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Sustainable Society: A society that balances the environment, other life forms, and human interactions over an indefinite time period.

What Sustainability Is Not!

John Cairns, Jr.

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Summary

In the span of years of seminars and lectures I have given on sustainable use of the planet, sustainable development, leaving a habitable planet for our descendants, and similar titles, a small but exceedingly vocal group has attempted, during the discussion period or the talk itself, to link sustainability with environmental extremism. Almost without exception, objections to sustainability have been without foundation.

The most common accusations are that sustainability is: (1) a subterfuge to protect endangered species, (2) anti-technology, (3) anti-industry, (4) anti-humans, (5) anti-private property, and (6) anti-change. Consequently, stating what sustainability is not is often helpful, and repetition of it may be necessary, depending on the depth of the misunderstanding in the audience. This discussion covers some, but far from all, common objections to sustainability. As sustainability has become better understood, attempts to associate it with environmental extremism should have diminished. However, no reduction in these misunderstandings has occurred, and, if anything, the intensity may have increased slightly. Generally, only a small percentage of audiences appear to be emotional about sustainability, and stating what sustainability is not may not change their opinion or even silence their opposition. However, other members of the audience may be informed by stating what sustainability is not.

Objections To Sustainable Development

During the past three years, I have given seminars, talks, keynote addresses, mini-courses, and the like on sustainable development. Audience age usually ranges from high school students to retirees. Occupations of those employed or previously employed range from blue collar service workers to industrial executives, and from modestly educated to highly educated. Despite the diversity in age, occupations and interests, the reoccurrence of at least some objections to sustainability, as perceived, is always startling.

An illustrative list of objections to sustainable development follows — "**sustainability initiatives are a thinly masked initiative to protect endangered species.**"

The spotted owl of the Pacific Northwest is the most commonly used example in the United States of protecting an endangered species. Surprisingly, objections are often raised by people who have never seen a spotted owl or, in some cases, even been to the Pacific Northwest. This example is mentioned in these seminars even though no particular endangered species is being discussed. The spotted owl seems to be the icon of the fear that protecting endangered species and the habitat they require will result in loss of jobs and will adversely affect wage earners who are dependent on the lumbering industry for their income. A similar argument is used in areas that depend on the tobacco industry — taking certain health risks is preferable, to at least some people, than the option of finding an alternative agricultural economy or even retraining workers for a different occupation. Consequently, the argument becomes a question of sacrificing humans to protect owls (or other endangered species), and emotions intensify.

Given the widespread nature of the accusation that endangered species are more important than jobs, it is desirable to point out that sustainable use of the planet is in the enlightened self-interest of all humans, particularly those interested in the well-being of future generations. The charge is frequently voiced that the endangered species is unnecessary and that the loss of it would hardly be noticed. The planet did get along quite well without the spotted owl for millions of years and, in fact, did so equally well for long periods of time without *Homo sapiens*. This fact leads to the assertion that sustainability focuses on life-support systems and prudent use of resources, not on individual species. In addition, the habitat occupied by the endangered species may furnish useful ecosystem services that contribute to sustainability, so the primary sustainability objective is not the protection of the spotted owl or other endangered species but the protection of the habitat and the services it offers. The Natural Step program maintains: 'We need to re-examine the negotiable rules of our economic game so they conform to the non-negotiable rules of the biophysical world' (Robert et al., 1996).

Sustainability is anti-technology

This objection forgets that sustainability goals and conditions will require a technological revolution and a major paradigm shift in technological development. Hawken (1993, 1997) describes many technological innovations that will be necessary to facilitate this shift. Furthermore, consulting firms, such as Roy F Weston, Inc. (e.g., Weston, 1995), have produced publications on this subject, and such firms as Mitsubishi have produced videotapes that depict technological innovations undertaken by that organization to foster sustainable use of the planet. Clearly, both individuals and companies are investing great amounts of time, energy, and money into developing technologies suitable for sustainable use of the planet. Sustainability is fostering technological changes and is not seeking to curtail technology but use it effectively.

Sustainability is anti-industry

Industry has invested a great deal of time in sustainability thus far. A large number of Swedish industries have endorsed the Natural Step Program (Robert et al., 1996), which has living sustainably as its objective, and Tibbs (1992) envisions hybrid industrial/ecological systems. The Mitsubishi videotape mentioned earlier devotes considerable time to both the continual reuse of plastics and the industrial transformation of garbage and other societal wastes so that they may be reintroduced into ecosystems in a way that

will make ecosystems thrive. Consequently, industry has an enormous stake in sustainability.

The technological and ecological components of human society's life-support system must work together to reduce the risk of the technological component damaging the services delivered by the ecological component. In fact, rather than a 'them' versus 'us' polarization of industry and those interested in sustainability, a synergistic cooperation must exist. That is, in order for sustainable development to occur, some degree of unanimity must be reached on the goals and the conditions. Applications will necessarily be different in developing and developed countries. However, none in the global marketplace should be isolated from the rest of the world because the environmental effects, such as acid rain and ozone holes, transcend political boundaries.

Sustainability puts natural systems ahead of humans

If sustainability is considered on large temporal and spatial scales, then more humans can occupy the planet over the next century, or even millennium, than would be possible if the ecological life support system is pushed beyond its endurance. Anyone even partially literate in toxicology realizes that humans cannot kill every species on the planet without killing themselves. Indeed, disappearance of any species indicates unfavorable conditions for life in general, whether the conditions be toxicological or physical. Therefore, humans are inevitably affected by any condition that affects large numbers of other living creatures, and it is in enlightened, human self-interest to protect the natural systems upon whose services human society depends.

However, some people believe that technology can solve every ecological problem (even though the problems are often caused by technology), and others believe that human ingenuity, intelligence, and technology free humans from the harsh biophysical laws (natural laws) that restrict other species. This argument is difficult to counter because of remarkable advances in science and technology over the last 200 years. On the other hand, these advances have also created new problems that did not exist 200 years ago, which have not yet been solved (for example, safe longterm storage of radioactive waste). Present storage technologies may be 'safe', but persuasive evidence indicates that the safety has not yet been adequately validated. Basically, this mind-set is a version of 'trust us', 'the check is in the mail', and 'the persons who created the problems can also solve them'.

Certainly, these options are not always true. Technology often advances faster than

changes in social behavior evidenced by the fact that, in an era when weapons of mass destruction exist in incredible quantities, some governments and political leaders still act in ways that are generally viewed as irresponsible and self-serving. Reversing severe ecological damage in time frames of relevance to human society (that is, to avoid major suffering) is not possible, and only one major mistake is required to cause severe societal disequilibrium. One of the goals of sustainability is to avoid such an unfortunate situation, both for present and future generations.

Moral reasons exist for protecting natural systems and the organisms that inhabit them. Sustainability does not address these ethical issues, except indirectly to the degree of leaving a habitable planet for future generations. Further, humans hope that their descendants will have at least the same opportunities to enjoy natural systems that they had. Persons now living cannot imagine future circumstances or what the value system of future generations will be. Sustainability initiatives do not attempt to address these issues, but rather to leave ecological and societal capital in place for present and future generations so as not to restrict any options.

Sustainability is anti-private property

This contentious issue is probably best examined by repeating the old saying 'your right to swing your fist wherever you choose ends where my nose begins'. A social contract diminishes the opportunities for an individual to do serious harm to other individuals in society while exercising freedom of choice. Members of society voluntarily relinquish certain individual rights clearly perceived as harmful so that their lives are not disrupted by inappropriate actions of others. Stated more crudely, individuals make a social contract to avoid damaging behavior with the understanding that society will coerce all of its members by imposing consequences for inappropriate behavior.

The situation becomes more complicated when private property is involved because people feel that they own the property and should be able to do whatever they wish with it. However, the same principle applies—a social contract requires that individual behavior must be restrained if such behavior endangers either the freedom or the property of others. Some residential areas even extend this principle to the aesthetic, where hanging laundry outdoors is considered inappropriate and antenna towers for ham radio operators are not permitted. A general, social contract is essential if one moves from one part of a country to another and wants to assume that certain protections are in place.

Sustainability merely modifies the social contract, i.e., general consent to protect future generations from the actions of present generations that will jeopardize their opportunities for living a comparable life. Sustainability, therefore, is not anti-private property but merely seeks, with common consent of society in general, to ensure that future generations have a habitable planet and at least the same opportunities as present generations.

The problem with all social contracts is that the perception of an individual action may be that it causes no harm—for example, filling in a one-acre wetland in a drainage basin that extends from the Canadian border to the Gulf of Mexico. But, filling in thousands of acres reduces storage of flood waters. The exhaust from a single automobile can hardly be measured any distance from the exhaust pipe. However, the exhausts from millions of automobiles have a dramatic effect within the limits of a city, especially when there is a temperature inversion or some other factor that keeps the air confined to the city as if it were covered with a dome. When an individual fights restraint either on individual behavior (such as speed limits) or on use of private property, the question is often not just whether a particular type of behavior is irresponsible. If only one person were acting this way, it might not be; however, the question becomes: what if everybody acted this irresponsibly? Sustainability is merely a social contract with large temporal and geographic spans, not different in principle from any other social contract.

Sustainability is anti-change

The Brundtland Report (United Nations World Commission on Environment and Development, 1987) states that major societal changes will be essential in order to achieve sustainability. Rather than being anti-change, advocates of sustainability want to cease present activities that are not sustainable and change them to ones that are. Therefore, people against sustainability could be considered anti-change, and those for sustainability are pro-change (at least where non-sustainable activities and behaviors are concerned).

The Evolution/Sustainability Paradox

The evolutionary process is continually producing new forms, most of which are no better suited to present environments than existing organisms, but a notable few are. Sustainability is essentially an attempt to ensure favorable conditions for one species,

Homo sapiens, over large temporal and spatial spans. Many other species compete with humans for a wide variety of resources; the most successful in the competition will have a greater fitness than other species. From a human perspective, this situation will lead to some destabilization. Sustainable development and its other descriptors acknowledge that humans are dependent on natural systems, but the question of how competition from other species is handled has not been addressed adequately. Certainly, not all interactions with other species will be benevolent and might even require drastic measures. This complex issue will probably prevent sustainable development from being the steady state perceived by most persons. In addition, general goals and conditions can endure if they are continually modified, but prescriptive rules and regulations for sustainability applied too bureaucratically will not suffice.

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John Cairns, Jr.

Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061, USA

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