipping point is passed, irreversible changes occur that affect the Biosphere. In short, every time a global tipping point is passed, Earth becomes more different, less habitable for present life forms, i.e., more alien. For example, the Greenland and Antarctic ice sheets are losing mass (melting) at an accelerating pace (ScienceDaily 2011). The shift from mildly alkaline to mildly acidic water in the world’s oceans is another example of a tipping point.

However, to understand, make policy about, and effectively avoid passing biospheric tipping points, human society and its political representatives must be scientifically literate, including an understanding of the scientific process. This requirement is far from true in the United States at present since recommendations in the US Congress to restrict anthropogenic greenhouse gas emissions by federal regulatory agencies have been proposed and voted down, even though the restrictions are based on scientific evidence published in peer-reviewed journals. How can the Biosphere be protected and, at best, nurtured without scientific evidence? Scientists, like most people, cannot function at their best when their research is constantly being denigrated by people lacking robust scientific credentials (e.g., some politicians, some news media).

Another major issue is that global crises and problems require global solutions, as well as support of the nearly 7 billion humans on the planet. Political, ethnic, and religious polarizations are major obstacles to establishing the necessary consensus on actions, values, and accepting the predominant scientific evidence.

During major catastrophes (such as the earthquake in Haiti in 2010 and the tsunami/earthquake in Japan in 2011), many, but far from all, humans feel they are apart from humankind, not a part of it. Equally important, the events in Japan are a dramatic illustration that humans cannot avoid the universal laws of biology, chemistry, and physics. The news media tends to describe these catastrophes as unforeseen events. Some risks are unavoidable or can be remarkably reduced (e.g., windmills vs nuclear plants for electric power). Risks can also be reduced by using less energy per capita, better insulation of dwellings, reduced travel, and efficient appliances. Some spokespersons say “Let the people speak,” but who speaks for future generations? Democratic votes must involve intergenerational ethics/morality. If the present generation shows a lack of concern for its descendants, what does this deficiency say about it? What does this lack show about placing economic growth as the highest priority?

Not Willing to Make Sacrifices?

Humans do not appear to be willing to make sacrifices for their descendants. Major lifestyle changes are necessary to avoid a collapse of the present Biosphere. Germans use half the energy per capita as their counterparts in the United States. Other cultures use far less energy per capita than the Germans. If energy per capita was markedly reduced, humankind could avoid building new nuclear power plants and phase out all of the old, coal-fired power plants.

Industrial energy consumption could be dramatically reduced if consumption of material goods was reduced. Many cultures (e.g., Europe, Asia) have superb public transportation systems, and food, packages, etc. can be transported on the same system with less consumption of energy.

In addition, travel — especially air travel — adds to each individual’s carbon footprint. Is any trip worth jeopardizing the future? Was that overseas trip to a conference necessary?

Houses, especially ones with poor insulation, consume a great deal of energy. In some cases, only two people may occupy a 5,000 square foot house. Suburbs that serve as “bedroom communities” often require long-distance commuting on weekdays, and much space that was previously farmland surrounds a single dwelling. Is such affluence a disregard for intergenerational ethics?

Conclusions

The global range of energy use is enormous — in Kerala State in India, the per capita consumption of petroleum has been one-sixteenth of the consumption of petroleum in the United States. The vast gap in material possessions is visually displayed in *Material World* (Menzel and Mann 1994). The American Plains Indians had few possessions since they were semi-nomadic. Prestige and status were not correlated with material possessions but to deeds that benefited the tribe. Such distinctions cannot be achieved with a global population of nearly 7 billion. Intergenerational ethics must be based on nurturing and protecting the present biospheric life support system, without which *Homo sapiens* probably could not survive. Biospheric renewable resources are the raw materials of the human economic system. Humankind has a long way to go with probably not much time before runaway climate change occurs.

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LITERATURE CITED

- Birol, F. and N. Stern. 2011. Urgent steps to stop the climate door closing. Financial Times (London) 9Mar <http://www.ft.com/cms/s/0/7dbcb112-49bd-11e0-acf0-00144feab49a.html#axzz1lwRdt3DR>.
- Franzen, J. 2006. *The Discomfort Zone*. Farrar, Straus & Giroux, New York, NY.
- McCarthy, M. 2011. Decline of honey bees now a global phenomenon, says United Nations. The Independent (UK) 10Mar <http://www.independent.co.uk/environment/nature/decline-of-honey-bees-now-a-global-phenomenon-says-united-nations-2237541.html>.
- Menzel, P. and C. C. Mann. 1994. *Material World*. Sierra Club Books, San Francisco, CA.
- ScienceDaily. 2011. Melting ice sheets now largest contributor to sea level rise. 8Mar Melting ice sheets now largest contributor to sea level rise.