HIGHER EDUCATION FOR SUSTAINABILITY

Cases, Challenges, and Opportunities from Across the Curriculum

Edited by Lucas F. Johnston
CONTENTS

Foreword
Paul Rowland viii

1 Introduction: What's Required to Take EfS to the Next Level?
DeeDee DeLongpré Johnston and Lucas F. Johnston 1

SECTION 1
Understanding the Landscape for Change 9

2 The Emerging Environmental Sustainability Program at Meredith College: Exploring Student and Faculty Interest and Participation
Laura Fieselman and Erin Lindquist 11

3 Understanding Student Environmental Interests When Designing Multidisciplinary Curricula
Jeremy T. Brusker, Gregory E. Hitzhusen, Robyn S. Wilson, and Adam Zwickle 29

4 Learning Outcomes: An International Comparison of Countries and Declarations
Debra Rowe and Lucas F. Johnston 45
SECTION 2
Sustainability Across the Curriculum: Strategies and Tactics

5 Systems Study of an International Master's Program: A Case from Sweden
Sanaz Karim, Nadanjah Sriskandanrajah, and Ása Heiter

6 Keys to Breaking Disciplinary Barriers that Limit Sustainable Development Courses
William Van Lopik

SECTION 3
Educating the Professional

7 Strategies for Transforming Healthcare Curricula: A Call for Collaboration Between Academia and Practitioners
Carrie Rich and Seema Wadhwa

8 Sustainability and Professional Identity in Engineering Education
Mark Minster, Patricia D. Brackin, Rebecca Devasher, Erik Z. Hayes, Richard House, and Corey Taylor

9 Implementing Environmental Sustainability in the Global Hospitality, Tourism, and Leisure Industries: Developing a Comprehensive Cross-Disciplinary Curriculum
Michelle Millar, Chris Brown, Cynthia Carnuthers, Thomas Jones, Yen-Soon Kim, Carola Raah, Ken Teeters, and Li-Ting Yang

SECTION 4
Problem-Based Learning

10 Everybody's Business: Addressing the Challenge of Team-Teaching Partnerships in the Global Seminar
Tamara Savelyeva

11 The Moral Ecology of Everyday Life
James J. Farrell

12 The Living Home: Building It into the Curriculum
Braun Barber and Leona Rousseau

SECTION 5
Transformational Approaches

13 Shaping Sustainability at Furman and Middlebury: Emergent and Adaptive Curricular Models
Angela C. Halfacre, Jack Byrne, Michelle Horhota, Katherine Kransteuber, Steve Trombulak, Brittany DeKnight, Brannon Andersen, and Nan Jenks-Jay

14 Stepping Up to the Challenge – The Dalhousie Experience
Tarah Wright

15 Sustainability as a Transformation in Education
Charles L. Redman and Annim Wiek

16 Toward a Resilient Academy
Richard M. Carp

Epilogue
Lucas F. Johnston

About the Contributors
Index

169
183
185
201
214
223
238
241
255
TOWARD A RESILIENT ACADEMY

Richard M. Carp

Introduction

Peter Hay wrote that there are two schools of ecologists. One views ecology as a subdiscipline of biology; the other understands it to require a fundamental transformation of our lived, felt, and understood existence (2002:132). I am among the latter; those who believe that, for example, better science or more technology will see us through will find little of interest here. Those who believe otherwise may find a greater understanding of our current situation as scholars and teachers, as well as some resources for working our way into more sustainable knowledge and action.

The human capacity to provide for ourselves and our progeny a congenial life of material sufficiency and experiential joyfulness is in peril, in large measure because of the effects of our own actions.^{1} Our understanding of the world and our place in it is largely responsible for this peril, because people do what we do because it makes sense for us to do so.^{2} For our doing to change, so must our understanding (though the reverse is surely true as well). The academy is largely, though not entirely, responsible for the official regimes of truth and meaning that permeate society. Historically, as well as in the current moment, academic knowledge practices are complicit in creating, justifying, maintaining, and applying the behavior that places us at risk. Those practices must transform, fundamentally and comprehensively. There are a variety of resources ready to hand to assist us with that task; they challenge the very bases on which our academic institutions, our academic disciplines, and our academic careers are based. They must do so, because those institutions, disciplines, and careers participate in patterns of relationships that fray, rather than support, the resilience of the social–ecological systems that provide the ecosystem services upon which our life depends.
This chapter, like its author, lives a dual life. On the one hand, this is a piece of academic writing, aimed at an audience of scholars/teachers and conforming to the protocols of the academy. On the other hand, it seeks to confound and disrupt those protocols, arguing that they participate fully in unsustainability. Such are the ironies of our time.

**Academic Unsustainability**

I argue here that the network of institutions that make up “the academy,” which includes not only colleges and universities, but also (at least) professional and disciplinary organizations, its sources of funding, and its methods for distributing economic and status rewards, predominantly defray rather than support resilience. There are many ways in which this seems to be so. In a relatively brief chapter such as this we can only explore two of the most important. The first has to do with how we conceive and enact relationships between knowers and what is known, which are at odds with the lessons of ecology. The second has to do with the economics of the academy, which mar it to one of the primary engines of unsustainability.

**Knower/Known Relationships**

**Oecos³-Logos**

In the oecos, everything is related to everything else; everything is active, transforming in response to changes elsewhere, in turn affecting transformation through change, in an endless process. Change in one place changes everything, to some extent. Chaos theory warns us how hard it is to predict that extent, which may be more profound in a seemingly remote location than at a seemingly proximate one, in either time or space. Knowing participates in the oecos, and therefore changes it. There is nowhere “outside” from which to know. There are not two zones, one of ecology (nature) and one of culture (human), so that the question is of the impact of the culture on the ecology. Rather, cultural landscapes and their components participate fully in the developmental system of which they are a part. That is, culture participates in the process by which current activities “shape the context of development of their successors,” a process joined into by all beings which engage in or affect “current activities,” and one which, in its largest organic dimensions, we call evolution (Ingold 2000: 391).

Knowledge practices, therefore, are actions, and like all human actions they have practical and ethical, as well as conceptual, dimensions. Our knowledge practices are subject to judgments not simply of accuracy or adequacy, but of their effect on the health and well-being of social-ecological communities. Simply as a matter of survival, we are responsible to and for the oecos for our knowledge practices.

Acts of knowing are not acts of objectification (and correlative subjectification), but acts of participation which themselves enter into the ongoing cycle of transformation described above. For this reason, a sustainable (or a sustainability) curriculum would begin with the mutual interdependence and interpretation of beings. As Thomas Berry put it, “The difficulty cannot be resolved simply by establishing a course or a program in Ecology, for Ecology is not exactly a course or a program; it is rather the foundation of all courses, all programs and all professions” (1996: 9). Moreover, as Ingold remarked, “ecology as presented in textbooks could be regarded as profoundly anti-ecological, insofar as it sets up an organism and environment as mutually exclusive entities (or collections of entities) which are only subsequently brought together and caused to interact” (19). Scholars “tend to study the system from a perspective of being outside whereas in fact they, too, are part of the system” (Walker and Salt 2006: 32).

The logic of oecos (eco-logos) is a logic of dynamic relations, of transforming patterns composed of patterns in transformation. The interconnection of what we study implies the interconnection of our knowledge about what we study and the practices by which we study; an ecology of being(s) requires an ecology of knowledge(s). This entails, at the very least, a sustained and consequential conversation among the various forms of study, what are now known as “disciplines,” whereas today, “in the universities one discipline is rarely called upon to answer questions that might be asked of it by another discipline” (W. Berry 2001: 129; see also Walker and Salt 2006: 32).

The ecological crisis is not an “accident” of cultural development; it is a necessary correlate of our knowledge practices (cf. Carp 2001: 89; Lefebvre 1991: 412).

**What Sort of Thing Is Truth?**

If ecological crisis results from our knowledge practices, we will have to alter them if we are to support resilience. “Truth” is a crucial component of knowledge, for “truth,” or its analog, is used to distinguish understanding from error. In most academic work, we think of truth as a more or less accurate representation, in some dimension or set of dimensions, of an underlying reality. Truth is something like a map, and the most common touchstones of accuracy are replicability, prediction, and control.7 If we take the science of ecology seriously, neither prediction nor control is possible (Walker and Salt 2006: 29).

I propose that a more adequate test of thought is not its “accuracy,” but its ability to contribute to practices of living well” (Carp 2001: 73). This raises many questions about the characteristics of “living well,” but in the context of sustainability, it must include contributing to, rather than diminishing, resilience—supporting “the health and well-being of human and natural communities [social-ecological systems]” (W. Berry 2001: 134). Subjecting our knowledge practices to this test and the critiques it implies would doubtless alter many of them.
Moreover, resilience thinking, rooted in evolutionary ecology, situates us in a world of dynamic and unpredictable change (Walker and Salt 2006: x–xi and passim). Our conduct emerges from the understandings and rationalizations that form part of our knowledge practices, while those practices (self-justifying for the most part) are conduct themselves. This conduct effects unpredictable change, both because of the dynamic and uncertain character of the world, and because of the inevitably fallible and incomplete quality of our understanding, so that “part of what we need to know is how to change [adapt]. We must make room for surprises and ironies at the heart of all knowledge production; we are not in charge of the world.” (Haraway 1996: 123)” (Carp 2001: 73). Rather than “truth” (a collection of propositions or a set of maps) we should seek “truing” (the capacity for adaptive transformation) (cf. Carp 1991: 34–35).

This implies a new respect for the local and particular. Currently, that something can be done everywhere is a test of its truth (it is universal). In a truing context, something is valid only if it enhances the health of the social–ecological community in which it takes place. The sheer capacity to do is a test only of power, not of validity. The “larger” scale does not necessarily take precedence over the “smaller,” since cross-scale effects take place in both directions (Walker and Salt 2006: 90–91). Kudzu certainly can grow in the American South (it is true), whether it contributes to the health and wellbeing of the region is another question altogether (it doesn’t true). Expert knowledge often acts like kudzu. For truing, the social–ecological community is the final judge.8

The Socio-Cultural Oeco-Logos of Unsustainability

Unsustainable economic and political practices and systems have developed in dynamic relationship with the academy and its knowledge practices. From the standpoint of oeco-logic this is no surprise. Nothing is the result of a single cause; rather there is “the creative unfolding of an entire field of relations within which beings emerge and take on the particular forms they do, each in relation to the others” (Ingold 2000: 19). This pertains at each scale, and therefore characterizes social, political, and economic development as much as natural ecologies. We can best understand unsustainability as a resilient, but destructive, social-cultural system with an ecological form. The academy has from the beginning participated in the patterns of relationships that degrade the resilience of the socio-ecological networks on which human life depends.

The history of unsustainability is also the history of particular understandings of and actions in the world. To the extent that this is a history of “the post-Enlightenment West” and its global effects, it is the history of the academy and its knowledge practices. Academic knowledge provided the technical means as well as the ethical rationales for the conquest of nature, women, and the non-European world (Carp 2001: 92). Meanwhile, the growth and development of academic knowledge has depended on a network of technical, economic, political, and military forces. The history of science parallels the history of technology; scientific advances rely as much on new technical laboratory capacities as technological developments in the wider society rely on scientific breakthroughs. Both require the complex economic, political, and military networks that have made them possible (Haraway 1996: 118).

The question before us today is whether we can transform our knowledge practices so that they move our socio-cultural ecology into a basin of attraction amenable to the long-term well-being of human individuals and our species. The economics of the academy (how we pay for knowledge workers and research and how we justify our work to students, parents, and other stakeholders) creates a substantial obstacle to doing so.

The Economics of the Academy

Paying for Knowledge Workers and Research

The academy is driven by what can be funded, who will fund it, and why. What economic interests does the academy serve? Predominantly those of the mainstream economic (political and military) forces of our time; those very forces that fray resilience. Faculty members are evaluated, rewarded, retained, or fired, based in part on their ability to bring in external funding. This also affects who goes to graduate school, what paths they follow through it, and what they study. Because faculty members and graduate students teach undergraduates, the effects trickle down there as well.

As Wilson put it there is, “a cardinal principle in the conduct of scientific research: Find a paradigm for which you can raise money and attack with every method of analysis at your disposal” (1998: 157). This principle applies with equal force in the social sciences: work that can be done is work that can be funded.

One might think the humanities would be exempt, but this is hardly the case: pressure for external funding in the humanities is high, though funding itself is scarce, and the humanities are subsidized by administrative funds raised by others.

Unsurprisingly, money available for research serves funders’ interests. Money is predominantly available based on two criteria: economic worth (profit enhancement) or military application (state security). Yet it is vanishingly unlikely that either capitalism or the nation state will prove to enhance resilience, the former (at least) because limitless expansion in a limited system is impossible, the latter (at least) because national boundaries bear little resemblance to bio-regions or other ecological forms.9

“Professors,” wrote Paul Feyerabend, “serve masters who pay them and tell them what to do: they are not free minds in search of harmony and happiness for all…” (1987: 315). As Wendell Berry put it, “The faculties and administrations of universities are inexcusably bewildered between the superstition that knowledge-
is invariably good and the fact that it can be monetarily valuable and also dangerous" (2001: 144, see also 122, 68, 63).

Selling Education to Students, Parents, Taxpayers, and Donors

Economic justifications are also the primary reasons education is held to be important. Students are told to go to college because it will increase their earning potential. Parents are asked to pay for education to enhance their children's financial capacities. Donors and taxpayers are enticed with promises of students' economic well-being and of larger-scale economic development. While we sell education to students on the promise that they will succeed in the world economy, that economy degrades the resilience of the oecos on whose ecosystems services we depend (Walker and Salt 2006). We promise students that they will contribute to unsustainability!

Articles in newspapers and online ask whether a college education is a "good investment," comparing the cost of college with graduates' lifetime earning power. A Google search of "is college worth it" (19 August 2010), displayed articles from The New Yorker, The Washington Post, Business Week, PBS, and The Huffington Post, on the first page, the oldest of which was 19 March 2010. The UNC System's UNC Tomorrow Final Report (Phillips, 2007) repeatedly stresses the importance of the UNC system in North Carolina's economy, focusing primarily on "global competitiveness." On page 4, the commission summarizes its findings in three points, each of which emphasizes this factor. Although the report repeatedly uses the phrase "personal and professional" (passim) to describe the purpose of education, nowhere in the first 15 pages was there any mention of educating students for non-economic components of quality of life, although page 8 seems to assume, without in any way demonstrating, that the education imagined in the document will lead to "improving the quality of life," including providing "an intellectual and artistic environment that makes for a full, meaningful life." How will it do so is left to the imagination. Page 13 of the report makes it clear that humanities and arts should be taught because they enhance the learning of "soft skills" necessary for career success, not because they have intrinsic or non-economic significance.10

In contrast, Csikszentmihalyi (1993) stated that the arts and humanities, properly understood and taught for their own significance rather than their contribution to economic success, may provide an antidote to our addiction to endless consumption. Material culture, he writes, "compete[s] with humans for scarce resources" (20); our survival depends on establishing a relationship with material culture that builds, rather than frays, resilience. The antidote to an "addiction to objects" is "a genuinely rich symbolic culture...poetry, songs, crafts, prayers, and rituals..." (28). If he is right, the doorway to resilience opens in a revised practice of the academic backwaters of art, music, theatre, religion, and philosophy.

Livelihood is of course necessary, as is governance. We and our students are faced with the conundrum of how to live in a process of continuous transformation that moves our economics and our governance toward forms that support resilience. An academy devoted to sustainability would commit its intellectual and financial resources toward resolving that conundrum.

Re/Sources for a Sustainable Academy

It is not at all clear that the modern disciplinary academy can transform into a sustainable institution. Perhaps we need a new locus of education, analogous to the rise of new knowledge practices associated with the humanities, enabled by the appearance of an economic and political counterforce to the Church and the divinities—the princely courts of mercantile capitalists (Carp 1997b). Perhaps new knowledge practices await an alternative contemporary political and economic locus; perhaps knowledge, politics, and economics must transform in tandem, mimicking the evolution of ecologies.

On the other hand, some may argue that even if the critique articulated above is correct, we will for a long time need transitional knowledge practices associated with the network of industry, science, technology, social science, and humanities currently practiced in the academy. This may be true, but it is, at best, a rearguard action which may provide additional time for more fundamental change. Like the argument that we need to continue to harvest and burn oil and coal and build nuclear reactors, an argument on behalf of the academy as it may be correct in the short term, but is unsustainable in the longer term. Change is coming; we will either help to shape it and learn to ride it, or we will be inundated by it.

Below I briefly discuss four re/sources I find useful in imagining and beginning to instantiate new knowledge practices more likely to support resilience: contemporary indigenous education; scholars’ bodies; reflexive communality; and assets-based community relations. We can understand each as an academic knowledge, since I present them here as they have come to me in scholarly works. Yet these works point toward and attempt to embody extra-academic knowledge practices; any academy that took them seriously and made them central would be very different than the one we now inhabit.

Knowledge is not just (not even primarily) ideas in minds or media. It corresponds to practices “for organizing schemes of perception, appreciation, and action, and for inculcating them as tools of cognition and communication” (Lefebvre 1993: 82). I invite you, as you read these brief introductions, to imagine putting these re/sources into effect. How would your knowledge practices change or stay the same? How might they affect the material conditions of your daily life: what you do with your body; where you do it and in relationship with what material culture; how would they affect your social relationships, both their form and also with whom you relate; how might your “perception, appreciation, and action” change or stay the same?
Contemporary Indigenous Education

The word “survivance” describes the fact that, despite substantial obstacles, many indigenous peoples are both surviving and thriving, without being crushed by or capitulating to modernity. Many of these peoples engage in practices that seem better adaptive to supporting resilience than our own. Walker and Salt (2006) note that “many traditional societies and small-scale farmers” engage in resilience thinking and practices (xi).

One primary contributor to indigenous resilience is the survivance (continuity and transformation) of indigenous knowledge practices, transmitted through indigenous education. Perhaps we have something to learn from contemporary indigenous education as we imagine how to transform our own?

Dr. Gregory Cajete (Tewa), Director of the Native American Studies Program at the University of New Mexico, has articulated “an ecology of indigenous education” (1994). It is an example of the paradigm of locale: although he expresses what he believes to be universal phenomena, he knows that he does so in particular (not universal) terms; although he believes his principles apply in every indigenous context, he recognizes that each realization of them will be unique to those contexts (18–19). Beyond that, they are applicable to education in the “developed” world, “if our collective future is to be harmonious or whole, or if we are even to have a viable future to pass on to our children’s children” (23; see also 25–26; 78).

Cajete presents a genuine ecology of ideas and images. It would be as presumptuous to summarize it as it would be to summarize, e.g., the ecology of the giant redwood forests. Here I will make only a few remarks:

- Learning is, and depends on, ethical as well as cognitive factors (heart and mind together). Humility, respect, honesty (including about one’s self), are necessary components of education;
- “True learning and gaining significant knowledge does not come without sacrifice and at times a deep wound” (228);
- Knowledge and action are inseparable;
- All the senses are necessary for genuine education.

For indigenous education, knowledge is always bodily; there is not a mind somewhere and a body somewhere else. Rather there is bodymind always already in relationship with social-ecological context. This directs us to consider our own bodies as they participate in knowledge practices.

Scholars’ Bodies

“As both Michel Foucault and Pierre Bourdieu have urged, attention to discipline is not merely a concern about institutions and professionalization; it is above all concern about bodies – human bodies” (Lévi-Strauss 1993: 82). In the academy, we dream of eternal, universal knowledge, of meaning without context. To maintain the dream as reality, the actual contexts of academic work must disappear, most especially scholars’ bodies, since the academy can pretend to present universal knowledge only by claiming academic bodies require no special discipline, a claim we know from our own experience to be false.

A sustainable academy requires, in Paul Stoller’s words, that we “reawaken profoundly the scholar’s body” by fusing “the inelligible and the sensible” (1997: xv). Doing so requires that we “eject the conceit of control in which mind and body, self and other are considered separate. It is indeed a humbling experience...” (xvii), which necessitates becoming conscious of and responsible for, among other things, the “assembly of unarticulated, non-verbal skills” required to do various kinds of academic work, and their involvement in the appearance of their objects of study (Lévi-Strauss 1993: 71).

We live as bodied creatures, participating fully in material socio-ecological communities. We want to sustain our successors’ bodily survivance, to enhance the resilience of material patterns of the oecum that support human well-being. To do so, we will have to acknowledge fully the bodily character of our knowledge practices, and adjust them accordingly, effecting “a mingling of head and heart...an opening of one’s being to the world – a welcoming” (Stoller 1997: xviii).

Reflexive Commensality

Reawakening our scholar’s bodies, we discover that they are social–ecological, always already formed by and forming other people and the material world, which is largely fashioned through human activity, taking the shapes of material culture.
Bodies participate in material culture; like all artifacts they are formed from raw materials (genetics, flesh) by its processes, structures, and forms (Carp 1997a: 288–299). Bodily activities, including perception and, therefore, the world perceived, are skilled practices "engendered from early infancy through culturally induced processes" that participate integrally in material culture (Carp 2001: 103; see also Carp 1997a). Because resilience is frayd by our material practices, achieving sustainability requires transforming those practices. Because our bodies are formed by those same material practices, achieving sustainability requires transforming our bodies. Because our perception, which gives us a world to know, is profoundly affected by our bodies' participation in material culture, achieving sustainability requires transforming our perceptual skills.

C. Nadia Seremetakis explores how memory, history, and sensation are embedded in and embodied by material culture. Skilled sensual attention to material culture allows us to experience "commensality...the exchange of sensory memories and emotions, and of substances and objects incarnation remembrance and feeling. Historical consciousness and other forms of social knowledge are created and then replicated...through communal ethics and exchange" (1994: 37). Just as scholars' bodies have been anaesthetized, so commensality has been effaced in modernity, so that we experience our shared sensual exchanges as "banal, functional or literal and...private." Yet beneath the apparent universality of material modernity, other commensalities have "an underground existence as a repressed infrastructure of social knowledge" (Seremetakis 1994: 37–38). Underneath the dust of modernity, there are articulate sensory experiences that embody not only remnants of premodern worlds but also specific critiques of modernity. They produce and reproduce "social knowledge through the circulation of material forms" (38), embodying knowledge practices far removed from the academy, sites where "sensory memory is encapsulated, stored, and recuperated in...artifacts, spaces and temporalities of consumption, sharing and exchange" (128).

Learning to experience these commensalities provides both respite and insight. On the one hand, they can "constitute provisional refuge areas in the prevailing sensory cacophony" (125), a haven from the banal, private, mundanity of everyday life in modernity, which is largely devoid of metaphor or poetics, and is often experienced, ironically, as either anesthesia or pain. On the other hand, in their multiplicity, reflexive commensalities confound the academic dream of abstract universality, introducing us to "the reflexive interplay of multiple sensory realities" (125). These realities provide us with avenues to explore in our search for knowledge practices that support resilience.

They also introduce us to the politics of the senses (125–132), which is a pragmatic as well as an ethical concern. Diversity is a measure of ecological well-being, while the existence of multiple organisms that perform the same function strengthens resilience (Walker and Salt 2006: 69). Multiple commensalities work in a similar way in the social component of social-ecological systems, embodying a variety of lived understandings of the world and ensuring a range of potentially adaptive responses to disturbance, rather than a single "survive or die" response throughout the system. In knowledge practices, as in other components, the social-ecological world, "being efficient...leads to drastic losses in resilience" (7).

It is difficult to describe in a text how to tune into reflexive commensality, which must begin with sensory practices in social contexts. Patiently opening oneself to unfamiliar sensory experiences and practices, and returning to them until they begin to make sense is a start. Perhaps the simplest, though by no means the most enjoyable, starting point is to awaken to the commensalities of the academy, to the peculiar "nowhere" in which our work takes place. Abandoning the dream of a meaning independent of context, we can experience the sensory reality of the contexts of our meaning forms – exhibition spaces (museums and galleries), expression spaces (print pages and their electronic analogs), and learning spaces (classrooms, laboratories, and meeting rooms) – and of the meanings embedded in them. We need a close grained analysis, and an equally rigorous experience, of academic material culture and the bodies, spaces, and times associated with it.

**Assets-Based Community Relations**

If all you have is a hammer, all the world looks like a nail. If you are educated only to solve problems, all the world is filled with them; "solving" one only brings other problems to the fore. To achieve sustainability, we need a keen understanding not only of problems, but of the assets on which we can draw to resolve them.

In 1993, John Kretzmann (sociology and urban affairs) and John L. McKnight (human development and social policy) wrote "a guide about rebuilding troubled communities." In it they contrast two approaches, one focusing on "the community's needs, deficiencies and problems...the second...on a community's capacities and assets" (1). Although they focus on devastated neighborhoods, their approach is applicable to the whole area. They turn expertise on its head, focusing on the assets already present in a community, rather than on the knowledge experts bring into it. They recommend an "intense and self-conscious internal focus," which concentrates on strengthening relationships (9). Such work is inevitably particular and local, for each community's strengths and relationships (like those of each ecological community) are specific to it; another way of saying this is that diversity is recognized and valued. In this, as in many arenas, assets-based community development resembles the resilience thinking recommended by Walker and Salt (2006), who insisted that enhanced social-ecological resilience "needs to emerge through people working with their local systems" (151). As Kretzmann and McKnight insisted, the trick is to "support local invention...to respond to community rather than manage, replicate, and proliferate" (374).

Diversity is a key value, each place and its components must be approached in
Looking Ahead

The contemporary academy is unsustainable. It participates in a socio-cultural pattern that has its own internal resilience (and therefore is difficult to change) but that degrades the sources of the ecosystem services on which it depends. If we are to transform the academy into something more sustainable, or to develop new institutions of higher education and research, we will need to find the assets for knowledge production available in every community in which we take place and to connect them in diverse and local ways to multiply their power and effectiveness. In this way, we may build genuinely sustainable academies.

Notes

1 Contemporary global economics and politics exhibit unsustainable characteristics, manifesting in increasing fragility in fundamental ecological support systems. "Sustainability" is a metaphor in which we try to imagine and enact modes of behavior that enhance, rather than degrade, the resilience of our social-ecological systems - their capacity to absorb disturbance and continue to function (Walker and Salt 2006). The problem is not only that ecosystem services on which we rely are diminished. Complex adaptive systems tend to settle into "basins of attraction," resilient conditions to which they return when disturbed. Under sufficient disruption, they will "flip" into a new, resilient basin of attraction, with different characteristics to the former basin (Walker and Salt 2006). We risk flipping the global ecology into a resilient basin of attraction far less amenable to human life.

2 I use "we" rather than the common "they" to emphasize that you and I are part of the collective noun "people." If something is true of "people" it is true of you and me (us). Commonplace forms of language and experience routinely separate us from contexts to which we actually belong (ecologies, for example, as well as humanity). Talking and writing in ways that instead articulate our connections is one aspect of moving toward sustainability.

3 "Oro" is a transliteration of the ancient Greek οἶκος (plural: οἴκοι), meaning "house" or "household." It forms the root of our "eco," as in ecology, economy, and ecumenical. I use "ores" rather than "ecosystem" because of a critique of systems thinking which I cannot elaborate here, and because the metaphors we use to articulate experience matter. "The ores" as I use it refers to Earth's ecology in its largest context, "an ores" refers to a more local ecology.

4 A critique of Walker and Salt (2006) would begin here; they often write as if people can manage or understanding as if outside.

5 In important ways, ecology and evolution imply one another. Perhaps we should talk about evolution or ecology.

6 I have addressed this question at length elsewhere (Carp 2001: 72-74).

7 In the humanities, these may be replaced with adequate interpretation, measured by how convincing the argument is to other scholars, and the extent to which the argument is used and developed by them.

8 As my use of science indicates, I am not suggesting we simply abandon existing knowledge practices. We need what some have called a "successor science" (Haraway 1996: 111).

9 For the former, see, e.g. O'Connor (1994), Kovel (1988), and Harvey (2005). For the latter, see Princen (2005), Sagarin and Taylor (2008), and Amieski (2007). Giving up capitalist economies and nationalism may not be as painful as it seems at first. Anieski notes that, for citizens of the United States and Canada, the experience of well-being (including security and happiness) have not increased since WWII, despite the vast increase in monetary wealth (and armaments and other security apparatus) in those nations during that time.

10 We would find a similar pattern at almost any US college or university. See, e.g. Schmidt (2002).

11 "Sustainability" combines survival and vitality, referring to culture's capacity to retain identity while adapting to continuously changing circumstance. It is formally similar to "complex adaptive system" (Belanger 2008; Vizenour 1984; Rickard 2005).

12 There is no point romanticizing "noble indigenes"; indigenous peoples have harmed the oros. Neither is there a point in dismissing their long-standing capacity to remain within stable and resilient basins of attraction. The difference in scale, scope, and impact on resilience between indigenous and modern and post-modern societies is massive.

13 This section draws heavily on Carp 2001: 99-104.

14 The ensemble of inarticulate skills required for academic work is a form of commensality.

15 The slow cities and slow food movements may be attempts to re-establish reflexive commensality in everyday experience (J. Carp 2012).

16 See Walker and Salt (2006) and Kretzmann and McKnight (1993) for examples.

References


