Chapter 2 Solving the Wrong Problem: How Good Habits Turn Bad

Explanations exist; they have existed for all times, for there is always an easy solution to every human problem—neat, plausible, and wrong.
—*H. L. Mencken,* A Mencken Chrestomathy

About ten years ago I participated in a workshop on industrial ecology and the service sector. This was one of an annual series that was sponsored by the National Academy of Engineering to delve into the then-emerging field of industrial ecology and to look for opportunities to improve ecosystem health. Industrial ecology is based on the idea that healthy ecosystems can also serve as a metaphor for sustainable human socioeconomic systems. One of the central themes in this field is the closing of material loops—in other words, recycling most everything we use in the same way materials flow in natural systems.

At this workshop a speaker from one of the largest retail chains in the United States gave an impassioned presentation about all the good things his firm was doing for environmental improvement. The highlight was a discussion of the results of a program he called "dumpster diving," in which personnel at selected stores periodically emptied the dumpsters they used and sorted the contents. Cardboard packaging turned out to be a major part of all the trash. The company realized that it could bundle the cardboard and sell it to recyclers, thus avoiding an environmental problem and making money at the same time. The speaker concluded with a proud statement about his firm's new program and then invited questions. After a few queries about the details of the project, one of the attendees asked, "What you are doing is certainly a step in the right direction, but have you ever thought about all the stuff that goes out of the front door? What about its impact on the environment?"

The question stopped him short, and, after a long pause, he responded, "Well, I see what you are getting at. You mean that the real impact of our business comes in the use and disposal of what our customers carry out with them." After another long pause, he continued, "Well, if we are going to have any influence on what our customers buy, we would have to give them information about the environmental implications of their purchases. And wouldn't this be the same as telling our customers that they are dumb?" Ironically, his presentation came on the heels of another by a different major retailer, who had described his company's new program to provide just such information to its customers. Further, he had also talked about another program the company had undertaken to eliminate products that could not conform to his firm's own set of environmental standards.

The dumpster-diving company was stuck in a common pattern of problem-solving that may appear to work but that has significant and serious "side effects." Although I use the term "side effects" in the usual sense here, the term itself is fundamentally misleading. These outcomes are not "side" at all; they are as much a consequence of acting as are the primary efforts. To emphasize this point, in this book I will always put "side effects" in quotation marks. The term itself suggests a desire to minimize or to wish away these outcomes.

The company in the example had picked out just a small part of the problem that it purportedly was committed to address and had missed the big payoff. Such behavior is typical in our modern world and is very hard to avoid. Our society is addicted to reductionist ways of solving virtually all our problems. When confronting problems we tend to chop

a moment. And as the problem lessens, so does the need for solution. The left-hand part of the loop indicates that the effect is in the same direction (*s*) as the action. The combination of opposite and same connection between action and effect forms a balancing loop and is an example of negative feedback. Because we spend most of our lives working to make our problems go away, this pattern of behavior is the most common. Some kinds of problems, like hunger, never go away, so we keep going round and round this loop. This pattern of behavior also describes our habits, which are nothing more than repeated problem-solving routines. They rise to the top of our toolboxes simply because they seem to work. Consequently, we use them over and over again and they become ingrained.

At this point things start to get more complicated. Everybody knows that many, if not most, of life's problems keep coming back where and when we least expect them. In Figure 2 I have added another loop to indicate that often the solutions we choose produce some sort of unwanted result or unintended consequence. One common outcome is that the original problem comes back at some later time: "fixes-that-fail." Another is that some unintended consequence shows up somewhere else. The side loop in this figure shows that the action and effects both flow in the same direction. The unwanted effects keep getting bigger the more we keep trying to solve the primary problem, which may also grow over time if our efforts fail to get at its roots. This kind of loop is called a reinforcing loop, and we term the process positive feedback. We usually try

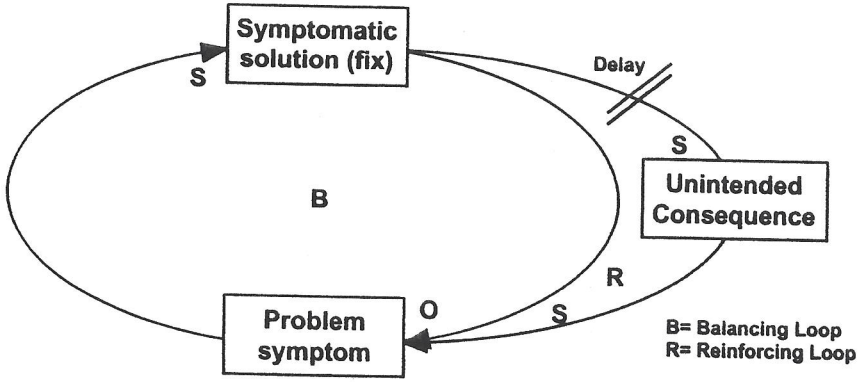

Figure 2. Fixes-that-fail archetype

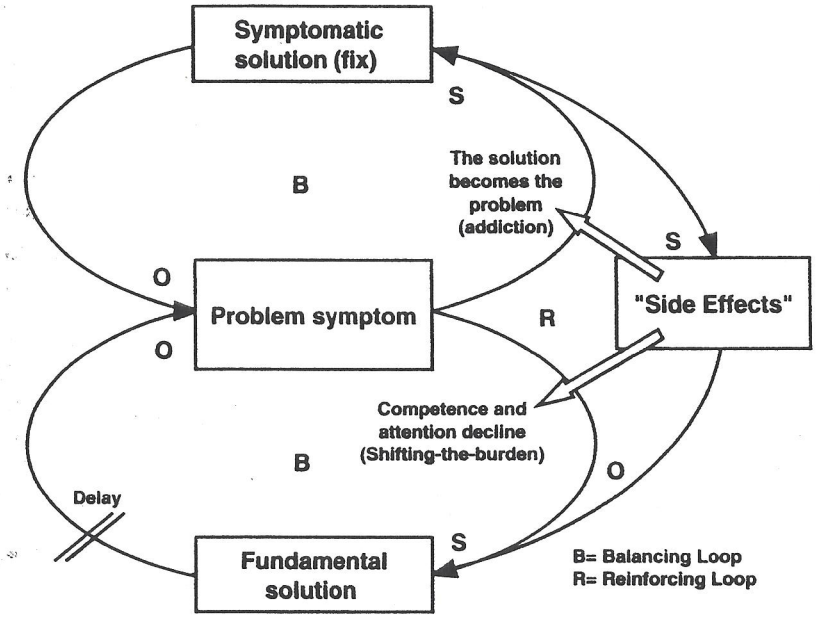

Figure 3. Shifting-the-burden archetype

to avoid this pattern, because nothing in life can grow without limits. The dangers of global warming could be magnified by positive feedback that causes the oceans to release previously dissolved greenhouse gases as they begin to heat up. This increase in emissions thereby contributes more to the rate of temperature rise.

Repeated attempts to solve the problems often have another serious negative "side effect." Figure 3 shows a new pattern that people fall into all too often. In this diagram, a presumed potentially effective solution appears in the lower loop. Such desirable action is hard to recognize, because our old habits can lead to two kinds of serious "side effects." The first, shifting-the-burden, is our tendency to lose sight of possible fundamental or more effective solutions while we remain stuck in our habitual ways, trying harder and harder to deal with situations that just don't seem to improve or otherwise go away. Our habits and fixation on the symptoms tend to blind us to the possibility of more effective and longer-lasting solutions. Our cultural impatience also turns us away from this realization. We shift the burden away from the more appropriate solution to the habitual one.

The story of Helen Keller and Annie Sullivan is often told to illustrate this pattern. After Helen's parents discovered that she was both blind and deaf, they found that the more they tried to do for her, the more obstreperous and difficult she became. When Annie Sullivan arrived, she forced Helen to begin to do everyday actions by and for herself. As Helen began to acquire basic skills and become responsible for her actions, her whole persona changed, ultimately producing one of the most remarkable human beings of our times. Her parents had been shifting the burden away from Helen, who needed desperately to learn for herself. Her story serves as an example of this type of danger and of the empowerment that can result by escaping its vicious circle. Table 1 shows some examples of typical shifting-the-burden behavior taken from business and life in general.

In some cases this pattern can lead to addiction. 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 a new problem, as in alcoholism. Typically, alcoholism springs from attempts to mitigate pain and stress caused by an experience such as job stress or family troubles. At first alcohol seems to lessen the stress or anxiety, but the symptoms soon return because the cause is still lingering. After a while, alcohol begins to poison the body and cause a new set of symptoms that push the original set into the background. The chosen solution, alcohol, has become a new, more serious problem due to its deleterious physiological and psychological effects. When this happens, the first problem can't be dealt with until the new one is addressed.

Table 1. Shifting-the-burden examples

Problem Symptom	Symptomatic Solution	Negative Side Effects	Fundamental Solution
Bank failures	Federal insurance	Responsibility disappears	Prudent banking practices
Poor employee performance	Manager steps in	Erosion of confidence and relationship	Skills training
Oil scarcity and high prices	Create reserve supply of alternates	Inadequate development	New products, culture change
"Not enough time"	Eat fast foods	Obesity; sociability loss	Improve time management

Habits that routinely produce satisfactory outcomes are everyone's primary tools for action. It is only when habits begin to produce either of these two patterns with 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 it is perceived as something that demands attention.

Such is the status of unsustainability. We can see these general patterns when we examine the primary framework for addressing unsustainability. Figure 4 is a repeat of the earlier one showing the general case of fixes-that-fail. Here I have explicitly substituted "all of our problems" for the general case and the technological solution (quick fix) for the symptomatic general solution as shown earlier in Figure 2. I am using "technology" here as a proxy for the normal, everyday choice of solution in today's modern context.

In our modern way of thinking and acting, we are accustomed to solving virtually every problem by some sort of technological means. By this I mean not only using some favorite artifactual device, but also by applying "scientific" theories when all of the alternative means held in reserve also fail to work. Although solutions to the

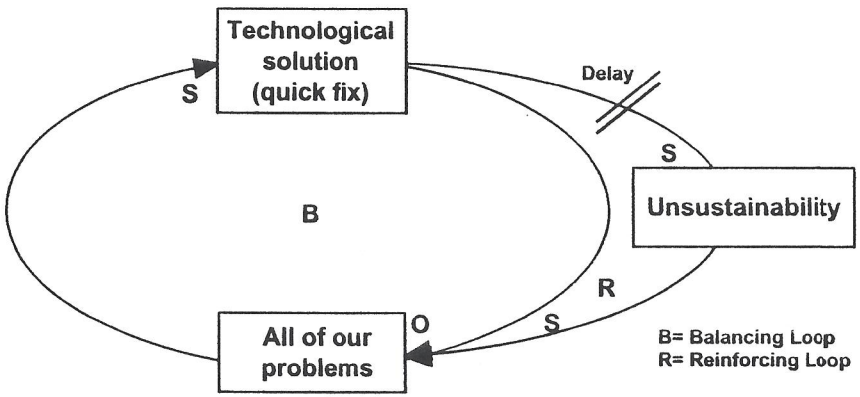

Figure 4. Unsustainability as an unintended consequence of modernity

immediate problem may appear, this habitual way of acting has the insidious "side effect" of producing serious deterioration of nature and our own humanistic capabilities. The long run of successes of the technological fix has also led to unjustified expectations that such solutions can always be found. Thomas Homer-Dixon, who has written extensively on threats to global security, calls this "technohubris," and he suggests that this route to solving today's complex problems such as global warming may not lead us to the place we seek.[4]

Table 2 shows some examples of such fixes to individual and social problems. Like other habits, these solutions do work for a while and can become part of the prevalent choices 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 reemerge or worsen.

To bring the argument closer to home, let us look at the dominant way of dealing with unsustainability today. Figure 5 puts the shifting-the-burden pattern into the context of efforts to produce sustainability. The more we follow the path of what has become commonly called sustainable development (the upper loop), the harder it becomes to jump from the top loop to the bottom one. In economic terms, we are spending 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. We should be investing in radical new forms of transportation and energy generation, but instead we keep pouring our funds in the conventional direction.

Table 2. Examples of unsustainable practices

Problem Symptom	Symptomatic Solution	Negative Side Effects	Fundamental Solution
Global warming	CO_2 trading	R&D slips; irresponsibility	Renewable energy
Material use growth	Ecoefficiency	Ecosystem collapse	Industrial restructuring
Maldistribution	Tax policy	Irresponsibility; gated cities	Cultural change
Dissatisfaction; alienation	Commodity consumption	Addiction; loss of competence	Self-development

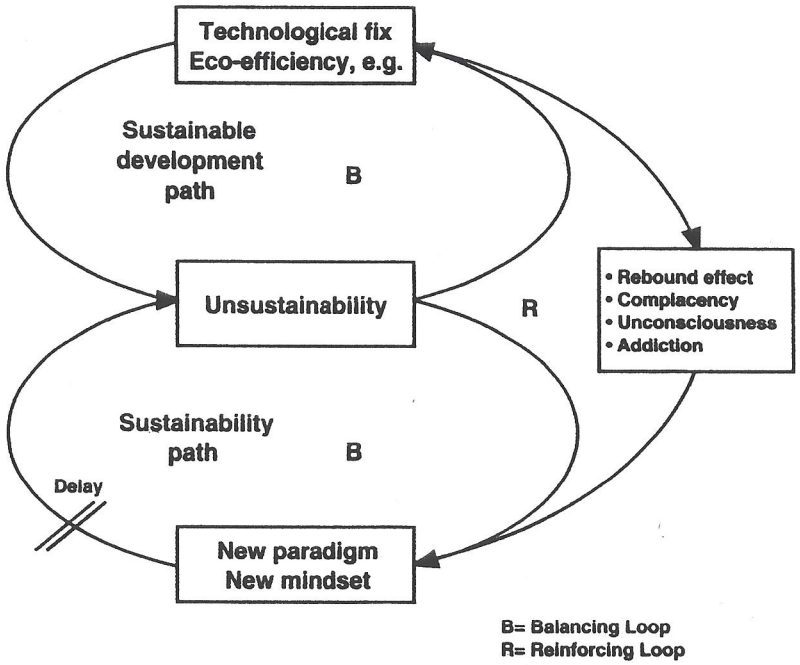

Figure 5. Technological fixes do not work

This might result in some success in the short run, but not if that strategy reduces longer-range efforts to a pittance. And in the matter of global warming, U.S. policy has been to do little, arguing we cannot even afford more efficiency without damaging the economy in the short term.

Attempting to address the symptoms of ecological stress rather than go to the root of the problem is a form of shifting-the-burden. The currently preferred policy to deal 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 buildup of solar energy–trapping gases. Such measures arguably are important and timely, but equally arguable is whether 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 make this problem disappear. Arguments that it is economically preferable to do nothing at all and mitigate the

effects are the worst form of shifting-the-burden, as they turn attention completely away from the causes. Such alternate paths to deal with complex social problems arise in part because we choose to compartmentalize expertise and reduce problems to fit into only a few of the boxes.

There is another, subtler problem hidden in this diagram. All of the existing efforts toward 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 this is true, but not in the case of sustainability. *Reducing unsustainability will not create sustainability.* Sustainability and unsustainability are not just two sides of the same coin or parts of the Zen glass contents. Our modern culture has led us to the wrong place by reifying sustainability.

The root cause of unsustainability is that we are trying to solve all the apparent problems of the world, large and small, by using the modernistic frame of thinking and acting that has created the metaproblem of unsustainability. Einstein is credited with only a slightly different observation: "The significant problems we face cannot be solved at the same level of thinking we were at when we created them." Modernity is a particular cultural form different from all that preceded it, and, in spite of those who argue we have gone beyond it, its culture dominates the West and increasingly is being imported by other nations trying to industrialize and adopt the cultural icons of the West, and especially those of the United States.

Given our total immersion in this culture, extraordinary steps are required even to recognize this form of habitual behavior, much less begin to try and change it. After all, that is what culture is: the ocean we all swim in and cannot sense ordinarily. Unlike fish, however, we can become conscious of the deep structures that drive our routines by stepping outside them and, with considerable effort, change them. If we do not, the world is likely to continue to degrade to a point where we truly cannot reverse the trend or, worse, where we suffer catastrophic and traumatic events.

Finally, it is very important that we look critically at the many programs that have come forth in the name of sustainable development or environmental management (one should always question whether we can really manage the environment). Sustainable development itself is a technological, technocratic program. It epitomizes Einstein's statement and fits the shifting-the-burden archetype. Even its original parsing, as found in the United Nations' 1987 Brundtland report, which introduced this subject to the public at large, gives it away: "Sustainable development is a form of development . . ."[5] Then within sustainable development come programmatic prescriptions like ecoefficiency, Natural Capital, The Natural Step, Triple Bottom Line, and many others. All have some potential to mitigate or slow down the unsustainable trajectory of the globe, but all are only quick fixes. They are, as I have said, part of the problem, not the solution: they all will fail sooner or later and, worse, shift the burden away from more fundamental actions.

Sustainability by Design

A Subversive Strategy for Transforming Our Consumer Culture

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