

I think the correct conclusions under current conditions are: (a) “Ecological and social sustainability of human society face serious and increasing threats,” and (b) “We have the means and the obligation to turn things around and get on a sustainable path while we still can.” With such an attitude, you look at the situation realistically and do your part to change it. (305)

Bossel’s Path B is the obvious choice; ultimately, his conclusion must be our own as well.

Sustainability

Sustainability and sustainable development often present themselves as the most influential concepts in the environmental agenda because they stand for new thinking, and they have been echoed and re-echoed in many contexts, specialist and political, scientific and economic, global and local. But “newness” is not a simple idea: what is new in one context is familiar elsewhere; and a successful concept recurs so often that it ages quickly and has to be actively renewed.

GEORGE MYERSON AND YVONNE RYDIN,
The Language of Environment: A New Rhetoric

The terms “sustainable” and “sustainability” started surfacing with growing regularity in the early 1980s. As Albert Bartlett writes in a historical analysis of the term, “‘Sustainability’ has become big-time,” and “University centers and professional organizations have sprung up using the word ‘sustainable’ as a prominent part of their names” (6). The terms are used in an increasing number of disciplines—not just ecology and environmental studies but also economics, planning, architecture, management, and, to a lesser extent, education and art. As a result, some of these disciplines have changed in fundamental ways: environmental science is now considered an “interdiscipline” (Sloep)¹, and the relatively new discipline of ecological economics is structured almost entirely around the concept of sustainability. Yet there are many academic disciplines—like English studies—that have yet to explore the implications this concept might have for their content and practice. As we explore the possibilities for developing English curricula that engage

sustainability, we need to examine the conflicting definitions embedded within this concept, particularly the contradictory ways in which it has been employed.

Considering the more than two pages of definitions for the root “sustain” found in the *Oxford English Dictionary*, it’s not surprising that “sustainability” has been used in a variety of often conflicting contexts. Some of these definitions—e.g., “to give support to a person’s conduct,” “to cause to continue in a certain state,” “to keep up without intermission,” “to provide for the upkeep of (an institution, establishment, estate, etc.)”—are at odds with what many consider to be the essence of “strong definitions” of sustainability (explained below), since it is precisely our consumer addictions and our upkeep of growth-driven institutions that work against the goal of forging a sustainable culture.

The word “sustainability”—often used interchangeably, and thus confusingly, with “sustainable development”—attracted significant attention when it appeared in a 1987 report by the United Nations World Commission on Environment and Development (also called the Brundtland Commission), published under the title *Our Common Future* (World Commission). The report stated that “humanity has the ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (8)—which, as Stead and Stead point out, is a rephrasing of a Kenyan proverb: “We didn’t inherit the Earth from our parents; we borrowed it from our children” (134). As sustainability started to figure prominently in the language of international policy, due in large part to the Brundtland Report, the term appeared in a number of principal documents generated by ensuing international summits: the 1992 Rio Earth Summit (United Nations Conference on Environment and Development, or UNCED), which led to the UN Commission on Sustainable Development; the 1993 World Conference on Human Rights in Vienna; the 1994 International Conference on Population and Development in Cairo; the 1995 World Summit on Social Development in Copenhagen; the 1996 Second UN Conference on Human Settlements in Istanbul; the 1997 World Food Summit in Rome; and

the second UN Conference on Environment and Development in New York in 1997.

In some of the earlier arguments for sustainability, like Lester Brown’s 1981 *Building a Sustainable Society*, the term is never explicitly defined, indicating a confidence on the part of the author that the intended audience is already familiar enough with the concept. In Brown’s book, sustainability is characterized in terms of the obstacles facing those who would create a sustainable society: soil erosion, deterioration of biological systems, population increase, and oil reserve depletion, all of which will require “fundamental economic and social changes, a wholesale alteration of economic priorities and population policies” (8), if we are to create a sustainable society. Actually, Brown’s closest approach to defining sustainability in this early book can be found in the dedication: “To Brian and Brenda—and generations to come.” For despite the multiple definitions of sustainability, most are predicated on an ethos of intergenerational justice.²

This ethos marks, for example, Markandya and Pearce’s definition of sustainability: “The central idea behind sustainability is the protection of the natural resource base for future generations” (270).³ Herman Daly and John Cobb describe this mode of living as “justice extended to the future” (146). Elsewhere sustainability has been equated with “permanent livability,” where present and future generations have equal access to the same natural resources (Pearce 59), and with the quest for “enoughness” (Stead and Stead 61–63). Indeed, as Holmberg and Sandbrook have written, “The notion of intergenerational equity lies at the core of the concept of sustainable development. While there is no solid definition to go by, development that does not meet the criteria of intergenerational equity must be bad development” (91). Hence the frequent comparison between sustainable thinking and the Iroquois Confederacy’s (probably romanticized [see Krech]) practice of projecting the consequences of specific actions seven generations into the future before undertaking significant decisions. At least one writer has claimed that looking ahead should go even further than seven generations (Chianese 530)—no small task, given that as humans we generally “don’t include future generations within our moral horizon because we tend to lose the

concept of ‘ours’ after great grandchildren” (Daly, “Economic Growth Debate” 127).

Alan Gilpin, in his *Dictionary of Environment and Sustainable Development*, offers the following definition of sustainable development:

Development that provides economic, social, and environmental benefits in the long term, having regard to the needs of living and future generations. . . . Sustainable development considers both the living and non-living resource base with regard for conservation and the advantages and disadvantages of alternative courses of action for future generations. It allows the use of depletable resources in an efficient manner, with an eye to the substitution of other resources in due course. Sustainable development calls for much more emphasis on conserving natural systems and the resource base on which all development depends; a greater regard for equity within society at present and between rich and poor nations, with particular regard to the world’s poor; and a planning-horizon that goes well beyond the needs and aspirations of those alive today. It requires an integration of environmental, social, and economic considerations in decision-making. (206)

Not surprisingly, as the term gained in popularity, “sustainable development” began appearing as a political and corporate cliché (Myerson and Rydin 100–103). In *One World, Ready or Not: The Manic Logic of Global Capitalism*, William Greider writes that the phrase “carries revolutionary implications, but sounds so wholesome that almost everybody can endorse it. Every enlightened politician now supports the goal of sustainable development; so does every leading corporation and financial institution that is sensitive to popular opinion. Meanwhile, the global system plunges forward along its usual path, building toward some sort of epic showdown with nature” (448–49).⁴ Nor do ecological economists uniformly agree with definitions of sustainability promoted by the development regimes. Even though the Brundtland Report’s definition is the one most frequently quoted, critics like Robert Goodland have faulted the report’s claim that a five- to ten-fold increase in world industrial output would be necessary in order to reach a level of sustainable growth—the idea was to make less developed countries more

developed, though in fact this would also have moved them further from economic sustainability—since, according to Goodland’s calculations, current growth in throughput (the process whereby energy and matter from natural resources, i.e., “sources,” get used by us and eventually end up as pollution and wastes, or “sinks”) is already at unsustainable levels (16). Herman Daly goes even further, arguing that sustainable growth (as opposed to development) is impossible (“Sustainable Growth”); he also reminds us that, due to inevitable long-term loss of energy and matter through entropy, even the steady-state economy he promotes could not last forever (“Postscript” 378–79).

Some of the confusion associated with the term *sustainability* is due to its evolution from what were originally strictly biological associations to its currently larger social and economic implications (Dixon and Fallon 94). For sustainability

has two components. One is economic sustainability—the ability of an economic system to continue operating at some level of output. The other is ecosystem sustainability—referring not to an absolutely unchanged ecosystem equilibrium but to . . . ecosystem resilience . . . [which] refers to the bounce-back capacity which allows ecosystems to recover from short-term damage or disruption. True sustainability must include both components. (Harris 98)

When sustainability is considered in only the former sense, it is often viewed as *weak* sustainability, a concept associated with neoclassical economic thinking and promoted by “cornucopians” who tend to view sustainability as a locally isolated and controllable phenomenon: “A good example would be depletion of soil fertility through erosion, with attendant substitution of mechanization, irrigation, and fertilizer to give equal or higher yields” (Harris 98). Here sustainability is a modifier of growth, and, in this sense, it is often appropriated by companies, advertising executives, and politicians as a sound bite meaning little more than “keeping the economy growing” or sustaining profits.

Strong sustainability, on the other hand, “gives priority to ecosystem resilience, and does not accept human-made capital accumulation as an adequate substitute for natural capital depletion” (Harris 98). Myerson and Rydin further subdivide strong

sustainability into three categories, ranging from moderate to extreme. The first category refers to support for marginal change in current development practices, a “social choice” position which “sees a degree of conflict between environmental protection and economic goals as inevitable, but optimistically argues that trade-offs between these two goals can be managed so as to achieve an optimal balance and an overall maximum level of welfare” (104–5). A second, stronger stance is the “new economics” position, which argues for more substantial change and is associated with a more radical redistribution of resources, “allowing a more community-orientated, bottom-up approach, and resulting in new patterns of production and consumption that would reduce the current conflict between environmental production and economic activity” (105). The third stance—the “strongest” of the three positions, and the one I embrace as the most important—is a “limits to growth” perspective, which “involves full, precautionary protection of ecosystems and maintenance of all ‘natural capital’” (103). Proponents for a steady-state economy, like Herman Daly, can be found at this end of the spectrum; they argue for maintaining constant stocks of people and physical wealth in a state where throughput should be as low as possible (Daly, “The Steady-State Economy” 325). This third and strongest of the strong definitions of sustainability links the term closely with the concept of limits, harking back to the influential 1972 book *Limits to Growth* (Meadows, Meadows, Randers, and Behrens), which in many respects initiated all subsequent conversations about sustainability.

Ronald Engel writes that

there is nothing inherent in the term “sustainable development” to keep it from becoming the name for an alternative post-modern social paradigm and a new moral conception of world order. “Sustainable,” by definition, means not only indefinitely prolonged, but nourishing, as the Earth is nourishing to life, and as a healthy natural environment is nourishing for the self-actualizing of persons and communities. The word “development” need not be restricted to economic activity, much less to the kind of economic activity that now dominates the world, but can mean the evolution, unfolding, growth, and fulfillment of any and all aspects of life. Thus “sustainable development,” in the broadest

sense, may be defined as the kind of human activity that nourishes and perpetuates the historical fulfillment of the whole community of life on Earth. (“Introduction” 10–11)

Similarly, in painting their own version of the weak-to-strong spectrum of definitions of *sustainability*, Richard Clugston and Thomas Rogers of the Center for Respect of Life and Environment describe the stronger definition as defined by personal, spiritual growth: a mixture of humility, recognition of limits, and an awareness of natural systems as “circuits of aliveness.” Clugston and Rogers, however, implicitly regard all living systems as ecologically nonhierarchical, an approach that some have argued is indefensible.⁵ A more successful approach to defining sustainability might be to adopt the six fundamental values embedded in the concept, as clarified by Stead and Stead: wholeness, posterity, smallness, community, quality, and spiritual fulfillment (132–46). Despite these differences, however, Engel, Clugston and Rogers, and Stead and Stead all present a holistic interpretation of sustainability that can be useful to educators who agree that we have a responsibility to design a pedagogical ethic informed by the need to think and act sustainably.

I will argue that such a pedagogical ethic must be grounded in the following six tenets:

1. A sustainable society cannot be created without sustainability-conscious curricula.

A variety of calls have been made for curricula that engage the concerns of sustainability. Ted Trainer makes a case for a new kind of curriculum for training people to become citizens of a new conserver society (166–77). Gregory Smith argues for a curriculum that promotes interdependent living, where courses in “conflict resolution, ecological principles, peace studies, group dynamics, systems theory, global environmental trends, and multicultural studies” are standard (94). Paul Ryan has developed the “Earthscore Curriculum,” which is “an experiential, interdisciplinary way of developing an ecology of mind, that is, patterns of thinking in keeping with ecological patterns” (*Video Mind* 302–07). Some have called for new curricula that include, among other things, studying sustainable indigenous cultures;

understanding the complex relationships between soil, vegetation, and climate, as well as the complexities inherent in principles of energy flow and dissipation; and developing an awareness of the implications of radical differences in socioeconomic expectations between the North and the South (Clark 76). In addition, according to David Orr, conventional understandings of what a core curriculum should address are all wrong. He argues that no one should be permitted to graduate from any institution of higher education without a basic understanding of

- ◆ the laws of thermodynamics,
- ◆ the basic principles of ecology,
- ◆ carrying capacity,
- ◆ energetics,
- ◆ least-cost, end-use analysis,
- ◆ limits of technology,
- ◆ appropriate scale,
- ◆ sustainable agriculture and forestry,
- ◆ steady-state economics, and
- ◆ environmental ethics. (*Earth in Mind* 14)

“I would add to this list of analytical and academic things,” Orr continues, “practical things necessary to the art of living well in a place: growing food; building shelter; using solar energy; and a knowledge of local soils, flora, fauna, and the local watershed” (14).

In light of such calls for curricular reform, no academic department can claim that it is above, beyond, or outside such concerns. All departments want to stay in business; they want to attract a stable number of majors and defend their relevance in the eyes of the institution and the student body. But to what degree can one remain interested in sustaining one’s own niche while remaining uninterested in sustainability? How long can any canon of information or methodological practices remain supported in academic disciplines if the problem of sustainability goes ignored? It stands to reason that a sustainable culture cannot exist unless sustainability features prominently throughout the curriculum.

2. A pedagogy of sustainability would call attention to “social traps” of unsustainability, leading teachers and students to begin imagining means by which to avoid them.

Costanza and Daly define a social trap as “any situation in which the short-run, local reinforcements guiding individual behavior are inconsistent with the long-run, global best interest of the individual and society” (57). When fashion, consumer addictions, laziness, and social insecurity induce all of us—students and faculty alike—to fall into social traps of unsustainability, then a curriculum that does not provide the tools and the time to identify and critique the implications of such traps becomes a trap in itself. To address this cycle requires recognizing the degree to which social traps infiltrate our institutions. As Thomas Prugh puts it:

The goals of long-term global ecological and economic health and sustainability will often be more critical than local, short-term goals for economic growth or the goals of private interests. But our institutions and incentive structures are set up to address primarily these short-term, private interests. And since people, companies and countries consistently pursue private self-interests and frequently are not checked by the institutions, they thus tend to undermine the larger goals. That is, our institutions and incentive structures set social traps. (115)

The elimination of such social traps must come about, Prugh argues, through intervention—through, moreover, a mechanism that is already a commonplace in the primary and secondary schools that already assume responsibility for making students aware of the long-term consequences of short-term behavior such as smoking, drinking, drug use, and unprotected sex (115). Consequently a sustainable pedagogy would be inherently interventionist: it would recognize that our consumer culture fosters unsustainable behavior, and that the educator’s job, on some level, is to disrupt the assumptions implicit within that culture.

3. A pedagogy of sustainability should be antigrowth and pro-development.

Herman Daly provides an effective means of distinguishing between these two terms.

To grow means “to increase naturally in size by the addition of material through assimilation or accretion.” *To develop* means “to expand or realize the potentialities of; to bring gradually to a fuller, greater, or better state.” When something grows it gets bigger. When something develops it gets different. The earth ecosystem develops (evolves), but does not grow. Its subsystem, the economy, must eventually stop growing, but can continue to develop. The term “sustainable development” therefore makes sense for the economy, but only if it is understood as “development without growth.” (“Sustainable Growth” 267–68)

Development has become a bad word for many, but battles between the “developers” of housing complexes, shopping malls, parking lots, and golf courses on one hand and advocates for open space on the other are really battles about irresponsible growth.⁶

We are conditioned to equate growth with goodness. But the GNP (gross national product) and GDP (gross domestic product) don't register the toll that growth takes on natural capital.⁷ For example, the *Exxon Valdez* spill resulted in billions of dollars being spent on cleanup, compensation, and litigation—all contributing to the GNP—but of course “net total welfare would surely have been higher if the ship had missed the reef” (Prugh 84–85).⁸ If we were to begin imagining a pedagogy that emphasized development rather than growth, we might be left with an emphasis not on the accumulation of data but on the development of student ideas; an emphasis not on a minimum number of credit hours necessary to graduate but on the ability to articulate a developing synthesis treating varied subject matter; and so on.

4. A pedagogy of sustainability would promote an ethic of sustainability.

Environmental debates tend to get presented as tugs-of-war between human-centered individualists on the conservative end and ecosystem-centered holists on the “green” end. The former are seen as privileging human welfare over nonhuman species; the latter, “ecosystem rights” above human rights. Not only does such oversimplification distort the needs and motives of those on both sides, but also, according to Kristin Shrader-Frechette, neither extreme can lead to sustainability. Instead she argues for

what she calls “hierarchical holism,” in which priority-ranking systems are used to determine our duties, rights, and responsibilities in relation to the quest for sustainability. For example, we might argue that “strong human rights (such as the right to bodily security)” come first, with priority then going to “environmental and biocentric goals,” followed by “weak human rights (such as rights to property)” (69).⁹

At the heart of such a system is the distinction between needs and desires. A pedagogy of sustainability would create contexts in which students and faculty define, rank, and ultimately redefine our needs and desires. What does one “need” in order to develop intellectually, socially, physically, spiritually? What will it take to fulfill those needs, and at what cost? The exploration of a needs-versus-desires dialectic would inevitably result in a pedagogy that condemns luxury lifestyles as well as consumption for the sake of consumption. “The basic needs of the present should always come first, but luxuries of the present generation should not. Future generations cannot act in present markets, so our present economic actions should show a moral concern for the future” (Daly, “Economic Growth” 127). Arguably, then, every student who graduates from an institution and remains committed to living an indefensible consumer lifestyle—fancy cars, multiple credit cards, extensive brand-name wardrobes, expensive gadgets—constitutes a failure for that institution.

5. A pedagogy of sustainability would reject many conventional notions of work and labor, recognizing the need to reinvent the nature of business and work as a fundamental part of creating a sustainable society.

Paul Hawken, from *The Ecology of Commerce: A Declaration of Sustainability*:

The word “sustainability” can be defined in terms of carrying capacity of the ecosystem, and described with input-output models of energy and resource consumption. Sustainability is an economic state where the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations. It can also be expressed in the simple terms of an economic golden rule for

the restorative economy: Leave the world better than you found it, take no more than you need, try not to harm life or the environment, make amends if you do. Sustainability means that your service or product does not compete in the marketplace in terms of its superior image, power, speed, packaging, etc. Instead, your business must deliver clothing, objects, food, or services to the customer in a way that reduces consumption, energy use, distribution costs, economic concentration, soil erosion, atmospheric pollution, and other forms of environmental damage. (139)

As teachers, we want our students to get “good jobs.” But most of those “good jobs” are unsustainable. In fact, as Hawken reminds us, our very notion of business must be radically reinvented if it is to become sustainable. “The ultimate purpose of business is not, or should not be, simply to make money. Nor is it merely a system of making and selling things. The promise of business is to increase the general well-being of humankind through service, a creative invention and ethical philosophy” (1). If teachers fail to give students the means by which they might come to reevaluate their job expectations and their assumptions about work, then in the long view teachers are arguably doing more harm than good when their labors result in students entering and perpetuating unsustainable careers.

6. The daily operations of the college campus must reflect the ethic of sustainability promoted within the curriculum.

Eric Zencey, from “The Rootless Professors”:

How many college professors (excluding hydrologists and geographers, who may be assumed to have a professional interest) can describe the watershed in which they live? The absolute necessity of water to life is well known; ninety-some percent of the body is water; yet most academics have no idea whence theirs comes or where it goes when its incorporative service is done. From the vantage of cosmopolitan transcendence, even something as large as a watershed can seem a parochial detail. This learned ignorance, felt as a *worthy* ignorance, is a significant root of our culture’s ongoing environmental crisis. (Zencey 16)

Zencey’s criticism reminds us that the curriculum is directly related to the daily operations of the local college community: food

acquisition, preparation, and disposal; maintenance of buildings and grounds; purchasing for labs, departments, offices, and classrooms; energy expenditure; and so on. If a college’s daily operations work against sustainability, as most do, then the institution’s very existence will undermine and compete with any attempts to foster curricula of sustainability rather than work toward the goal of building a sustainable culture.

In 1997 I attended a two-week-long Environmental Literacy Institute at Tufts University, sponsored by University Leaders for a Sustainable Future. Prior to arriving, all participants were asked to complete a “Campus Profile.” The intention was to make us aware of how little most educators know about crucial aspects of their workplace. It worked: we arrived rather humbled at how much we didn’t know, not to mention how difficult it was to find answers to some of the following questions:

1. In what water shed(s) is your campus situated?
2. In what city, town, or municipality is your campus located?
3. Name the following officials representing the community your campus is a part of: (a) City Council; (b) State Senate and Congressional Representatives; (c) Federal Senate and Congressional Representatives
4. (a) Where does the energy for electricity on your campus come from? (b) What is the fuel source? (c) Who is in charge of energy management?
5. (a) Where does the water on your campus come from? (b) Where does it go when it leaves? (c) Who is in charge of water management?
6. (a) Where does the majority of food from your campus come from? (b) Where does it go when it leaves? (c) Who is in charge of food management?
7. (a) What are the major materials used (i.e., construction, office, laboratory, etc.) on your campus? (b) Where do they come from? (c) Where do they go when they leave? (d) Who is in charge of purchasing and disposal?
8. What problems does your university impose on the environment?

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9. What would you identify as your current administration's top three policy issues?

For those of us concerned with creating a sustainable curriculum, we can begin by first understanding the extent of our institutional ignorance when it comes to sustainability. This can be done very quickly by taking the "Sustainability Assessment Questionnaire (SAQ) for Colleges and Universities" (available from University Leaders for a Sustainable Future, and downloadable from ULSF's Web site: www.ulsf.org). The SAQ asks a series of questions aimed at assessing an institution's commitment, or lack thereof, to sustainability—the presence of sustainability within curriculum, scholarship, faculty and staff development and rewards, outreach and service, and institutional mission and structure. One of the goals of such questionnaires, of course, is to make us aware of our failures as educators in teaching for sustainability. In an age when so many faculty members and administrators are obsessed with various assessment mechanisms, we need first to step back and honestly confront our collective failure as educators in building a sustainable culture.

A second step for reconceiving our courses and curricula in light of sustainability is to explore the findings of other sustainability-minded scholars and organizations. For instance, in 1997 the President's Council on Sustainable Development established the Public Linkage, Dialogue, and Education Task Force, which issued a report titled "From Classroom to Community and Beyond: Educating for a Sustainable Future." The report lists the following three objectives for sustainability-minded education:

Ensure that awareness, knowledge, and understanding of sustainability become part of the mainstream consciousness, both nationally and internationally. . . .

Engage key domestic constituencies in a dialogue about sustainability to produce consensus. . . .

Foster the skills, attitudes, motivation, and values that will redirect action to sustainable practices and produce the commitment to work individually and collectively toward a sustainable world.

The report goes on to emphasize that sustainable education must entail *collaboration* ("colleges and universities should work with other schools and communities . . . to deliver information, identify questions for research, and provide direct services to help solve community problems"), *cross-disciplinary connection making* ("connections among all subject areas, as well as geographic and cultural relationships [thereby offering] an opportunity to strengthen [individual disciplines] by demonstrating vital inter-relationships"), and *relevance* ("learning citizenship skills and understanding that citizens have the power to shape their lives and their communities in light of their vision of a healthy and prosperous future").

Finally, the third and most challenging step is to take the existing information on sustainability and begin inventing ways of applying this information to our work as teachers and scholars so as to invite collaboration and exchange between faculty and students. In using sustainability as a design principle for rebuilding my entry-level writing courses—an overview of which is provided in Appendix B—I have become increasingly aware of my students' concerns about where they live, where they work, and what their futures might or might not hold. Their insights, coupled with relevant literature on sustainability, will occupy the next three chapters.