

Authentic Sustainability; Beyond Going Greenⁱ

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Sustainability is the defining question of the 21st century. It is not just a buzzword or passing fad, as many people seem to believe, or perhaps even hope. Sustainability asks: how can we meet the needs of the present without diminishing opportunities of the future? It isn't about demanding sacrifices from present generations to ensure a life of abundance for those of future generations. It is not about giving everyone everything they might want, either now or in the future. It's about ensuring that everyone has access to enough of the things they actually need for a purposeful, productive, and personally rewarding life. It's about affording the same basic human rights to those of the future as we expect and demand for ourselves today. Sustainability asks whether we can keep doing what we are doing today without threatening the future of humanity. Those who take the question of sustainably seriously come to the same conclusion. We can't. Our economy and society quite simply are not sustainable.

Unfortunately, the United States is a nation in denial. Too few are willing to confront the reality that our current way of life is not sustainable. When we face this reality we eventually will understand that we must fundamentally change our thinking about how the world works and our place within it. This change in thinking eventually must change virtually every aspect of our lives. Many people will never seriously ask the question of sustainability. They are afraid of the answer. To them, the risks of real change are simply too great. When confronted with questions of environmental degradation and resource depletion in the 1960s, they thought it was another passing fad or at most a challenge that would be quickly and easily met. When confronted with the economic costs of environmental protection and energy conservation during the 1970s, they retreated into denial and neglect.

Today, too many remain in denial of critical ecological issues such as global climate change, fossil energy depletion, loss of biodiversity, exhaustion of fresh water, environmental health risks, ozone depletion, soil degradation, and scarcity of essential minerals – all threats to the future of human life on earth. Even many of those who see the potential consequences of these threats are unwilling to do anything about them. They either don't think there is anything of consequence they can do or they hope the consequences won't be felt until sometime in the distant future – when neither they nor their children will have to bear the costs.

On the surface, one might think we have made a national commitment to sustainability. Organizations ranging the political spectrum from Walmart to the Sierra Club have sustainability initiatives, and each seems to have its own definition of sustainability. In reality, each organization is attempting to redefine sustainability to meet its economic and political needs.

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This is commonly called “green washing,” and is quite common in America. There is no longer any real disagreement among those who advocate *authentic* sustainability. Sustainable organizations must help meet the needs of the present without diminishing opportunities for the future. Sustainable organizations and institutions must have ecological, social, and economic integrity.

Everything capable of meeting the essential needs of people, of both the present and future generations, must be derived from either nature or society. Society provides the means by which we facilitate our *social, personal* relationships *with* other people and nature. The economy facilitates the processes extracting things of *individual, impersonal* value *from* nature and society. Without an economy, our potential is limited to a life of self-sufficiency. But, if we deplete the resources of nature and society there will be no source of future economic value. Thus, ecological, social, and economic integrity are inseparable dimensions of the whole of sustainability. Up to now, most public and private sustainability programs have focused on the narrow intersection or overlap of ecological integrity and economic feasibility. Most have been reluctant to even address the social and ethical dimensions of sustainability. In fact, our economic and political systems ultimately must be radically redesigned and reorganized for authentic ecological, social, and economic sustainability.

Most sustainability programs in public institutions and private industry have focused on “going green,” primarily on the 3-Rs: reducing, reusing, and recycling. Such programs fit comfortably within the existing economic development paradigm, as they often are means of increasing economic efficiency as well as ecological integrity. Reducing our resource consumption, without diminishing economic output, makes the economy run more efficiently. Reusing things rather than throwing them away, reduces resource wastes and often increases economic efficiency. Recycling turns wastes into resources and has the potential to increase efficiency even more than reduction or reuse. In cases where reducing, reusing, and recycling are not “economically feasible,” public policies are created as a means of providing adequate economic incentives. Resource efficiency, while *necessary* for sustainability, is simply not sufficient, with or without government incentives. If you are going in the wrong direction and simply slow down, you aren't moving away from your desired destination quite as quickly, but you are still going in the wrong direction.

The insufficiency of efficiency to ensure sustainability is made apparent by the fact that sustainability ultimately is a matter of energy. Everything that is of use to us – our cars, houses, clothes, as well as our food – requires energy to make, energy to use. In fact, all things of economic value are simply concentrated forms of energy. All useful human activities – working, managing, thinking, – also require energy. In addition, humans are capable of being economically “useful” only after they have been nurtured, socialized, and educated, all of which require energy.

According to the laws of thermodynamics, energy can neither be created nor destroyed. However, each time energy is used to do anything useful, which includes all things of economic value, some of the usefulness of energy is lost. Whenever energy is used to do something useful, which physicists call *work*, it inevitably changes in form. Specifically, it changes from more-concentrated, more-organized forms to less-concentrated, less-organized forms, as when gasoline

explodes in the engine of a car. The energy isn't destroyed by use. But each time energy is used and reused, it becomes less concentrated, less organized, and thus less useful. This is the essence of the physical law of entropy.

Waste is simply energy that we don't use – perhaps don't know how to use. Pollution is negative energy in that it requires energy to mitigate its negative impacts or degrades the ability of nature to sequester solar energy. Improving the efficiency of energy use – including reducing wastes and pollution – allows society to get more usefulness or productivity from a given quantity of resources. That's why such things can also be profitable. However, increasing efficiency cannot prevent the inevitable loss of energy to entropy. Organizations and institutions that are preoccupied with efficiency as a means of achieving sustainability are simply slowing the speed by which we are going in the wrong direction.

Other organizations have advanced their thinking beyond resource efficiency; they are substituting renewable for non-renewable resources – meaning renewable for nonrenewable energy. Some have recognized that solar energy is the only truly *sustainable* source of energy available to offset the inevitable loss of usefulness to entropy. Some have installed windmills and panels of photovoltaic cells to generate a portion of their energy needs. When combined with “green buildings,” that capture passive solar energy and reduce energy use, the reductions in energy savings may offset the higher initial costs – over some reasonable period of time. In general, substituting renewable solar energy for non-renewable fossil energy may or may not be profitable, depending on the technology. Again, a shift from fossil energy to solar energy is necessary for sustainability, but it is not sufficient.

A society that is guided by economic value is fundamentally incapable of ensuring the social equity necessary for sustainability. Ultimately, it is cheaper economically to extract and exploit than to regenerate and renew. Economic value is determined by scarcity, not by necessity. Some basic necessities of life, such as air, have no economic value. Air is not scarce, at least as long as there is enough for everyone to breathe all they want. Scarcity means there is not enough of something for everyone to have all they want; so someone has to get by with less than they want, for some, less with than they need for an acceptable quality of life. By its very nature, the economy must leave some people without adequate food, clothing or shelter -- or force some to settle for cheap, unhealthful foods, unsafe shelter, and clothes that won't keep out the cold.

The preoccupation with productivity and profitability of the past 30-years has not reduced poverty or social inequity in the United States. More people are hungry or “food insecure” in the U.S. today than in the 1960s. In fact, the gap between the rich and poor is wider than at any time since the Great Depression of the 1930s, and continues to grow wider. The good-paying manufacturing jobs that defined the American middle-class have been moved to lower-wage countries, in the name of economic efficiency. All of these things make economic sense but are not economically sustainable.

A society characterized by persistent economic and social inequity is inherently unstable and vulnerable to economic and political collapse. This is not some socialist theory or communist dogma. This is a cornerstone of the American democracy, which was designed by the “founding fathers” to ultimately ensure equity and justice for all. They proclaimed the unalienable rights of

all people to life, liberty, and the pursuit of happiness and wrote “to ensure these rights, governments are instituted among men.” Social equity and justice are essential pillars of both democracy and sustainability.

Economic value is inherently individualistic and impersonal. It makes no economic sense to do anything solely for the good of society or to invest in anything if the rewards are expected to be realized after the investor is dead. Since life is inherently uncertain, economics places a premium on the present relative to the future. That's why people are willing to pay interest on borrowed money and demand interest on loaned money. At an interest rate of 7%, a dollar ten years from now is only worth fifty-cents today, because fifty-cents invested at 7% compound interest will have grown to a dollar in ten years. People of future generations are obviously competing in today's markets to ensure their individual, impersonal self-interests. A solar-powered economy obviously would not deplete its primary source of energy. However, simply shifting to renewable energy does not address the challenges of social equity or intergenerational equality, and this will not ensure sustainability.

Sustainability will require a fundamentally different way of thinking. As Albert Einstein once observed, “We can't solve problems using the same thinking we used when we created them.” Increasing energy efficiency and substitution of solar energy for fossil energy, while necessary, will not be sufficient to ensure sustainability. We must fundamentally change our way of thinking about how the world works and our place within it.

The industrial model of development, which has dominated Western thinking for the past two centuries, reflects a mechanistic view of the world. The world is viewed as a giant, complex mechanism that can be managed and manipulated to meet human needs and wants. Within the industrial paradigm, the economy and society are nothing more than collections of self-seeking individuals. A sustainable model of development must reflect an organismic view of the world. The world is not a machine designed for the exclusive benefit of humanity but instead is a giant, complex organism. We humans are not apart from the world but a part of the world, and thus, we cannot manipulate the world for our exclusive benefit. We are as dependent on the living and nonliving elements of the global ecosystem as they are us. Our well-being is inseparable from the well-being of the whole.

While we humans may be able to tip the ecological balance in our favor relative to other species, we cannot change the fundamental principles by which the world functions. Humanity is a part of nature and the economy a part of human society. Thus societies ultimately must function by the principles of nature and economies ultimately must function by the principles of both society and nature. We can ignore the laws of nature, including human nature, but we cannot avoid the consequences of their violation. To achieve sustainability we must learn to live in harmony with nature.

Societies and economies are living systems. Living systems don't function according to the precise laws of the nonliving world – physics, chemistry, or electronics. Living systems function according to general principles. We don't know with certainty how living systems will respond to a specific stimulus; we only know how they will respond “in principle.”

Sustainable societies and economies must be guided by the principles of healthy, productive natural ecosystems. These principles include *holism*, *diversity*, and *interdependence*. Natural ecosystems are more than collections of individual physical and biological elements. They are holistic – relationships matter. Diversity also is an essential principle of healthy natural ecosystems. Diversity is necessary for renewal, resilience and resistance, regeneration, and adaptation. Interdependent, mutually-beneficial relationships are necessary to transform the potential benefits of holism and diversity into positive ecological reality. Interdependence makes the whole something more than the sum of its parts, instead of something less.

The principles of social ecology include *trust*, *kindness*, and *courage*. Social principles arise from a set of common core values, which transcend religion, philosophy, race, nation, and culture. Trusting relationships are built on the core values of honesty, fairness, and responsibility. When trusts are validated, relationships grow stronger, and when violated, they grow weaker. Relationships of kindness are built on the core values of empathy, compassion, and respect. Sustainable relationships sometimes require mercy rather than justice. Finally, trust and kindness accomplish little without the courage to act. It takes courage to reject deception, inequity, irresponsibility, ruthlessness, and disrespect – to be trusting and kind.

Fundamental economic principles reflect the basic nature of individuals in their pursuit of individual, impersonal self-interests. They include *scarcity*, *efficiency*, and *sovereignty*. Economic value is determined by scarcity, meaning there is less of something available than people need or want. As indicated previously, things of great intrinsic value, such as air, have no economic value as long as they are plentiful. However, people also need some things that are scarce and thus have economic value. Economic efficiency reflects economic value relative to the economic costs of the things used to produce it. People must make efficient use of their time, intellect, energy, and money if they are to meet even their basic economic needs. Economic sovereignty is the freedom to make informed choices. In a sustainable economy, people must be free to make their own decisions and must accept responsibility for their choices.

Sustainable societies must have integrity, meaning completeness, strength, and soundness, which depend on the extent to which the principles of sustainability permeate all of its aspects. Social integrity also depends on the principles of ecological and economic integrity. Communities and societies must be holistic, diverse, and interdependent. Ecological integrity also depends on the principles of social and economic integrity. Societies must use their natural resources efficiently, while respecting the needs of future generations. Finally, economic integrity is inseparable from ecological and social integrity. Economic relationships must be mutually beneficial relationships that reflect a sense of kindness and trust, in meeting our individual material self-interests.

Sustainable societies and economies that function according to these fundamental principles of nature will have the characteristics of healthy living systems. Healthy living systems *reduce*, *reuse*, and *recycle* energy flows to slow the rate of biological entropy. The 3-Rs of sustainable are not sufficient to ensure biological sustainability. Sustainable systems must be *regenerative*. Since the usefulness of all energy is ultimately depleted, the regeneration of usefulness through the use of new energy is the only concept of sustainability that we know. Regenerative systems

must be *renewing*, *reproductive*, and *reorganizing*. Only living systems are capable of regeneration.

Only living systems have the capacity to sequester *renewable* solar energy necessary to offset the inevitable loss of usefulness of energy to entropy. Green leaves and algae are self-*renewing* biological solar energy collectors. We humans can also capture solar energy by using windmills, falling water, and solar panels. We are also self-renewing biological beings. Living things also have the natural tendency to *reproduce*. That's why plants devote a significant portion of their life's energy to producing seeds. That's why animals, including humans, devote so much energy to raising their offspring, even when there are no economic incentives to do so. Living systems also have the capacity to *redesign* and *reorganize* themselves as they learn and evolve from generation to generation. We humans have the capacity to radically *redesign* and *reorganize* our economic and social systems to mimic the principles and processes of *regenerative*, living systems, if we choose to do so.

As societies, economies, and organizations move toward greater economic efficiency, they compromise the essentials of sustainability. As investments become more narrowly focused on economic returns, they fail to make the long-term investments in natural and human resources necessary for renewal and reproduction. Such investments cannot compete economically with those promising quicker returns. Such economies and societies have no incentive to radical redesign and reorganize for the benefit of future generations of citizens or investors. Their institutions and organizations may be productive and profitable, but they are not sustainable. To ensure sustainability, the need for economic efficiency must be balanced with the need for ecological and economic integrity.

Since living systems are continually renewing, reproducing, reorganizing, they are ever-changing, evolving, and thus are never precisely predictable. Sustainable economies and societies must be able to survive the inevitable unexpected shocks and changes; they must be *resilient*. Resilient systems are *resistant*, *responsive*, and *redundant*. They are able to resist the geological, climatologically, economic, and political shocks of an unpredictable world. When their resistance breaks down under extreme conditions, they are able to respond in ways that protect them from further damage. In the most severe cases, resilient systems have a fall-back strategy or "plan B;" they have built-in *redundancy*. Resilient systems must be resistant, responsive, and redundant.

Again, as organizations, economies, and societies move toward greater economic efficiency, at some point they begin to compromise these essentials of sustainability. Their functions become more highly specialized and more tightly synchronized and redundancies are removed. In the process critical dependencies are created among the specialized functions and the systems as a whole become more fragile and vulnerable. They lose their ability to either withstand or respond to unexpected shocks, and their lack of redundancy leaves them without the resiliency needed to regroup and bounce back. If any component of such a system fails to perform its function effectively, the entire system is vulnerable to collapse. Such systems can be highly efficient, but they lack the resistance, resilience, and redundancy needed for sustainability. Again, to ensure sustainability, the need for economic efficiency must be balanced with the need for ecological and economic integrity.

Some critics of sustainability claim that people simply are not willing to make the economic sacrifices necessary for sustainability. They will always give priority to economic efficiency over ecological and social resilience and regeneration. “What have those of future generations ever done for us,” they ask, “so why should we do anything for them?” Admittedly, many people today are simply too preoccupied with economic self-interests to care about the long run ecological or social sustainability. Some of these people will never change. They have made up their minds about how the world works and their place within it, and they aren't going to change. However, other will change if they are provided with living examples of a fundamentally better way of life and convince that a better way of life is possible.

People must come to the realization that life is not about the pursuit of material wealth, power, or fame – as we had been led to believe. Life is about the pursuit of happiness; everything else is a means to this end. Certainly, some level of economic well-being is important. We are physical beings with physical needs. We need food, clothing, shelter, and perhaps some of the other things that make our lives easier or better. However, we are also social beings with social needs. We need positive relationships with other people, even if we receive nothing of individual, material or tangible value in return for our efforts. In addition, we are ethical and moral beings. We need the sense of rightness and goodness in our life that comes only from knowing, by faith, that our life has purpose and meaning. Happiness arises from a sense of balance and harmony among the economic, social, and ethical dimensions of our being.

This isn't just a personal opinion. University psychologists Ed Diener and Martin Seligman reviewed more than 150 scholarly studies relating wealth to happiness.¹ Their 2004 report confirmed a growing scientific consensus that beyond some very modest level of income – around \$10,000 per person in developing countries – increases in income do not necessarily bring greater happiness. A 2003 British cabinet office report also confirmed, “Despite huge increases in affluence compared with 1950, people throughout the developed world reported no greater feelings of happiness.”² These and other studies consistently have found that personal relationships – friends, family, and community – are necessary for happiness, as is a sense of being treated with equity and justice within society. And perhaps most important, they concluded our happiness depends on our having a clear sense of purpose and meaning in life from which to derive our sense of ethics and morality.

Whenever our individual pursuit of wealth, power, or fame compromises the rightness of our relationships within families, communities, or within society, we diminish rather than enhance our happiness, even if we achieve personal “success.” When our pursuit of success compromises the rightness in our relationships with the earth, our ethical and moral sense of stewardship of creation, we diminish our happiness, no matter much personal wealth we may extract from nature. It is not a sacrifice to care for others; caring makes our life better, not worse. It is not a sacrifice to care for the earth; caring makes our life better, not worse. Certainly we need to care for ourselves, but we also need to care for others.

This is not some new age philosophy. Aristotle proclaimed that happiness was inherently social and virtuous, a natural consequence of the *rightness of relationships* among friends, within families, communities, and society. Alex Des Tocqueville in his classic book, *Democracy in*

America, of the early 1800s referred to it as “self-interest rightly understood,” in that caring for others is as important for those who care as for those who are cared for. The Dali Lama refers to the pursuit of true happiness as being “wisely selfish,” recognizing that our individual well-being is inherently linked to the well-being of the whole of human society and of the earth.

Once we begin to appreciate the physical, social, and ethical dimensions of happiness, we begin to understand that the economic, social, and ecological principles of sustainability are also the principles of purposeful living and the keys to true happiness. The hope for the future of humanity is that more people, particularly young people, will awaken to the fact that meeting the challenges of authentic sustainability, going beyond “going green,” going beyond the 3-Rs, will lead them to a fundamentally better way of life. Any by example, these people will lead humanity to a new and better world.

End Notes:

¹ Ed Diener and Martin EP. Seligman, “Beyond Money. Toward an Economy of Well-Being,” *Psychological Science in the Public Interest*, 5 (1), 2004, 1–31.

² Oliver James, “Children before cash; better childcare will do more for our wellbeing than greater affluence,” *The Guardian*, May 17, 2003.

Authentic Sustainability Workshop
Ashland, Wisconsin
Sunday, June 26 2011 10 am – 5 pm

Questions for Pre-workshop Reading

Write out answers to the questions below and bring them with you to the workshop.

- 1) Identify an organization that exemplifies the ecological efficiency (efficiency and substitution) approach to sustainability. Identify an organization that recognizes the authentic sustainability perspective. Use the Internet and any other sources available to you.

Do you have personal experience with organizations in either category? If so, identify them and indicate why you place them in their respective categories.

- 2) Give your definition of authentic sustainability. Has it changed since reading Ikerd's article and researching the examples above? If so, how?

- 3) What are the risks and benefits of an approach to sustainability that only addresses the 3 Rs: reduce, reuse, and recycle?

- 4) What do most organizations mean when they say they are going “going green”? What would they need to change in order to embrace authentic sustainability?

- 5) Are the answers to the questions above important to you? Why or why not?

- 6) What will you do differently after reading this paper and exploring these questions above?

Use the back of this page or additional pages as needed.