



# Beyond Sustainability

Why an All-Consuming Campaign to Reduce Unsustainability Fails

By John Ehrenfeld

## Reducing Unsustainability Does Not Create Sustainability

There is a disturbing vision of the future haunting us that needs to be confronted, not rejected or ignored. From the publication of Rachel Carson's *Silent Spring* in 1964, to the current buzz spurred by the documentary *An Inconvenient Truth*, a growing number of individuals, businesses, and other institutions are recognizing alarming global breakdowns and imbalances.

This concern first emerged as environmentalism, which grew out of the recognition that the natural world, the essential support system for all of life on Earth, was breaking down under the material demands of affluent economies. The conversation has broadened from the 1970's themes of pollution and waste to include issues like global warming, ozone layer depletion, and the collapse of the world's great fisheries. Depending on whom you speak with or the data you choose to study, the threats range from annoying to apocalyptic.

The loss of such resources raises the specter of unsustainability, or the inability to maintain the type of life we now lead far into the future. This conversation invariably frames the issue in terms of problems to solve: specific, targeted approaches that set boundaries on current practices, which can in turn reduce key indicators for issues such as global warming.

The problem with current efforts to address the threats to our global environment is that they have little or nothing to do with creating true sustainability. In most cases, they will only temporarily slow down the process of environmental degradation and global social inequity. Most commonly accepted measures, such as carbon trading, serve at best to slow the pace of unsustainability—while the absolute magnitude of the problems on a global scale has increased.

## Our very approach to solving the “problem” of unsustainability is grounded in a mindset that prevents sustainability from emerging.

Something is missing here. Better, many things are missing here. Speaking of the disintegration of the world around us largely as a set of problems to be addressed through technology is a manifestation of modern culture, which itself is a major culprit. It is a means-oriented mode of acting; trusting that better (more efficient) means will bring better ends.

Our very approach to solving the “problem” of unsustainability is grounded in a mindset that prevents sustainability from emerging. Always anchored to the past, the future is envisioned as being bigger or better. But such an approach will always keep us rooted in the past. To escape from the past, one must think in an entirely different way.

The current ideal of sustainability, as sustainable development, is not a vision for the future. It is merely a modification of the current process of economic development that its proponents claim, in theory, need not cause the terribly destructive consequences of the past. Sustainable development is fundamentally instrumental. It suggests new means, but still old ends. Sustainable appears as an adjective; the noun is still development.

At best, our current sustainable development strategies can barely cope with the forces of unsustainability: a state of the world that is unlikely to provide either the biological support for human and other life or the humanistic and social underpinnings that make life meaningful.

Few companies or institutions have addressed the root cause of unsustainability—our addiction to consumption. Instead, the prevailing mindset creates technological fixes, such as eco-efficiency. This is a classic case of shifting the burden, or focusing on the symptoms rather than attacking the problem at the roots. The underlying condition often reasserts itself in even more confounding ways, and, as a result, our capacity to change is undermined by the illusion that we are addressing the problems, when in fact we are not.

And so we need a radically different way to visualize sustainability and to think and act about it. And it begins with a simple argument: *Reducing unsustainability is not the same as creating sustainability.*

## I propose a radically different conversation about sustainability, one that begins with a new definition.

Sustainability is a noun and is an end, not a means. Sustainability is a characteristic of living systems. It is different from the lasting qualities of inanimate objects. We would never describe granite as having sustainability. We might speak about its durability, but never its sustainability. To me the most basic symbol of sustainability is that of flourishing. It pertains to both human and other living systems. For humans, flourishing means more than just remaining healthy. It also means living the good life following precepts handed down over the ages by sages and philosophers.

I propose a radically different conversation about sustainability, one that begins with a new definition. I define sustainability as the *possibility* that humans and other life *flourish* on the Earth *forever*. Possibility has no material existence in the present world that we live in. Possibility is only a word about bringing forth out of nothingness something we desire to become present, but possibility may be the most powerful word in our language because it enables us to visualize and strive for a future that is not available to us in the present. Possibility is like a time warp, allowing one to escape from the limits our past into an unshackled future.

We must create a fundamentally new model of sustainability and the means to find it. Sustainability can only emerge when we adopt a new story that will change our behavior so flourishing rather than languishing shows up in action. Sustainability is ultimately a story about a world of flourishing and care. Let's look at how we might create this possibility.

## **The Problem with Our Solutions**

As a society, we are addicted to solving our problems through a reductionist frame. When we confront problems in the world, we chop them into small pieces and give each piece to a specialist familiar with that chunk. Over time, as we have done this more and more, society's competence to address the complex, messy problems we confront has diminished. Unsustainability is just such a messy problem. Sustainability is a holistic concept that takes an equally holistic stance to attain. Reductionist solutions will not suffice.

## Attempting to address the symptoms of ecological stress rather than going to the root of the problem is another form of shifting the burden.

Consider, for the example, the limited success of the main strategy for solving the environmental problems of the automobile: to increase fuel economy. Efficiency gains in higher MPG have been offset by increases in vehicle miles driven. This strategy is shortsighted and shifts the burden from development of alternate means of transport or urban design that reduces the need for private vehicles.

The early history of environmental management is full of examples where pollutants were merely moved from one environmental medium to another because the legal structure governing regulation in the United States focused on only one medium at a time. Thus pollutants removed from the air and water ended up in landfills. Lawmakers ignored the laws of nature, especially the conservation of matter law that would have indicated that their reductionist approach was doomed to failure from the start.

Attempting to address the symptoms of ecological stress rather than going to the root of the problem is another form of shifting the burden. The currently preferred policy dealing with greenhouse gas emissions and their relationship to global warming is through emissions trading and carbon taxes. These instruments are designed to bring about a reduction of global emissions that slows down, but does not stop, the build-up of solar-energy-trapping gases. It is arguable that such measures are important and timely, but it is also arguable that relying on these “solutions” shifts attention away from attacking the problem at its roots. In the long run, only the innovation and implementation of renewable energy sources will dissolve this problem. Arguments that it is economically preferable to do nothing more than mitigate the effects are the worst form of shifting the burden as they turn attention

completely away from the causes. Such alternate paths dealing with complex social problems arise in part because we choose to compartmentalize expertise and reduce problems to fit into a few boxes.

It is a great challenge to make Humpty Dumpty's shell whole, but that is what it will take to turn from the unsustainable path of addictive consumption and reductionist solutions to the problems (plural) that crop up in our individual and collective lives. The stories just told may seem unique, but they are characteristic of general patterns of behavior that we fail to see because of our reductionist ways of thinking and other cultural limitations. When we focus only on the problems (plural) before us, we lose sight of the fundamental problem we fail to see at all.

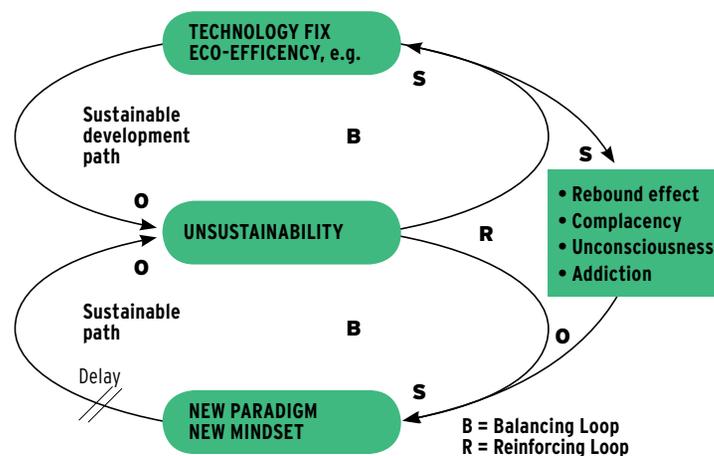
Reductionism is not always undesirable. Our habits, good and bad, result from it. Habits are nothing more than repeated, successful problem-solving routines. They rise to the top of our toolboxes simply because they work. As we use them over and over again they become engrained in our bodies and in our organizational cultures. The more we repeat them, the more they become deeply seated and hidden from view.

These useful routines can turn against us, however, and produce the pathology of addiction in some cases. If the habitual solution has a negative impact on the system beyond simply defocusing attention, repeated efforts can severely damage the system itself. In this case, the solution becomes the problem, as in alcoholism. Typically, alcoholism springs from attempts to mitigate pain and stress caused by some condition being experienced, for example, overload at work or family troubles. At first alcohol seems to lessen the stress or anxiety, but the symptoms soon return because the cause still lingers around. After a while, alcohol begins to poison the body and causes a new set of symptoms that push the old set into the background. The erstwhile solution, alcohol, has become a new, more serious problem due to its deleterious physiological and psychological effects. When this happens, the individual or group cannot deal with the first problem until the new one is addressed.

Habits that routinely produce satisfactory outcomes are the primary tools in everyone's toolbox for dealing with everyday life. It is only when habits begin to produce pathological or negative "side effects" that we need to stop and take stock. Whether repeated attempts with fixes-that-fail create addiction or the lesser shifting the burden pattern, the result is the same. The individual or group becomes incapable of addressing the first problem in a fundamental way or, worse, cannot begin to touch it even if they perceive it as something that demands attention. That is the status of our thinking and acting about sustainability.

In our modern way of thinking and acting, we are driven to solve everything by some sort of technological means. By this I mean not only using some favorite technological solution, like eco-efficiency, but also by calling on scientific theories when all of these known means fail to work. Although we may indeed find solutions to the immediate problem, this habitual way relying on technology has the insidious side effect of producing the deterioration of nature and humanistic capabilities, just as alcohol does to people.

### TECHNO-FIXES TRAP US IN THE WRONG PATH



To bring the argument closer to home, let us look at the dominant way of dealing with unsustainability today. The figure, showing one of several ubiquitous systems dynamics behavior patterns, puts the shifting-the-burden pattern into the context of efforts to produce sustainability. The more we follow the path of sustainable development, the more difficult it becomes to jump from the top loop to the bottom one. We will spend our limited resources on the wrong things. We know that more fuel-efficient vehicles and fossil-fuel energy efficiency are not the long-term solution to unsustainability. Instead of investing in radical new forms of transportation and energy generation, we keep directing our funds in familiar directions. This might be satisfactory in the short run but not if that strategy reduces longer-range efforts to a pittance.

The table shows some examples of unsustainable fixes to individual and social problems. Like other habits, these solutions do work for a while and can become part of the toolbox for dealing with the immediate problems of unsustainability. But, to the extent that they are seen as “the solution”, sooner or later the problems to which they have been applied will either re-emerge or worsen.

### QUICK FIXES FAIL TO SOLVE FUNDAMENTAL FLAWS

Problem Symptom	Symptomatic Solution	Negative Side Effects	Fundamental Solution
Global warming	CO2 Trading	R & D slips: Irresponsibility	Renewable Energy
Material use growth	Eco-efficiency	Eco-system collapse	Industrial restructuring
Mal-distribution	Tax policy	Irresponsibility	Cultural change
Unsatisfaction; Alienation	Commodity consumption	Addition; loss of competence	Self-development; Convivialtechnology

There is a subtle problem hidden in the earlier diagram. All of the existing efforts towards sustainable development simply equate more sustainability to less unsustainability. After all, that is the usual case in a linear, reductionist world. Even the Zen notion of a glass half full or half empty assumes that, as we reduce the bads or negatives, the goods will appear. In many cases that is true, but not in the case of sustainability. Sustainability and unsustainability are not just two sides of the same coin or parts of the Zen glass contents. Sustainability is a way of talking that can pull us toward a flourishing future. Unsustainability is merely a description of the sorry state of the world.

## **The Possibility of Flourishing Forever**

It is tempting at this point in the argument to enumerate the necessary and essential solutions to the problems as laid out so far, but any list of neat and detailed answers would contradict the very argument about sustainability. I have spent much of my own life doing exactly that. After earning a Ph.D. in chemical engineering from MIT, I began my professional career applying my technical training to conventional environmental challenges, such as cleaning up toxic sites. Over the years I continued to broaden my field of expertise, doing bench research, resource management, policy analysis, and even a stint in government. Twenty years ago I returned to MIT, where I directed a research program dealing with the management of hazardous waste and materials.

Something larger than carbon dioxide or economic maldistribution or any of the other “causes” was at work, and still is.

About the same time, environmental policy had shifted from regulating after the fact to more preventive approaches—from cleaning up waste to practicing “source reduction,” which entailed redesigning processes so as to keep such hazards from ever being produced. Our small group started to look for another way to frame our interest and competence in environmental matters.

At some point the notion of sustainability entered our group’s and my own lexicon. Something about the prevalent notion of sustainability, then and now, which was narrowly defined by the theme of sustainable development was deeply troubling to me. It seemed so obvious that it was adherence to the same notion of “development” that has dominated the modern world for decades, even centuries, and, ironically, that is at the root of whatever problems people were willing to put into the bin of unsustainability. There were certainly signs of trouble, but, in general, these were all taken as isolated concerns. Little or no attention was being paid to the underlying systemic possibilities for both the causes and potential avenues for remedies by my colleagues and others seeking “rational” solutions. Something larger than carbon dioxide or economic mal-distribution or any of the other “causes” was at work, and still is.

My personal journey has left me with the fundamental belief that the path to sustainability must take a systemic and humanistic view of our world. Any true call for sustainability must address the human needs that are being swept aside or trampled by the onslaught of the monolith of modernization in the name of [sustainable] economic development. The overwhelming economic and technological power of modernity must first be transformed at home. Only after we who call ourselves moderns recover our own humanity and experience the care that makes us human can we turn to the task of repairing the world of both people and nature.

So how to proceed?

First and foremost, we must conceptualize sustainability in a manner that includes the thoughts, beliefs, and values of men and women. Aside from the current focus on nature, it is critical to address the loss of caring and ethical behavior that makes the human species distinct from all other life. If individuals do not take care of the world in their everyday life, we will continue to rely on technological and technocratic solutions offered by experts drawing on the unreliable past.

I believe that there is a direct, but not easy, way out of this stalemate. It springs from the tried and true practices that deal with other forms of addiction and routine pathological behavior. We must begin by first bringing destructive patterns into view, raising them from the unconscious corner to which they have been sent hopefully out of view like a poor relative to be shunned.

In the short-term, there are constructive approaches towards sustainability. They begin with responsible, ethical choices in everyday life that help develop right habits and mindsets. To some extent, companies can help steer ethical behavior through the design of their products and services. They can use tools to intervene in our everyday, normal behavior, raising consciousness of addictive behavior and shifting behavior towards sustainability. For example, to conserve water, many toilets in the Netherlands are equipped with two flush buttons, one large and one small, presenting the user with a conscious responsible choice each time. Or consider speed bumps, which serve to remind drivers of unsafe behavior.

Next, we must replace the modernist vision that has been maintaining the endless revolutions of the vicious circle with an evocative vision of the world that can continuously pull one and all ever forward. Our way of acting today is more a reliance on the past to push us into the future. A moment's thought suggests that this way of being is not likely to work, especially when the problems of life look overwhelming. What we need is a vision that will pull us into the future. Ortega y Gasset put a positive spin on the same idea, saying, "Life is a series of collisions with the future; it is not the sum of what we have been, but what we yearn to be".

Of course this requires strong leadership from individuals in government and industry with the power to effect change and awaken people to our addictive patterns of modern life. Sadly, the political imperatives of running any meaningful organization today prevent most individuals from taking up this cause.

Steps one and two are nothing more than a shift in our consciousness and in the language we use to give meaning to the incoherent signals the world sends our senses. The change is transformative and takes but an instant. This is not to say it is easy; no, it is quite the opposite, as those committed to pulling themselves out of addictive and circular life patterns know well. This kind of transformation takes hard work, and most often intervention, but, when it comes, the transformation occurs in the blink of an eye. Help can come from many places, even from a few words of a poet or a friend or trusted teacher, or from the untranslatable message conveyed during a walk in the woods.

This brings us to the third step, which is the replacement of the structures and strategies that keep us spinning about in circles with images of satisfaction always just out of reach. Changing the culture and its consequent pathologies, takes much, much longer than the first two steps. The cognitive and material structures that reproduce cultural life—the technology and tools we use and the institutions and infrastructure that shape our social lives—must be re-invented, and then replace some and complement others of those now in place. Just as Einstein said that our ways of thinking keep us from breaking out of our stalemates, so do the tangible structures of our worlds.

The very way we think about the world and create the reality that grounds and justifies our actions leads to unsustainability and impedes a move to sustainability. But virtually every answer to every question we grapple with comes out of our view of reality. In a sense, we are stuck in the system that has creates our dilemmas. Until we begin to dwell in a new, sustainability world, we will have lots of questions but few answers that seem to fit. If you can discipline yourself to live inside of the questions that are surely raised here, then you will be able to slowly discard the old tried, but no longer true answers and replace them with new effective ways to build a sustainable future.

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## **ABOUT THE AUTHOR**

In 2000, John R. Ehrenfeld “retired” from teaching and researching at MIT. Having become an academic only after 30 years of working in the real world, he imported a healthy skepticism. It was there that his career, which had been devoted to environmental research and management, took a turn towards sustainability as a different sort of beast. Building on systems dynamics and humanistic philosophy, his work in the ensuing years has brought a new way of speaking and thinking about what he believes to be the greatest challenge to human beings today. He has recently completed a book on sustainability and looks forward to see it in print next year. His son, Tom, has worked on this piece with him.

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