

CHAPTER 17

Partially Global to Tribal: Will Humankind Be Forced to Make the Transition?

Our loyalties must transcend our race, our tribe, our class, and our nation; and this means we must develop a world perspective.

Martin Luther King, Jr.

Wisdom is your perspective on life, your sense of balance, your understanding of how the various parts and principles apply and relate to each other. It embraces judgment, discernment, comprehension. It is a gestalt or oneness, and integrated whole.

Stephen R. Covey

Humankind has transitioned over thousands of years from being a primarily tribal species to becoming a partially global community (Cairns 2009). Globalizing the financial system is underway, but the downside is already becoming apparent. One undesirable consequence is the expanding disparity of wealth, which brings wealth to a few individuals but not to most of the middle class and many of the poor, even though a marked increase in affluence has occurred in some developing nations. However, increased affluence has also increased the demand for material goods, which caused the first ecological overshoot/debt day in 1987 (consumption of over 100% of regenerated resources) and soared to 150% consumption in August 2010. Globalization has also resulted in a “race to the bottom” in wages, which is creating societal unrest, particularly in some developed countries (e.g., the United States).

Eight interactive global crises have become a threat to the Biosphere (Cairns 2010). All eight crises are continuing to worsen, indicating that globalization has increased damage to the Biosphere, with no strategy for protecting or nurturing it. In fact, the risk of biospheric collapse has markedly increased. Any management plan for ensuring the health and integrity of the Biosphere would require robust scientific information; however, science is under assault and scientific evidence is being denigrated and cast in doubt with minimal public outrage.

Since the present Biosphere (#6) is the life support system of the planet and also the source of the renewable resources that “fuel” the human economy, prudence requires a consideration of the consequences of a partial or complete biospheric collapse. The threat to both the human economy and, indeed, civilization itself is likely to be severe. As systems, including social and ecological ones, become more complex, they are more vulnerable to perturbations. The global financial meltdown in the beginning of the 21st century is a good example of this reality.

In the early years of the 21st century, one of the US political parties cast doubt on scientists and their preponderance of evidence because it believed that “science is uncertain” and that no decision should be made on the cause of climate change. The tactic worked surprisingly well until the global financial meltdown occurred and posed a greater uncertainty that demanded quick action. The solution to the financial crisis most commonly recommended was to restore economic growth. How can economic growth be restored to former levels when resource shortages (e.g., food, water) are increasing steadily so that 1.2 to 1.5 Earths (Press Association 2011) are needed to supply the global human population? Resource consumption varies and tends to decline during bad economic times. However, as long as more resources are consumed and produce more wastes than the Biosphere can assimilate, the situation will be unsustainable.

Global warming is adversely affecting both resource availability and waste assimilation. For example, in the state of Montana in the United States, “evergreens [are] falling victim to beetles that used to be controlled in part by bitterly cold winters. As the climate warms . . . that control is no longer happening” (Gillis 2011). Trees are both a renewable resource and a carbon sink. As wildfires burn dead trees, carbon dioxide is returned to the atmosphere. Although this example is in Montana, this devastation occurs worldwide. Forests can only “restrain the increase [of atmospheric carbon dioxide accumulation], not halt it (Gillis 2011). If forests cease growing, they will not be able to absorb carbon dioxide, and, if they burn, they will add carbon dioxide to the atmosphere. Even if these conditions are continued on a more limited scale, the Biosphere will not recover in a time span that will not require a major rearrangement of policies and a major change in human lifestyles.

Living sustainably is possible — the genus *Homo* did so for at least 2.3 to 2.5 million years, and the last surviving species, *Homo sapiens*, has done so for approximately 200,000 years (<http://www.newworldencyclopedia.org>). Humankind must rapidly adapt to irreversible change, and, the longer it is postponed, the more difficult adaptation will become.

The rush of the world's nations to use up all of the world's oil supply as fast as possible is causing terrible things to happen to the biosphere. Global industrialization, which is made possible by fossil fuel, is causing the 'sixth extinction' on planet Earth — the loss of an estimated 30,000 species per year. If global industrialization continues to the full term of the petroleum age, it may cause a greenhouse-gas death of the biosphere and the extinction of man (Caldwell 2003).

At present, the United States and Canada are trying to add tar sands to the fossil fuel list. Giving up the burning of coal and natural gas and beginning extensive use of wind and solar energy will speed the transition, but solar energy must be the primary, even the sole, source of energy. Currently, all other alternative sources (e.g., nuclear) increase the risks of an already perilous era.

Whether burning all remaining fossil fuels will drive *Homo sapiens* to extinction is not known, but what is the ethical/moral decision in this situation? Multiple, stable equilibria do exist in some ecosystems (e.g., Seabloom and Richards 2003). Even so, the universe is not a secure place, so taking unnecessary risks just to prolong the fossil fuel era a few more years is not rational.

Respecting Carrying Capacity

Most species on Earth are ruled by limits to growth, termed *carrying capacity*. However, *Homo sapiens* discovered fossil fuels and temporarily became, or so it seemed, above the universal laws of biology, chemistry, and physics. Even before fossil fuels were exhausted, carbon dioxide and other greenhouse gases began altering Earth's climate and damaging the present Biosphere. These events and many others have reduced Earth's carrying capacity for humans, even though the planet was overpopulated before they occurred. Many economists (e.g., Julian Simon) and political leaders (e.g., those who gave subsidies to increase birth rate) do not believe in the concept of carrying capacity; they believe it applies to other species but not *Homo sapiens*. After all, humans are intelligent, creative, have developed technological and economic systems, and believe in human rights. However, humankind has crossed the threshold between sustainable and unsustainable lifestyles by ignoring the reality of carrying capacity.

Rate of Transition

The rate of transition from partially global to tribal will depend on a number of factors that are either weakly or strongly interactive.

- (1) How long will the global fixation on economic growth continue?
- (2) How many of the eight global interactive crises have been “solved” by default?
- (3) Is a non-carbon energy plan underway?
- (4) Are climate change and evolution, two pivotal concepts in biology and endorsed overwhelmingly by mainstream scientists, still being denied?
- (5) Has a major increase in scientific literacy occurred in politicians and the public they serve?

- (6) Are corporations still funding the groups that cast doubt on science?
- (7) Will it be possible to have a civil, free, and open discourse on exponential human population growth?
- (8) Will sovereign nations relinquish some of their “rights” to save the present Biosphere?
- (9) Will representatives of sovereign nations remain at a global conference intended to recommend actions to save the Biosphere even when the conferences appear to threaten a particular nation’s special interests?
- (10) Will sovereign nations assist (and not interfere with) data gathering by qualified scientists about parts of the Biosphere within their national boundaries? If the Biosphere is to be protected, nurtured, and managed as a single, global functioning system, this action is essential.

The answers to these questions will determine the chance of preserving the present Biosphere in a condition not too different from its present state. One of the probable consequences of not doing so is a massive reduction in the size of the human population. Anyone horrified by this fact, as I am, must remember that humans both caused the problem and have for many decades failed to address it. The global population of humans has increased by 5 billion in the last 80+ years — an unprecedented event. Exponential human population growth has been occurring for thousands of years, but short doubling time did not appear threatening when the total population was small.

The Case for Tribal Living

Many years ago, philosopher Thomas Hobbes, in his book *Leviathan* published in 1651, described the status quo of early humans: “. . . and which is worst of all, continual feare, and danger of violent death; And the life of man, solitary, poore, brutish, and short.” Studies of present day hunter/gatherers and the fossil record provide evidence that this description is not entirely accurate. Humans who lived before the Agricultural and Industrial Revolutions had a varied diet and expended much less effort acquiring it than most present-day humans. Tribal members had a substantial amount of leisure time, which is not true of humans in today’s society.

The great disparity of wealth that exists in the 21st century did not exist previously, and the fate of the tribal members was more closely linked than is true in present-day societies where the disparity in wealth is huge and still increasing. Since most tribes were comparatively small, tribal members could observe their leaders closely on a daily basis rather than briefly and impersonally on a television set.

Still, most present-day humans would not exchange their lifestyle, however insecure, for a tribal lifestyle since most would not be skillful nor knowledgeable hunters/gatherers. The encyclopedic knowledge of tribal members of the strong regional, seasonal life cycle components is accumulated over a life time and is not quickly transmitted. Migratory species are especially attuned to nature’s variability. Hunters/gatherers must be sensitive to the risks involved since animals can be dangerous and plants can be poisonous and the location of even a temporary shelter requires informed judgment.

Fossil Fuels and Transition Time

Humankind’s continued use of the remaining fossil fuels will have a major impact on transition time. As the global temperature increases, so does the danger of rapid release of the billions of tons of carbon stored as frozen hydrated methane on the ocean floor and in the permafrost on land. A sudden, massive release of this carbon would almost certainly cause runaway climate change and reduce the time for humankind to learn to adapt to the new, challenging conditions. Simultaneously, available food would be influenced by the new and changed variety of food species and the increased competition for less available food. Human mortality and that of other species, under conditions of very rapid change, would increase. Over evolutionary time, a diverse array of new species would probably emerge, as happened after past great extinctions. During the transition period, continual adaptation would be necessary for survival. A major reduction in use of fossil fuels coupled with an increased biospheric assimilative capacity for carbon dioxide could make a slow transition possible. In this scenario, the concentration of carbon dioxide should be reduced to 350 ppm or less.

Conclusions

A society that espouses the type of economic growth that is destroying its life support system is flawed, and assaults on scientists who are merely reporting the truth.* Persecution of individuals for seeking the truth is not new. In ancient Greece, espousing the search for knowledge and truth was viewed by the power elite as corruption of the young. In the 21st century, scientific truths are perceived as a threat by both persons and corporations with special interests.

Humankind will never make the transition from a partially global society back to a tribal society if bearers of “bad news” (the truth) are punished. The result of punishing “bearers of bad news” is that most cautious people will only bring “good news” regardless of its accuracy. Fortunately, most scientists will continue to report what confirmed, scientific data reveal. No “good news” can be reported until something is done about the “bad news.”

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*Scientists usually avoid the words *truth* and *falsehood* and use different levels of confidence instead. Since the general public and their political representatives are not accustomed to probabilistic statements, I believe occasional use of the word *truth* is acceptable.