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CAN COMPASSION AND KINDNESS SURVIVE A VIOLENT CUTBACK IN HUMAN POPULATION SIZE?

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. . . to be indifferent is to cease living.

Elie Wiesel, Holocaust Survivor

This manuscript is the most difficult one I have ever written, but the severity of the tsunami, hurricanes, and earthquakes and the increased probability of other major disruptions due to climate change mandate further examination of the consequences of such events upon the fabric of human society. In the United States, where the Gulf Coast has been devastated by Hurricane Katrina, the US Congress continues to spend huge sums of money on "pork barrel" projects, such as the "bridge to nowhere." In New Orleans, LA, 30,000 to 50,000 of the city's houses will probably have to be demolished (Nossiter 2005). In addition, of the city's 180,000 houses, 110,000 were flooded. In the neighboring nation of Mexico, Hurricane Wilma stalled over the Yucatan Peninsula and washed out roads and damaged areas important to the tourist trade (McFadden 2005). Yucatan has numerous impoverished people who may become environmental refugees because of the storm. A significant number of these refugees will probably attempt to enter the United States. Financial aid that would prevent or diminish the flow of environmental refugees would almost certainly be more in the national interest of the United States than the "bridge to nowhere." An earthquake in Pakistan has killed an estimated 53,000, and 75,000 were injured (Sengupta and Rohde 2005). An estimated 3 million were left homeless. However, the earthquakes that devastated Pakistan and India have not been funded by the level of giving following the tsunami that created heavy damage around the rim of the Indian Ocean

or Hurricane Katrina that produced much destruction on the United States Gulf Coast (Strom 2005). Relief organizations reported that the generosity directed toward the victims of the two latter disasters was aberrational and should not be used as a yardstick to measure giving for other disasters. Clearly, compassion and kindness are not always equitable and fair. One cannot help wondering: if conditions worsen, what then? I am distressed while contemplating human suffering and the possibility of violent mass reductions in human population size. However, current, unsustainable practices are making these distasteful events increasingly probable. Humankind's optimism that sustainability can be achieved by making modest changes in present lifestyles is contrary to a large, rapidly growing mass of scientific literature. The increasing probability of a socially and ecologically disruptive climate change alone justifies deep concern. Neither ecosystem restoration nor reduction in ecological footprint size is being adjusted to a level congruent with sustainable use of the planet. These failures, if not quickly addressed, will destabilize both human society and the biospheric life support system upon which humankind is very dependent. The central question becomes: "If compassion and kindness fail to prevent a major collapse of the ecological and social systems, will they be effective when a collapse occurs?" One might also persuasively argue that, if resources are so mismanaged that a collapse results, resource wars will intensify.

The solutions to some of the issues confronting humankind are unclear. Illustrative examples follow.

(1) How can humankind effectively manage "common ground" resources (e.g., the oceans, the atmosphere)?

(2) How can donor nations who furnish food to needy nations be assured that the recipient nations will stabilize population at a level appropriate for sustainable use of natural resources?

(3) How can wealthy nations become models for sustainable use of natural resources?

Fortunately, solutions are available for some of the major issues confronting humankind. Illustrative examples follow.

(1) Technologies are available for reducing anthropogenic greenhouse gases. Changes in human lifestyle can also result in major reductions in greenhouse gases. Steps are already being taken. Gardner (2005) reports on a United Nations convention of institutional investors who collectively manage

assets of US$3 trillion and have pledged to invest US$1 billion in clean energy companies in an effort to reduce risks posed by climate change.

(2) Wangari Maathai recently won the Nobel Peace Prize for her environmental work. Such an acknowledgment is a good sign that society is beginning to recognize that the environment is, arguably, the crucial factor in peace and global security.

(3) The computer age enables swift, relatively inexpensive communication of environmental issues throughout the planet. Satellite remote sensing makes monitoring of vast systems possible. Finally, ecotoxicology and sophisticated chemical, physical, and biological analyses facilitate the analysis of cause/effect pathways. The photographs of Earth from space taken by the Apollo astronauts reinforced the Spaceship Earth concept and emphasized that our small, blue planet is unique in its own solar system and exceptional in the universe. A significant number of people still refuse to recognize that available area and resources are finite. A major ecological overshoot already exists (e.g. Wackernagel et al. 2002), so the rapid information transfer and analysis in the computer age is essential.

Basically, *Homo sapiens* evolved as a small-group species scattered over the planet in small numbers with low density. However, both population size and population density have increased exponentially. Sustainability requires a major transition in perspective: (1) humankind must acknowledge its dependence upon the biospheric life support system and adjust to its dynamic changes and (2) humankind must accept that a system perspective at a global level is mandatory. The lack of a global perspective is evident in the paradox that third world countries, which produce comparatively few greenhouse gases, will suffer the most from the consequences of sea level rise caused by melting ice caps while wealthy countries reap the benefits of industrialization, which produces most of the anthropogenic greenhouse gases, and will suffer least (Byravan and Rajan 2005). This scenario is far from a global perspective on compassion and kindness.

McKenna (2005) describes the lack of a regional, system-level perspective. The US state of North Dakota plans to open an outlet from Devil's Lake, a closed ecological system that has risen 26 feet, into the Sheyenne River, which flows into the Red River and ultimately into Canada's Lake Winnipeg and the Hudson Bay watershed. Devil's Lake has been geographically separate from the Hudson Bay basin for more than 1,000 years. Unfortunately, Devil's Lake's salty waters have high

concentrations of nitrogen, sulfates, and phosphates, which might cause severe digestive distress in humans and might be lethal to aquatic organisms. North Dakota does not allow Devil's Lake waters to be used for irrigation. The border between the United States and Canada has been very friendly, but "shipping" contaminated water to a neighboring country is hardly an act of compassion or kindness. Within the United States, the Pentagon is asking Congress to grant an exception to specific environmental laws in order to allow major military training exercises around the country to proceed unimpeded (Janofsky 2005). The Defense Department, which has 425 active bases and over 10,000 training ranges, is already regarded as a major polluter in the United States.

The previous examples, both good and bad, illustrate the contradiction between scientific evidence and economic and technological myths. However, compassion will probably survive as long as human culture survives, although the level may not be adequate. Richerson and Boyd (2004, p. 5) define culture as ". . . information capable of affecting individuals' behavior that they acquire from other members of their species through teaching, imitation, and other forms of social transmission" and "Culture . . . is stored and manipulated in brains" (p. 7). One might conclude that cultural evolution made the human species successful. One might also reasonably conclude that humankind has significantly exceeded the long-term carrying capacity of the planet and further social evolution is essential to avoid a violent cutback in human population size or at least change human society enough to stay within the planet's carrying capacity before a violent cutback occurs. Practicing sustainability ethics is an essential component of this social evolution as is compassion and kindness for all members of the human species as well as for other life forms.

Time is short for the transition, but, if culture is truly adaptive, humankind can behave quite differently than it has when confronting a carrying capacity problem. The water component of carrying capacity is already in a crisis stage in many parts of the world. Hodge (2005) reports that drought in some areas of the world is already beyond parched soil and damaged crops. Even with drastic water conservation restrictions, the 22,000 people of Goulburn, Australia, have only an 8-month supply of water in storage. The drought there already has played havoc with the town's social fabric. However, drought is not the only consequence of climate change. Okubo (2005) reports that big increases in the flow volume of rivers will leave some areas parched while putting others under the constant threat of flooding.

However, even in the United States, where the present administration does not regard global warming as a pressing policy issue, some people are willing to take a public stand on global warming (Sanders 2005). Some evidence indicates that President Bush may be contemplating action instead of asking for more scientific evidence as he has done for the past 5 years (Editorial 2005). Compassion and kindness can survive a violent cutback in human population size and, if practiced more devotedly, might even prevent a violent cutback. Arguably, the major obstacles to achieving these goals are (1) the failure to recognize the dynamic nature of the biospheric life support system and (2) the failure to develop a global, system-level perspective on environmental issues. The increasing acceptance of the causes and consequences of global warming appears to be shifting the perspective on both issues. Botkin (1990) discusses how humankind's perception of nature must change. Particularly important is his observation that humans are accustomed to thinking of life as a characteristic of individual organisms. However, a single individual of any species cannot sustain life, which is accomplished by a group of many species and their environments and their performance as a dynamic system. This system can maintain the flow of energy and the cycling of chemical elements that support life. Species come and go, but evolutionary processes maintain the system; however, stochastic events may alter the components of the system dramatically. Persistence of humankind's social fabric, in an era of ecological overshoot, will depend heavily on compassion and kindness, not only during disasters but continually.

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