CHAPTER 1: THE GREENING OF THE CURRICULUM

In “The Ethics of Eating,” Professors William Starr and Andrew Chignell help Cornell students chew over “the questions” raised by breakfast, lunch, and dinner. One of their students, Lauren Thiersch, a sophomore in the School of Hotel Administration, summed up:

This class demands one of two things: 1. That you defend the way you eat, or 2. that you change it. And in early February I stopped eating meat because of what I’ve read, watched, and learned in this class.30

The course was a four-credit philosophy class, but what Thiersch learned, judging by the syllabus, was a good deal of one-sided alimentary advocacy. “The Ethics of Eating” booklist is fat with organic memoirs and anti-factory farm diatribes seasoned only lightly with actual ethics. The syllabus includes Jonathan Safran Foer’s memoir of going vegetarian, Eating Animals, and its counterpart, Reclamation: A Tale of Blood, Betrayal, and Bioregional Meat by ex-vegan turned “naturalist-hunter” Brad Dingman; The Omnivore’s Dilemma by foodie-activist-journalist Michael Pollan; and Food for Thought: The Debate Over Eating Meat, edited by the animal ethicist Steve F. Sapontzis.

Students also watched the documentaries Food, Inc. (narrated in part by Michael Pollan) and Our Daily Bread, which portray ghastly images of factory farms and slaughterhouses as normal parts of corporate food production. At one point the class took a trip to a local meat processing plant to observe how slaughterhouses operate. Starr and Chignell also brought in two guest speakers during the semester: the vegan author Jonathan Balcome, who researches animal experiences of pleasure and is writing a book about the inner lives of fish, and Brian Wansink, the expert in eating behavior who got McDonald’s to swap apple slices for French fries in Happy Meals and convinced snack companies to create 100-calorie single-serve portions as a way to curb mindless eating.

Vegetarianism may be a perfectly reasonable personal decision, but it departs substantially from the traditional list of educational purposes: sharpening students’ faculties of reasoning and expanding their understanding of reality. Starr and Chignell aver that “The goal of this course is not to teach some preferred set of answers to these questions” but to give students “the basic tools” they need in order to “reflect clearly and effectively on the questions themselves.”31 But the lopsided booklist and speaker list, combined with the suggestion that most of our meals pose moral dilemmas and the requirement that students either “defend” or change their eating habits, offer pretty clear indications of which side Starr and

Chignell hope their students come down on.

“The Ethics of Eating” is one of 403 courses that Cornell has categorized as sustainability courses.\textsuperscript{32} Using the official guidelines delineated by the Association for the Advancement of Sustainability in Higher Education (AASHE) in a 300-page manual, Cornell distinguishes between classes that are sustainability-related and sustainability-focused:

- **Sustainability-focused courses** concentrate on the concept of sustainability, including its social, economic, and environmental dimensions, or examine an issue or topic using sustainability as a lens.

- **Sustainability-related courses** incorporate sustainability content as a course component or module.\textsuperscript{33}

Cornell’s sustainability-focused and related courses include the alarm-sounding “Earthquake!” (exclamation point included!),\textsuperscript{34} the far-sweeping “Microbes, the Earth, and Everything,”\textsuperscript{35} and the victim-fixated “Race & Social Entrepreneurship, Environmental Justice and Urban Reform.”\textsuperscript{36} “Magnifying Small Spaces Studio” teaches students how best to live in mini-spaces and answers the question, “In reducing one’s carbon footprint, how small is too small?” And Cornell offers a whole buffet of courses for those hungry for more of what Starr and Chignell served up. “Climate Change and the Future of Food,”\textsuperscript{37} for instance, prepares students for the possibility of an agricultural collapse, while “Food, Farming, and Personal Beliefs”\textsuperscript{38} compares the “personal value systems of farmers and consumers” and the relationships between religious faith and sustainability.

How does such an eclectic group of courses become part of the college curriculum at a major university? The idea, according to the David R. Atkinson Center for a Sustainable Future at Cornell, is that sustainability operates as an interpretive key that rises above the academic subject divisions to pick and choose pieces

\textsuperscript{32} Cornell Sustainability Courses, David R. Atkinson Center for a Sustainable Future, Cornell University. \url{http://www.acsf.cornell.edu/education/curricula/}


\textsuperscript{34} EAS 1220 - Earthquake! Cornell University Catalog, 2014-2015. \url{http://courses.cornell.edu/preview_course.php?catoid=22&coid=337177}

\textsuperscript{35} CSS 1120 - Microbes, the Earth, and Everything, Cornell University Catalog, 2014-2015. \url{http://courses.cornell.edu/preview_course.php?catoid=22&coid=336931}

\textsuperscript{36} ASRC 4330 - Race & Social Entrepreneurship, Environmental Justice and Urban Reform, Cornell University Catalog, 2014-2015. \url{http://courses.cornell.edu/preview_course.php?catoid=22&coid=344667}

\textsuperscript{37} DEA 2201 - Magnifying Small Spaces Studio, Cornell University Catalog, 2014-2015. \url{http://courses.cornell.edu/preview_course.php?catoid=22&coid=337061}

\textsuperscript{38} HORT 3600 - [Climate Change and the Future of Food], Cornell University Catalog, 2014-2015. \url{http://courses.cornell.edu/preview_course.php?catoid=22&coid=344169}

\textsuperscript{39} CSS 4910 - Food, Farming, and Personal Beliefs. Cornell University Catalog, 2014-2015. \url{http://courses.cornell.edu/preview_course.php?catoid=22&coid=336958}
from among them to weave back together in new, sustainable ways: It “transcends individual disciplines” but rests on “on a foundation of disciplinary understanding.”\textsuperscript{40} Hence it can wedge its way into all kinds of courses.

**Degrees of Sustainability**

Courses such as Cornell’s “Ethics of Eating” or “Microbes, the Earth, and Everything” are quickly becoming staples of today’s undergraduate student’s educational diet. It is common now to find courses coded as “sustainability-relevant” in college catalogues. Often sustainability gets its own department.

According to the Association for the Advancement of Sustainability in Higher Education, 475 college campuses in 65 states or provinces offer a total of 1,438 academic sustainability programs, ranging from certificates to undergraduate degrees to master’s and doctorate degrees.\textsuperscript{41} In the U.S. alone, there are 1,274 programs, representing all fifty states. That’s in addition to the hundreds of institutions that offer freestanding elective sustainability classes. Sustainability has graduated from a hobby research interest to a full-scale academic “discipline” that undergraduates can major in, graduate students can specialize in, and professors can become experts in.

The “disciplinary” status of sustainability is a bit open to question, though. It isn’t a distinct science, like biology or physics; it isn’t a distinct branch of the humanities, like philosophy or history; it isn’t a social science, like economics or sociology. Rather it is a swirl of ideas and commitments that touch many things.

\textsuperscript{40} Cornell Sustainability Courses. http://www.acsf.cornell.edu/education/curricula/

\textsuperscript{41} AASHE Academic Programs Database. Association for the Advancement of Sustainability in Higher Education, as of February 23, 2015. http://www.aashe.org/resources/academic-programs/
But discipline or no, students can get a degree in it. The nation’s first school of sustainability opened at Arizona State University in 2006. Housed within the Julie Ann Wrigley Global Institute of Sustainability, the school offers both bachelor of arts and bachelor of science degrees in sustainability, as well as minors in sustainability. Graduate students may earn a Ph.D., M.A., or M.S. in sustainability, a master’s in sustainable solutions, or an executive master’s for sustainability leadership. Its dean of sustainability, Christopher Boone, has a Ph.D. in geography and is an expert in urban infrastructure and environmental justice.

Some colleges are devoted conspicuously to the teaching of sustainability. College of the Atlantic in Maine directs all students to focus on “human ecology.” Florida Gulf Coast University’s motto is “sustainability, excellence, service”; its guiding principles commit professors to “instilling in students an environmental consciousness that balances their economic and social aspirations with the imperative for ecological sustainability.”

Unity College, whose slogan is “America’s environmental college,” focuses all of its course offerings around a core “Environmental Citizen curriculum” that every student must take. The three expected learning outcomes include students displaying “dedication to sustainability,” transforming into “engaged citizens and leaders who welcome diversity, work well with others, respect tradition and differing points of view, and help encourage a productive, communal way of life,” and developing “an extensive knowledge of the sciences, social sciences, and humanities” and how these disciplines “connect to and inform environmental issues.” The college’s mission statement commits Unity to providing “a liberal arts education that emphasizes the environment and natural resources” and to teaching each subject “through the framework of sustainability science.” In the midst of a national decline in core curricula, Unity College’s decision to make sustainability courses a graduation requirement is telling.

Four hundred twenty-four of the sustainability programs on AASHE’s list are baccalaureate programs leading to degrees in topics such as “Environmental Sustainability” (Rochester Institute of Technology) or “Sustainability Practice” (Lipscomb University). The majors range from earthy (“Sustainable Landscape Horticulture,” University of Vermont) to artsy (“Architecture and Sustainability,” Ferris State University), from business-focused (“Sustainable Management and Policy,” Purdue University) to socially-minded

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42 Degree programs, School of Sustainability, Arizona State University. https://schoolofsustainability.asu.edu/about/welcome-introduction.php
46 Ibid.
(“Sustainable Community Development,” Northland College). There are energy-focused programs (“Energy and Sustainability Policy,” Pennsylvania State University), global-warming inspired themes ("Global Environmental Change and Sustainability," Johns Hopkins University), options for aspiring teachers ("Environmental Education," Unity College), and economics approaches for the analytical types ("Environment, Economics, and Politics," Claremont McKenna College).\textsuperscript{48}

**Figure 1. Map of Sustainability Degree Programs**\textsuperscript{49}

What do students learn in these programs, besides an awareness of how expansive sustainability can be? Something like what they learn in Cornell’s “Ethics of Eating”—a little science, a bit of economics, a dab about ethics, and a great deal of social theory and political advocacy. Sustainability is less like a newly discovered, previously missing layer on the educational food pyramid and a more like a casserole. It borrows bits and scraps from here and there and, under the heat of the oven, bakes them into some semblance of a cohesive, tasty entrée. It can offer courses in ethical eating and environmental poetry at the same time that it offers a few in trash studies and sociology. There’s something there for everyone.

\textsuperscript{48} Sustainability-Focused Baccalaureate Degree Programs, Association for the Advancement of Sustainability in Higher Education. As of September 11, 2014. http://www.aashe.org/resources/academic-programs/type/bacc/

\textsuperscript{49} AASHE Academic Programs Mapping, Association for the Advancement of Sustainability in Higher Education. http://www.aashe.org/resources/academic-programs/map/
That salmagundi nature is redolent at the University of South Dakota (USD), where undergraduates may ingest sustainability in the form of either a Bachelor of Science or a Bachelor of Arts degree in sustainability, depending on whether they wish to specialize in the natural sciences or the social sciences. Those with less hearty palates may also select a minor in sustainability to complement whichever main course of study they choose. In all three versions, students aim to achieve four wide-ranging learning goals by the time they complete their programs:

1. An understanding of the fundamental scientific concepts that contribute to assessing the sustainability of human activities (e.g., environmental impact and resource depletion) and to evaluating sustainable technologies (e.g., energy and food production).

2. Familiarity with the social, political, and economic context of sustainability issues.

3. An understanding of how public policy can be employed to promote or inhibit social and scientific solutions to sustainability-related problems.

4. The ability to communicate proficiently about sustainability, in both written and oral presentation.50

That translates roughly to 1) the reality of global warming and the importance of renewable energy, (despite the presence of real academic debates over the merits of the science behind both); 2) belief in the harm of traditional social and economic structures and the need for reimagining society along progressive political lines; 3) the need for mass environmental activism as the solution to political problems; and 4) the ability to persuade skeptics and dissenters to conform with standard environmental thought, or, failing that, to keep silent.

The pièce de résistance at South Dakota’s sustainability programs is a core of classes that cultivate in students a taste for activism as the driver of sustainability social change. Students must take one course in public policy (“Introduction to Public Policy”) where they learn about the “dynamics of agenda setting, policy formulation, implementation, and evaluation.”51 They also take three courses in sustainability: “Sustainability and Society,” “Sustainability and Science,” and “Sustainability Capstone.”

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50 College of Arts and Sciences: Sustainability, University of South Dakota. http://www.usd.edu/arts-and-sciences/sustainability/undergraduate.cfm

and Society” assesses sustainability as a “framework” for addressing “complex societal issues,” which according to the university include “food systems, social justice, and sustainable development.” Welfare reform, drug abuse, and bioethics concerns are notably missing from the list.

From there, the curriculum moves into a smorgasbord of environmental science and economics, field experiences and internships, along with ecology and climate science for the natural sciences concentration, and population studies, food studies, and communications for the social sciences concentration.

What exactly “sustainability” is as a discipline is hard to pin down. It appears to be a particular way of interpreting reality rather than a particular portion of knowledge to study. In that regard, sustainability is a bit like “multicultural studies” or “gender studies”: a broad range of separate interests and subjects that mesh together only by the interpretive lens through which the student looks. In the case of sustainability, that lens is something along the lines of a deep-seated fear of depletion and unequal distribution of resources in the three spheres of the environment, the economy, and society, rectified by the solutions of collective political action and individual frugality.

**Integrated**

Increasingly sustainability is not just a subject a student may opt to study if he wishes, but an inescapable, automatic part of all disciplines and subjects. Sustainability spreads outside its disciplinary silo and into the curriculum at large as a set of assumptions that color even non-environmental courses. Students in sociology or business programs—or hotel administration, as in the case of Cornell’s Lauren Thiersch—find themes of sustainability in their non-sustainability electives, or in their (non-sustainability) core major requirements.

“Integrated” is the term colleges and universities use when they speak of fitting sustainability into the full spectrum of their academic offerings. Cornell in its 2013 Climate Action Plan, which sets out the university’s long-term sustainability goals, speaks of “integrating sustainability into students’ educational experience” and developing a sustainability educational program that will be “integrated with freshman orientation, undergraduate club leadership development, residential life, and professional development trainings.” Cornell is only one of hundreds of universities to speak in this manner. “Integration” has a long sustainability pedigree. The text of the American College and University Presidents’ Climate Commitment (launched in 2006) draws on the term when it notes,

54 Ibid pg. 29.
Campuses that address the climate challenge by reducing global warming emissions and by integrating sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society.\textsuperscript{55}

“Integrated” sustainability might at first involve the mere introduction of a few sustainability-themed courses alongside the other, regular course offerings, but it soon aims to mean something more. Advocates want sustainability to become incorporated into the curriculum much in the way yeast permeates bread, and not as nuggets of chocolate, sprinkled here and there, flavor cookies. The one spreads everywhere, actively changing the substance of the entire dough, and goes subtly unnoticed except when absent. The other offers rich, concentrated flavor, but only in a few select bites.

Second Nature senior fellow Peter Bardaglio made the goal of complete saturation of the curriculum clear in his 2007 manifesto, “A Moment of Grace’: Integrating Sustainability into the Undergraduate Curriculum.” Writing for the journal Planning for Higher Education, Bardaglio argued that sustainability advocates had a powerful, but narrow sliver of time in which they could radically remake the college experience with sustainability as the foundation. “The full integration of sustainability into the curriculum poses a fundamental challenge to the dominant paradigm in higher education,” Bardaglio wrote. One collective, concentrated push to settle sustainability comfortably at home within all academic disciplines could firmly establish sustainability in campus values and priorities.\textsuperscript{56}

**Bonanza**

Bardaglio spotlighted four colleges where a few activist faculty members armed with a budget, a winsome spirit, and determination had succeeded in treating sustainability as a multidisciplinary endeavor. Professors at Northern Arizona University, Emory University, Berea College, and Ithaca College had each created campus centers of some kind to serve as hubs for sustainability education.

Northern Arizona’s program was the first and most influential of the four. The locus of sustainability curricular change at the university was a small campus center known as the Ponderosa Project. The name hinted at the scope of its ambition. “Ponderosa” was not only the name of the majestic pines that towered above the university campus, but also the fictional gigantic ranch that was the setting for the 1960s television Western *Bonanza.*

\textsuperscript{55} Text of the American College and University Presidents’ Climate Commitment. http://acupcc.org/about/commitment

In 1992, just as Second Nature was launching its first campus outreaches, Northern Arizona’s director of English composition Geoffrey Chase and education professor Paul Rowland partnered with Anthony Cortese (then president of Second Nature) to figure out a way to bring sustainability into college campuses. At a Second Nature workshop, Rowland and Chase helped develop the idea of recruiting other faculty to teach sustainability-themed courses, or at least to incorporate examples, readings, or other material in their classrooms.

Three years later, having secured a grant from the U.S. Department of Energy, Rowland and Chase gathered twenty Northern Arizona faculty members at a two-day workshop, paid them each a $1,000 stipend, and coached them in revising their syllabi to incorporate sustainability. The workshop became an annual event, and by 2007, when Bardaglio conducted his survey of the state of sustainability education, the Ponderosa Project had led to the revision of 262 undergraduate classes and 97 graduate classes in 31 different departments.\(^\text{57}\)

The kinds of revisions aimed for involve making sustainability part of the standard educational experiences of the average student at Northern Arizona University, rather than a segmented discipline that the student had to seek out and choose. The goals of the project, listed on the Ponderosa Project website, emphasize the importance of exposing all students from all disciplines to the principles of sustainability:

- “Green the Curriculum” so that the theme of environmental sustainability is introduced and reinforced throughout students’ educational experiences
- Educate students in all courses of study about the implications of environmental sustainability in their chosen careers\(^\text{58}\)

That spirit became a benchmark for sustainability education around the country. Bardaglio summed up the vision of the Ponderosa Project that spread to similar programs at other campuses:

_Central to the Ponderosa Project has been the belief that the entire university, not just a single program, is responsible for sustainability. Project leaders have insisted that the best way to educate students about sustainability is to integrate it into a variety of subjects, rather than “ghettoize” it in an environmental studies program._\(^\text{59}\)

Here is perhaps where sustainability becomes most powerful, hidden in courses where the unsuspecting student meets it not as a tenet to be discussed and investigated, but a baseline assumption on which all subsequent scholarship and dialogue rests. The average student, if he has not previously made up his

\(^{57}\) Bardaglio, pg. 18.


\(^{59}\) Bardaglio, pg. 19.
mind on sustainability, or does not guard against the assumptions he encounters in class, almost cannot help being formed into an adherent of sustainability.

**The Piedmont Project**

Emory University offers another glimpse at what non-“ghettoized” sustainability education looks like. At the Piedmont Project there (one of the Ponderosa Project spin-offs that Bardaglio found so encouraging), environmental advocate Peggy Barlett took a survey of participating faculty members to find out in what manner they had fit sustainability into their courses. Barlett, the Goodrich C. White Professor of Anthropology at Emory and one of the leaders of the Piedmont Project, had led workshops annually at Emory and at other universities, where she trained professors in ways to teach their students sustainability alongside their primary professional disciplines.

Barlett found that “the vast majority” of Piedmont participants had changed their pedagogy to include experiential learning, new outdoor exercises, or new ways of engaging students. Meanwhile, 44 percent revised their courses by adding new labs, homework, or research projects; 64 percent developed a new unit or module; and 34 percent completely reoriented their course with a new paradigm.60

Exactly what this “new paradigm” represents, Barlett and her colleagues at the Piedmont Project don’t quite define. But other sustainability leaders offer a hint of what it might entail. Dickinson College President Neil B. Weissman explains in “Sustainability & Liberal Education: Partners by Nature,” that sustainability provides an educational metanarrative that “powerfully validates the liberal arts” and that glues together the diverging academic disciplines. That metanarrative cuts down “disciplinary silos” and offers “holistic systems thinking, the ability to make connections, interdisciplinarity, and “lateral rigor”—characteristics that Weissman found especially attractive when he launched Dickinson’s own version of the Ponderosa Project, the “Valley and Ridge Education for Sustainability” group.61

Integrated sustainability education, then, is not merely a tactic to reduce campus water and energy usage, or to help the college earn a greener reputation, or even to train students to shrink their environmental footprints—though it does involve, to varying degrees, all of these. Instead, sustainability becomes the overarching purpose of education itself, a pedagogic goal broad enough to speak to “virtually all academic disciplines” but substantive enough to demand that the disciplines “enter into dialogue.”62 Sustainability offered an underlying foundation, the overarching telos, and the intermediary substance of education all at once.

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60 “About the Piedmont Project,” Emory University. http://piedmont.emory.edu/About.html


62 Weissman, pg. 2.
Weissman was not the first to make this point. Former Cornell President Frank H.T. Rhodes argued a similar case in a 2006 *Chronicle of Higher Education* op-ed titled “Sustainability: The Ultimate Liberal Art.” Rhodes’s piece, published shortly after the initial launch of the Presidents’ Climate Commitment, encouraged colleges and universities to adopt sustainability as a central educational goal because it fit the ancient liberal arts tradition of preparing students “for citizenship, for participation in a free society” and thus provided a “new foundation for the liberal arts and sciences.”

Rhodes described what this liberal arts education built on the foundation of sustainability would look like:

> What might such a foundation entail? Certainly some significant exposure to the appropriate sciences: geology, natural resources, ecology, and climatology. Certainly, too, some understanding of social interaction sociology, economics, and history. And also, surely, some extensive familiarity with the great issues and themes of human inquiry, self-reflection, and moral consideration that have guided human conduct and reflected human creativity — with the arts and the humanities, in other words. And to anchor everything in the present, some review of the practical arts of technical discovery and invention, especially in relation to the broad issues now confronting us.

Minus the climatology and sociology, Rhodes’s list looks much like a photocopy of a traditional liberal arts curriculum. “But, in fact, it would be different,” Rhodes claimed, not in its choice of subject matter but in “the new focus, added coherence, and stark immediacy that it (sustainability) would provide.” Rhodes concluded confidently, “Sustainability, after all, is the ultimate liberal art (and science).”

**Environmental Humanities**

The ideas of sustainability as the “ultimate liberal art” and as an overarching metanarrative for human existence have led to the creation of some new hybrid disciplines that are neither individual sustainability-tinged electives nor narrowly focused sustainability programs, but distinct branches of larger disciplines that then adopt a special focus on matters of sustainability.

One of the most prominent of these disciplines is a new field calling itself the “Environmental Humanities,” a program beginning to pop up at institutions across the country. Universities offer undergraduate and graduate degrees in the field, national and international environmental humanities societies and

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associations have formed, and a rising number of journals investigate relationships between nature and society.

The field hopes to marry the arts and humanities with the environmental sciences. That partly means taking a historical, anthropological look at how humans have collectively treated and theorized about nature—reading how they anthropomorphized or deified nature in literature, examining how animals and plants are depicted in artwork, and understanding the cultural values and norms embodied in poetry, song, and dance. It partly means making fields such as English, art, and rhetoric serve as conduits for disseminating environmentalist messages and scientific findings to a lay audience and for advocating social and legal action on behalf of the physical environment.

It also means exploring the possibilities of what climate change will mean for human civilization’s existence and character. Bowdoin College English professor David A. Collings explores this third theme in his book *Stolen Future, Broken Present: The Human Significance of Climate Change*, published by Open Humanities Press as part of its “Critical Climate Change” series. Collings writes that climate change is poised to imminently endanger civilization, and while all hope is not doomed yet, “it is time for us…to contemplate, for the first time, what it means for us if we fail” to avert global warming.  

Now that science has shown us global warming, and technology has so far failed to solve environmental problems, “we now face questions not simply about the scientific, technological, economic, or political dimensions of this crisis, although they remain crucial, but also about its human significance.”

These three themes show clearly at the Environmental Humanities major at Stony Brook University, one of a dozen or so universities with such programs. (Some of the other institutions include the University

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65 Ibid.
of Vermont, the University of Utah, and the University of Oregon.) The historical perspective approach is evident in “Beyond Eden: Contact Narratives, Origins, and Sin,” in which students research how five hundred year-old Pueblo, African, Spanish, British, and Shinnecock literature shapes contemporary themes about nature, human origins, and sins, or in “Native American Texts and Contexts,” a look at the American Indian oral tradition, poetry, history, and other writings. The rhetorical and political training for advocacy makes an appearance in classes such as “Environmental Writing and the Media,” or “Collective Action and Sustainability.” The concern for climate change’s effects on humans is evident in “Civilizations and Collapse,” which presents case studies in how human groups have in the past reacted to environmental changes, and “The Maya,” an ethnographic course that pays “special attention” to the ways in which environmental and agrarian issues have impacted this diverse group of peoples.

All told, it’s a hodgepodge of science courses mixed with boutique courses that sound, by turns, a little nouveau humanities, a little identity studies, and a little social science lite. Undergraduate Environmental Humanities majors must take courses in cultural anthropology, “Ecoaesthetics in Art,” “Mathematical Thinking,” “Introduction to Sustainability,” and a choice of two from a list of five science courses: physical geography, “Chemistry, Environment and Life,” oceanography, “Organisms to Ecosystems,” and “Introduction to the Natural History of Long Island.” Students also have to take three one-credit “Career and Leadership Skills” courses and a three-credit “Integrative, Collaborative Systems Project.” They also take seven courses from a wide range of approved courses (reaching from “Extreme Events” to “Peoples and Cultures of South America” to “Theory and Design of Human Settlement”).

But the Stony Brook program, along with its counterpart programs at other universities, is motivated by more than a vague inkling for more interdisciplinary study or a hunch that the humanities might be indirectly useful to the cause of environmentalist advocacy. More than any other discipline, the Environmental Humanities portray the pinnacle of sustainability’s influence as an interpretive framework for viewing all of human and natural reality.

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71 Environmental Humanities Major, Stony Brook University, Fall 2014.
George Handley, professor of humanities at Brigham Young University and one of the best-known proponents of the environmental humanities as an academic discipline, explains that "environmental humanities is no mere thematic approach to the study of culture, a sort of tree-hugger’s tour of the great works of civilization,” as if it saw nature as a mere subject matter for writing, singing, dancing, and philosophizing about. He rejects the idea that the discipline might “involve landscape painting but not necessarily the broader field of art, or it might include nature writing and nature poetry but not necessarily novels set in an urban context.”

Instead,

*If we take seriously the challenge posed to human culture by the question of the natural world, we begin to see that there is little or no room to insist that “nature” and “culture” occupy separate and distinct arenas of our experience. And if this is the case, either all of nature is somehow subsumed by human culture and history or all culture and history is subordinate to and reflective of the character of the natural world.*

Hence the Environmental Humanities, in exploring both nature and culture—which, it turns out, are nearly the same thing—offer “a steady and persistent interrogation of the very meanings and definitions of the earth, of human artistic expression, and of humanity itself.”

The idea is to magnify nature from mere subject of thought (e.g. the natural sciences) to the whole of thought itself. The division between what is human (and therefore has complex self-awareness, moral agency, a sense of beauty, and intimations of the transcendent) and what is outside the human in a “state of nature” is to be abolished, according to this view, and replaced with a conception that the “human” is just an eddy in the larger stream of existence.

To put this another way, natural scientists want to study man’s influence on nature, and the more


73 Ibid.
orthodox environmental humanists want to study nature’s influence on mankind. But this new branch of environmental humanism wants to promote the “Anthropocene,” an epoch of history in which man and nature blur to the point of being indistinguishable. That’s because man has so tampered with the environment, interrupting natural cycles and injecting pollution into the atmosphere, that when scientists examine nature, they actually are looking at extensions of our human existence. The role of the environmental humanities is to rejoin the arts and the sciences in order to take off the disciplinary blinders, take in a 360-degree view of the new human/nature reality, and, in a kind of undoing of the Socratic turn, reunite natural science with moral philosophy.

Living Laboratory
With everything from the classroom to the dormitory to the quad to the recycling center infused with opportunities to teach environmentalism, the campus quickly turns into a kind of training ground for sustainability. Weissman, the president of Dickinson College, describes campuses as functioning as “living laboratories’ of sustainability for the application of ideas, skills, and values developed in the classroom.” Students can learn about renewable energy in their science classes and help construct wind turbines on campus, or absorb from their English classes a habitual reverence for diversity that they can then express in their membership in the multicultural student club. Assuming, of course, that campuses already have sustainability policies and equipment that students can practice on, Weissman keenly notes the potential for classroom activities and homework assignments to shape students’ lives:

Classroom discussion of sustainability issues readily yields important implications for what we loosely call student “lifestyle.” And residential practices similarly can be used as vehicles for reflection on, and study of, broader issues such as consumption and policy.

Sustainability requires experiential learning. What better place to practice than on campus?

In this conception, the college campus is not a shelter from exterior distractions where students can focus their time on learning to understand reality and live appropriately in it. Instead, college becomes a miniature of the exterior world, a microcosm of the macrocosm, in which students are trained to operate in the “real world” once they get there. Whether there is still time for a leisurely appreciation of poetry or human history or philosophy is beside the point. The convenience, of course, is that the settings of the microcosm can be controlled, and the students can be taught to adopt a certain conception of “normal” that they then carry with them when they graduate.

The University of Wisconsin-Oshkosh has made this “living laboratory” idea into its unofficial motto. Its

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74 Weissman, pg 3.
75 Ibid
newest sustainability plan calls for the campus to become a testing ground of sustainability practices, so that students can “understand what sustainability is all about and how they can apply it in their own lives and in their own communities,” as Professor Stephanie Spehar, a sustainability advocate, puts it. The campus newspaper reported on the methods by which the university planned to make sustainability part of students’ everyday lives:

The plan calls for campus to become “a living learning laboratory” while infusing sustainability into the curriculum, developing a sustainability leadership program, creating incentives for student and faculty research and leveraging campus assets for the larger community.

The danger that the University of Wisconsin hopes to guard against is that without opportunities to learn about sustainability in class, students won’t realize the environmental efforts taking place around them on campus, and without opportunities to practice on those campus initiatives, they might not ever come to apply the sustainability principle they learn in class.

To avoid this catch-22, the new 2014 Campus Sustainability Plan calls for more “co-curricular programming specifically focused on sustainability,” and recommends incorporating sustainability into new-student orientation and other activities for first-year students, installing kiosks that highlight campus sustainability, and using sustainability efforts in campus advertising and promotional material. It has already held recycling competitions, hired students to promote sustainable lifestyles to their peers, started an internship program at the sustainability office, and incorporated sustainability lessons into the “core concepts” taught in the general education program, the University Studies Program (USP). Beginning in Fall 2013, every student must take at least one course that answers the “Sustainability Signature Question,” How do people understand and create a more sustainable world?, in order to be sure every student gets a taste of sustainability during his time in college.

For these efforts, the University earned a 100 percent rating from the Association for the Advancement of Sustainability in Higher Education on the datum “Campus as a Living Laboratory” for its efforts to teach students about recycling, energy efficiency, diversity and inclusion, public transportation, and other ways to embody the sustainability virtues they were learning in class.

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77 “Co-Curricular and Residence Life,” University of Wisconsin-Oshkosh Sustainability.
78 “Curriculum and Research,” University of Wisconsin-Oshkosh Sustainability.
Enchanted

Students are not the only ones who change as a result of their sustainability educations. The professors change too. At Emory’s Piedmont Project, Barlett soon found that when professors integrated sustainability into their courses, they changed as much, perhaps more, than their students did. Barlett, an anthropologist, uses the idea of “enchantment” to describe the transformation that takes place when, through the influence of sustainability, a person falls in love with nature. She tallies 184 faculty members who have participated in Piedmont Project workshops, in addition to 130 graduate students, for a total of 34 of 43 Emory departments that have at least one sustainability-influenced course. She believes that most, if not all, of these individuals and departments have changed to some degree as a result of their new experience with sustainability.

For a 2008 article in *Cultural Anthropology*, Barlett reread all the email feedback surveys from previous Piedmont workshops and conducted one- to two-hour interviews with the first 37 participants from the Project’s early years. Barlett concluded that a number of participants had experienced “reenchantment” with nature, because they had adopted stronger sustainability-related household and work habits as a result of their newly-discovered love for the earth. ⁸⁰

Barlett recounts some of the ways the professors changed as a result of their new teaching material: “For most faculty, the workshop stimulates curricular innovations and new personal actions, both at the household level and at work.” ⁸¹ More specifically, participants noted that they had changed the way they thought about their lives and their jobs:

> The Piedmont Project workshop has probably been the most meaningful and deeply satisfying experience I have had…to shape my course…as well as reevaluate my role as an educator.

> I realized we ought to work to make this place [the college] a sustainable way of living.

> It really did change the way I think. ⁸²

Seventy-three percent of the Project participants reported changing some action or habit of their daily lives (improving family recycling, controlling water run-off, choosing environmentally-friendly vacations), and 78 percent reported becoming more aware of sustainability and environmental issues at work (turning off computers, walking to work, even using departmental chair influence to encourage other colleagues

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⁸¹ Barlett, pg. 1077.

Barlett attributes these changes to a “reenchantment” with nature sparked by a newly developed community working together towards sustainability:

*Especially because the Piedmont Project did not seek directly to promote action but rather focused on curriculum and pedagogy, what accounts for the power of the shifts? In the participants’ accounts and in the process of change over the past seven years, it is clear that the combination of reason and reenchantment is important. When participants talk about the experience, three things are emphasized: the supportive community that emerged, the new knowledge they enjoyed learning, and the new connections to place.*

That sustainability metanarrative had done its work. The professors had changed the way they thought about some of their deepest values.

**The Back Story**

Higher education has only recently become the leading champion of sustainability. Twenty years ago, environmentalist David Orr worried that higher education might have the opposite effect: the average student, not deeply entrenched on either side of the issue, might become an environment trampler rather than a sustainability trumpeter.

“Education is not widely regarded as a problem, although the lack of it is,” Orr wrote in 1994. He was the Paul Sears Distinguished Professor of Environmental Studies and Politics at Oberlin College and a well-established figure among the academic environmental movement. His book, *Earth in Mind: Education, Environment, and the Human Prospect*, made the case for environmental education as an antidote to mainstream academic culture. “The conventional wisdom holds that all education is good, and the more of it one has, the better…. The truth is that without significant precautions, education can equip people merely to be more effective vandals of the Earth.”

Orr was writing in an intermediate lull after the heyday of the campus environmental movement of the 1970s and during the embryonic stages of the college campus sustainability movement. John Kerry and

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83 Barlett, pg. 1082.
84 Barlett, pg. 1083.
Teresa Heinz had met two years before at the 1992 UN Rio Summit on sustainability. Second Nature, their nonprofit founded to nurture the inchoate sustainability movement in American higher education, had just begun operation, and Chase and Rowland were just planting the seeds of the Ponderosa Project at Northern Arizona University. At the time, Orr saw academia as taking a lethargic, perhaps even wary, approach to sustainability. He wrote to expose what he perceived as a disordered focus on individual self-actualization at the expense of environmental action.

Fast forward two decades to 2014, when according to AASHE’s calculations, American higher education institutions offered nearly 1,500 sustainability degree programs, hundreds more courses as electives, and thousands of co-curricular sustainable living programs. In a mere twenty years, sustainability has gone from a fringe concern to a central educational purpose.

What happened in between was one part coincidence and two parts strategy. The coincidence came by way of increasing public concern over global warming and burgeoning Western consumption. That concern was compounded by a series of extreme weather events. The 2004 Indian Ocean earthquake and tsunami, hurricanes Katrina in 2005 and Sandy in 2012, the BP oil spill in 2010, the meltdown of Japan’s Fukushima Daiichi nuclear power plant in 2011 after the Tohoku earthquake and tsunami all turned the public mind towards the prevention of and reasons for environmental catastrophes. These harrowing experiences prepared the ground for the seeds of sustainability’s solutions.

A media campaign, highlighted by a number of high-profile movies, interpreted these events through the lens of global warming and the solution of sustainability-minded action. The 2004 film *The Day After Tomorrow*, though fictitious, encapsulated American fears that global warming would melt the ice sheets, interrupting water flows, and leading to catastrophic global cooling. Al Gore’s documentary *An Inconvenient Truth* (2006) rocked public awareness with charts, figures, and statistics meant to confirm the possibility of some of the doomsday scenarios that *The Day After Tomorrow* depicted. One year later in 2007, just as the Intergovernmental Panel on Climate Change was releasing its doleful Fourth Assessment Report, Leonardo DiCaprio tried his own hand at another documentary, *The 11th Hour*, that galvanized public interest in curbing global warming by downsizing hundreds of thousands of individual environmental footprints. “Global warming is not only the number one environmental challenge we face today, but one of the most important issues facing all of humanity,” DiCaprio’s voice warned the viewer. “We all have to do our part to raise awareness about global warming and the problems we as a people face in promoting a sustainable environmental future for our planet.”
The combined effect was to capture the attentions and fears of the American populace and to cultivate increasing interest in finding a solution in the doctrines of sustainability. Meanwhile, two simultaneous sustainability strategies successfully capitalized on increasing public environmental interest.

The first strategy involved the United Nations, which announced the years 2005-2014 as its Decade of Education for Sustainable Development. This plan, largely carried out by UNESCO, sought to make lessons about global warming, disaster risk, poverty, diversity, gender equality, health, peace, water, and biodiversity central to K-12 education in countries around the world. 86

The second was domestic, and it focused on higher education. Second Nature led the effort to develop a national strategy to get sustainability inside college syllabi, not just the college president’s administrative agenda. This “Education for Sustainability” agenda grew out of a latent dissatisfaction with the way higher education had previously approached sustainability. In 2003, Second Nature co-founder and then-president Anthony Cortese expressed exasperation at higher education’s unwillingness to engage with sustainability as an educational endeavor, despite a decade of work by Second Nature to convince them to do so. He wrote a short manifesto, “The Critical Role of Higher Education in Creating a Sustainable Future,” in the journal Planning for Higher Education, in which he echoed many of Orr’s fears from nine years earlier:

> Despite the efforts of many individuals and groups within the formal educational system, education for a just and sustainable world is not a high priority. Indeed, it is the people coming out of the world’s best colleges and universities that are leading us down the current unhealthy inequitable, and unsustainable path. Only a few architecture schools have made sustainable design a foundation of education and practice. 87

Three years later, Second Nature launched the American College and University Presidents’ Climate Commitment with great success, as within a few years hundreds of institutions pledged to eliminate their greenhouse gases. But apart from the brief note about the benefits to colleges who are “integrating sustainability into their curriculum,” the pledge did not actually commit signatory institutions to making any changes in their curricula.

Because of higher education’s recalcitrance to make sustainability a part of their educational programs, students went on to graduation and to careers having never given much thought to their duties to the environment—


despite massive, multi-million dollar efforts on the part of their alma maters to cut out greenhouse gas emissions and to reduce water, paper, and energy usage. While hundreds of colleges and universities were making great strides towards becoming models of sustainability devotees, their tactics were akin to those any small corporation might take. The efforts focused on measurable administrative and operational goals, rather than student learning. They had achieved lower levels of energy and resource usage and purchased new emissions-reducing gadgets, but besides setting themselves up as examples, and advertising their achievements to prospective students, the institutions hadn’t necessarily engaged their students in the process. The problem, as Orr saw it, was one of “green operations and brown curricula.”

Cortese called for an approach to sustainability in higher education that involved professors and students as well as presidents and executive staff. Only a college, with its “unique academic freedom and the critical mass and diversity of skills to develop new ideas, to comment on society and its challenges, and to engage in bold experimentation in sustainable living,” could intervene fast enough to shift the mindset of a generation. Cortese cites Orr: “The kind of education we need begins with the recognition that the crisis of global ecology is first and foremost a crisis of values, ideas, perspectives, and knowledge, which makes it a crisis of education, not one in education.”

**Prepositions and Sustainability**

Cortese set out a strategy that involved changing the content, context, and process of learning so that higher education began teaching “interdisciplinary systems thinking, dynamics, and analysis” in a context where environmental sustainability became “a central part of teaching of all the disciplines, rather than isolated as a special course or module in programs for specialists.” This would be part of a process that emphasized “active, experiential, inquiry-based learning and real-world problem solving.” Finally, Cortese held that none of these partial curricular changes would work unless higher education itself put on the practices of sustainability, and downsized its environmental footprint. “The university is a microcosm of the larger community,” Cortese explained. “Therefore, the manner in which it carries out its daily activities is an important demonstration of ways to achieve environmentally responsible living and to reinforce desired values and behaviors in the whole community.”

Cortese’s vision, despite the early setbacks with the Presidents’ Climate Commitment, focusing on operational rather than educational goals, did eventually catch on. Bardaglio, Weissman, Barlett, Chase, Rowland, and the other early sustainability pioneers have brought the curriculum into the sustainability

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88 Cited in Weissman, pg. 1.
89 Cortese, pg. 17.
91 Cortese, pg. 19.
line. Weissman has actually recommended a new version of the Presidents’ Climate Commitment, one more focused on academics and student learning.92

These efforts were aided by the work of Stephen Sterling, the British professor of sustainability who categorized three levels of potential sustainability education, each one growing progressively more radical and closer to the ideal he hoped to achieve. Bardaglio cited Sterling’s work as a helpful rubric for gauging progress in his “Moment of Grace” manifesto. First order sustainability education he called “education about sustainability,” or the mere transmission of knowledge. Education about sustainability included science classes about sustainable species growth and resource usage, or seminars on the ways that pollution particles affect rain cycles. This, Bardaglio noted, “is easily assimilated within the status quo,” as it requires merely adding more courses and programs to the academic roster, without tampering with any of the other courses and programs.93 This first order of sustainability education has been largely accomplished.

Second order learning, or “education for sustainability,” emphasized “learning for change,” or educational tactics that got students actively practicing the things they were learning. Education for sustainability became the theme of a national convention hosted by Second Nature and the Campaign for Environmental Literacy in fall 2010. Twenty-three national sustainability leaders met in Washington, D.C. to lay out an Education for Sustainability Blueprint.94 One subcommittee was assigned to the topics curriculum and research to figure out how to make higher education more interested in teaching students the habits and practices of sustainable living. The Blueprint commitment aimed to

1. Develop partnerships to develop and distribute curricular units.

2. Establish faculty development efforts; network of faculty leaders (e.g. through fellowships).

3. Evaluate and support the role of the president in leading this change, building on conversations that are already underway through the ACUPCC.

4. Develop connections with corporate America to show need for fundamental educational reform.95

Education for sustainability involved changing behaviors and operations to live and work in a sustainable

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92 Weissman, pg. 6.
93 Bardaglio, pg. 17.
94 Education for Sustainability Blueprint, pg. 3.
95 Ibid, pg. 7.
manner—the kinds of things that many universities, in signing the Presidents’ Climate Commitment, have done. Most universities are well along the path towards this second order of sustainability education. The language of “living laboratories” and many of the tactics of psychological “nudging” fall into this category.

Third order learning focused on “education as sustainability.” In this final phase, sustainability suffuses the entire pedagogical practice of the institution, so that sustainability operates as an assumption in every course, extracurricular activity, administrative policy, and lifestyle decision. It becomes a matter of practice, rather than a matter of study. It also embodies a type of pedagogy, so that, as Weissman explained, the manner of instruction becomes more active on the part of the student, more focused on group learning and research as ways to “create” knowledge, and more focused on synthesis and integration of disciplines rather than drawing distinctions among types of knowledge.

Here is where sustainability education battles are now waged. Education about and for sustainability are largely the norm on college campuses. Education as itself an exercise in sustainability, one whose pedagogy and inherent assumptions embody the principles of sustainability, is an idea still being sorted out. It has gained substantial ground, in the form of the Ponderosa and Piedmont projects and their progeny, and in places such as the University of Wisconsin-Oshkosh, where the whole campus aspires to embody the practices of sustainability. UW-Oshkosh, in its Campus Sustainability Plan that emphasized “living laboratory”-like initiatives, explains the motive behind sustainability as a pedagogic practice:

*The clear links between sustainability and real-world problems encourages high-impact pedagogical practices such as problem-based learning, community and service learning, applied projects, and research. This in turn encourages us to transform our thinking about learning at our institutions.*

The lofty interdisciplinary goals of the Environmental Humanities carry the ideals of “education as sustainability” further still.

Harnessing higher education into the service of sustainability seriously undermines its purpose. It treats other disciplines as mere material for sustainability to interpret or vehicles by which sustainability can be taught. It forces habits and disciplines based on reflection, dialogue, and careful consideration into the

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mold of urgent political and social advocacy. It divorces the classroom from the goals of understanding and comprehending reality and yokes them to activism and ideological conformity. It cloaks the dogmas of environmentalism as necessary, foundational premises of higher education, setting them up as pillars that are above rational debate. And in refocusing the college curriculum on a popular politically-correct fad, it deprives students of a connection to a greater tradition of thought and culture. Eventually, though, sustainability will run out of liberal arts pillars to gnaw on and undermine. That is a habit, they will find, that cannot be sustained.