

The Nature of College:
College Culture, Consumer Culture and the
Environment

James J. Farrell

own on trivia night, but he also learns how to look attentive in class even when he's not listening. He learns quickly that a "major" is a major part of his image, which is why so many incoming students are pre-med or pre-law. If they aren't careful they might get stereotyped by less desirable majors, like the geeks in math and science, the poets in English, or the dreamers in the Art department. By second semester, Joe knows which professors give an "easy A," and he knows never to take an 8:00 a.m. class again. A master at multi-tasking, he can procrastinate, text friends, check Facebook, drink coffee, listen to music, and clean his room—all at once.

Joe's sister, Jo College, studies academic stuff, but she also learns the social science of getting along with a roommate she just can't stand, and the art of making or breaking friendships expeditiously. She's concerned about her appearance and what to wear, and what her peers think. Like their friends, Joe and Jo both procrastinate with Facebook and e-mail, TV and video games, music and their iPod playlists. They learn to love sleep, but they can also mainline caffeine, pull an all-nighter, nap in noise, *and* brag about who got the least rest.

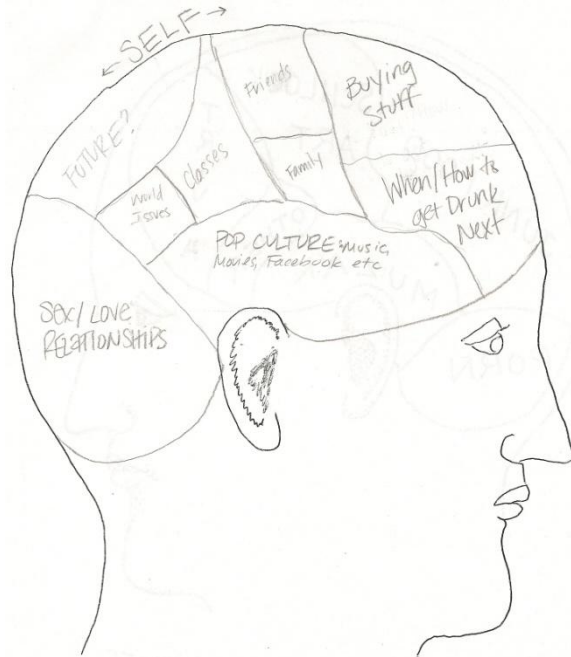
At college, students learn to live for the breaks, and to wait for the weekend. They learn which fraternities water their beer, and which ones throw the wildest parties. They learn to "party hearty," mastering the art of drinking beer from a bong or a Frisbee or a boot. Many learn how to drink without getting caught, and most learn more about party games than political parties. Everybody learns that there's no such thing as an effective hangover remedy. At parties and elsewhere, students learn how to attract the opposite sex,¹ and how to present themselves physically and socially for maximum magnetism. Once they draw someone in, students learn other arts and crafts: like the fine art of hooking up or the subtle craft of condom use. They find the best places for privacy, and discover the delicate politics of "sexile."

Joe and Jo College master the academic cycle of learn-and-forget, cramming a lot for the tests and forgetting a great percentage of it immediately afterward, because it's the grade that's important, not what we actually *learn*. At the same time, they refine their talent for bullshit: perfecting the discussion of books they've never read, cranking out 500 words about anything or nothing, writing a response paper ten minutes before class, and pounding out a ten-page expository essay (with footnotes) in a day. "Good students" like Joe College learn what the professor wants, which buzzwords she likes, and how to give her both in bulk. Most students know how to get better grades than they deserve, and some even survive all four years without a deep thought.

Some students do learn more substantial stuff in academia. These students learn to love ideas, and the art of a crafted sentence. They learn to work harder than they ever imagined, and to play harder too. Some students learn several of life's important questions, and one or two of the answers. They learn a little more about the self beneath the surface, and what they're good at and good for. They learn a lot from failure, and they know that wisdom is more important than knowledge. But in some circles, sadly, such students also learn that enthusiasm for learning or a passion for politics will make them a deviant. It's not always cool to love school.

Most students take a foreign language, but most forget it. Slanguage, however, is taken more seriously. Students won't soon forget what it means to hang ass or frontload, or to take the walk of shame or the stride of pride. They learn how to call out a tool, troll, nerd, fraggot, slush, or sorostitute, and they know synonyms for liquid courage, beer goggles, and money trees. A lot of college slang involves natural endowments (breasts, buns, beauty, buffness), natural functions (intoxication, vomiting, excretion and sex), and the call of nature (excretion and sex again), but almost none of it enhances students' love or understanding of the natural world.

¹ You will think that I've misspelled opposite sex, but I didn't. I'm trying to find a term that works for people of all sexual preferences, and "opposite" means "fitting, suitable, appropriate."



In short, students learn (mostly from other students—certainly not professors) their college culture, passing the patterns and practices of everyday life from one graduating class to the next. As Joe and Jo College find a place in their campus culture, they also define their place in the world, both socially and ecologically. As David Orr says, “All education is environmental education.” All of our habits have an effect on earth’s habitats.

College is a place where students could think twice about environmental beliefs and behavior, but most students don’t. Even though people are transforming the good earth into a different planet, students don’t learn very much about global climate change, or their personal part in it. Global warming is just a euphemism for what Hunter Lovins calls—more accurately—“global weirding.” Warming sounds like something familiar, and, in a Minnesota winter, it sounds good. But global weirding is radically different from anything human beings have ever experienced. Earth 2.0 is warming *and* melting, wetter *and* drier, stormier, increasingly unstable, and less hospitable to many of the species that have evolved over eons. Earth 2.0 is also responding in ways that reinforce these problematic tendencies. As ice melts, more heat is absorbed into oceans. As tundra melts, more methane leaks into the atmosphere, accelerating the greenhouse effect. At current rates of change, New York in the year 2100 will have as many 100-degree days as Miami does now. And coastal colleges and universities may be underwater—and not just metaphorically. Global weirding also complicates solutions because we’re not sure which planet we now inhabit, says Bill McKibben. “Just at the moment when we need everything to be working as smoothly as possible, we find ourselves inhabiting a new planet, one for which we can make no conceivable estimates of carrying capacity.” Each of us, he notes, does our part in global weirding: “If the average North American life expectancy holds at seventy-eight years, each person can expect to produce 1,630 tons of carbon dioxide over his or her lifetime.”

Students learn a lot in college, but most students aren’t experiencing what they need to live responsibly in a restorative society. Colleges now need to supply and apply the knowledge and practices we need for a sustainable future, so that students see, in word and deed, how a sustainable society looks might work. A college that wants to remain relevant to its students will teach them (and teach them by example) how to be leaders in the ecological transition of the 21st century. If it works right, a college education will teach students to develop what David Orr calls “designing minds,” minds that are prepared to design a good society in harmony with nature. Orr suggests that higher education should be designed “1. to equip young people with a basic understanding of systems and to develop habits of mind that seek out ‘patterns that connect’ human and natural systems; 2. to teach young people the analytical skills necessary for thinking accurately about cause and effect; 3. to give students the practical competence necessary to solve local problems; and 4. to teach young people the habit of rolling up their sleeves and getting down to work.” Institutions of higher education have always prepared students to succeed in the so-called “real world.” Our colleges and universities now need to teach students how to live responsibly on the planet as well.

Today's colleges aren't yet ready for this challenge, but students can challenge their colleges to live up to the promise of mission statements that claim to prepare people for the future. In the 1960s, Paul Goodman challenged students to "Think about the kind of world you want to live and work in. What do you need to know to help build that world? Demand that your teachers teach you that." Much of the time, sadly, we don't follow this advice. Too often, we prepare ourselves to live in the world as it is, instead of the world we really want to live in. Too often, we take courses to complete requirements instead of requiring our courses to help us build a better world. And we hardly ever *demand* enough from our professors or our education. That's what this book is for.

Introduction: A Reader's Guide to the Nature of College

I went to college because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived.
Henry David Thoreau (amended)

Think about the kind of world you want to live and work in. What do you need to know to help build that world? Demand that your teachers teach you that.
Paul Goodman

The very least you can do in your life is to figure out what you hope for. And the most you can do is live inside that hope.
Barbara Kingsolver, *Animal Dreams*

There are all sorts of books advising students how to read, but not a lot on how to engage an author in a constructive dialogue. Colleges have courses in creative writing, but not in creative reading, which is the art of reading in conversation. At its best, a book is one voice in an ongoing conversation, contributing corrections and corroborations, new ideas and insights, and waiting for a response. So books work best when the writer introduces readers to that conversation, offering clues to the terms of engagement. The questions and conceptual frames for this book will make reading easier for you, challenge your conventional ways of thinking about our world, and help you to establish your voice in the conversation. So here they are:

The Questions

What are the key components of American college culture? Why do we act the way we do?
What do we really value and why?
Why do we act in ways that contradict our values?
Why do we consume so much?
How much of our lives is intentional, and how much merely habitual?
Why is it so hard to talk about things that really matter to us?
What are the roots of hope and change?

The Frameworks

1) The Culture of Nature

Because this book plays at the intersection of American Studies and Environmental Studies, a basic assumption is that we always experience nature through cultural frames; that the American eye is always connected to “the American I,” and that Americans grow up learning ways of seeing, including ways of seeing nature. One of those ways, for example, is Romantic: we see nature through the eyes of nineteenth century landscape painters who saw nature and wilderness both as a counterpoint to civilization, and as an escape from it. This explains how car manufacturers can sell us environmentally destructive SUVs by advertising them in cultural landscapes that look “natural” to us. As a result of Romantic assumptions that conflate nature and wilderness, most of us don’t think that we’re interacting with nature most of the time. But we are, as a second way of seeing suggests. Our Romanticism coexists with our resourcism, which interprets the natural world mainly as natural resources, useful to supply human desires, but not as a living, breathing community of organisms. The concept of “the culture of nature” doesn’t mean that nature is only cultural; nature is clearly a dynamic force of its own. And it doesn’t mean that people aren’t nature. For all our cleverness and intelligence, we’re bi-focal, bi-pedal, big-brained mammals. There’s not yet a commercial chain to advertise it, but, in fact, “Nature `R` Us.” And we *always* come to nature through culture.ⁱ

In this book about the intersections of nature and nature’s human nature, we’ll think carefully about the American culture of nature as it shows up on American college campuses. College culture is a subset of American youth culture, a twentieth-century development that increasingly gives young people the freedom to make sense of the world by themselves. Profs control the curriculum, but students teach other in the *hidden* curriculum of college—

beliefs and behavior shaped without much conscientious consideration—and this education is, environmentally speaking, far more important than what we learn in classes. Students may *take* a credit or two in Environmental Studies, but they *live* their environmental values every minute of every day, and exemplify them to their friends. When they graduate, therefore, those practiced values, good and bad, tend to be the operative values of their American lives.

It's one of the functions of culture to teach us what's "natural"—in two ways. The first type of "natural" is what's normal, what's expected, what's routine. We think "it's only natural" to live in buildings with bathrooms, or to eat three meals a day, or to party on the weekends. In this sense, the word "natural" generally means "cultural," and the word "natural" is employed because it seems less arbitrary, and therefore more compelling, than the word "cultural." If we say "It's only natural to eat meat," it's a lot more powerful than saying, "It's only cultural to eat meat." In this way, culture naturalizes itself, trying to place some actions beyond the bounds of conscious and conscientious reflection.

One way we learn what's natural—in this cultural sense—is common sense, which is basically what we think when we're not really thinking about things. It's everyday knowledge, the stuff that "everybody knows." So *The Nature of College* is about the social construction of common sense. Most of the time, most of us follow common sense, the accumulated wisdom of the tribe. But these days, sadly, a lot of common sense isn't wisdom because environmental impacts have dramatically changed the cost/benefit calculations (and the ethical implications) of everyday activity. At college, cars and computers are common sense. Air conditioning in the summer is as commonsensical as heat in the winter. TV and video games are common-sense entertainments. It's common sense to support systems—social, economic, political—that don't support ecosystems. It's common sense to look out for the self, because common sense is seldom civic sense. Sadly, therefore, common sense may not be good enough for the ecological revolution of the 21st century. In these pages, therefore, we'll contrast the common sense of college culture with the uncommon sense that ecological perspectives offer. And thankfully, colleges can teach students to evaluate the quality of common sense, and to find the uncommon sense of their culture too.

Some of our common sense shows up in our ways of seeing, in the frames we use to interpret the world. In America, for example, our primary relationship to nature is resourceism, the assumption that nature is a natural resource for our consumption. This is connected to economism, the assumption that the value of things is primarily economic. When we see nature primarily as natural resource, however, we miss other essential dimensions of it. When we look at nature through an econoscope, it becomes an econoscape—a landscape designed mainly to make money, or to make the making of money easier (as with roads and parking lots). An econoscape is a radical simplification of nature, a version of buy-o-diversity that cheapens nature. It's also likely a landscape that depletes its own natural capital, selling tomorrow's fertility for today's consumption. The green of photosynthesis is converted to the green of money.ⁱⁱ

Some of our common sense gets encapsulated in the "cultural scripts" of everyday life, the expected actions and interactions that make life easy and more-or-less predictable. As we grow up, we learn the rules of everyday social exchanges so well that we can perform them almost automatically. We know that when someone says, "Hi, how are you?" that the correct answer isn't the truth, but simply "Not too bad. You?" At any store in any mall in America, we know the cultural scripts for purchasing products. Even in love, many of our intimacies are cultural scripts concocted in times past. Holding hands and kissing may seem natural to lovers, but they're more social than biological. So a ritual like Valentine's Day, for example, combines commercial scripts and cultural scripts to make sure that we get the rites of love just right. When they work well, cultural scripts help us manage routine social interactions so that we can focus our attention on things that are more important. But sometimes (like *now*) our common-sense scripts obscure what's important, and then it's time for us to write new scripts.

The second way that culture teaches us what's "natural" is by defining what's nature and what's not. This is never clear or precise or consistent. Science and religion, for example, define "nature" differently, but generally speaking, in college culture, the natural world is the non-human world. We speak of people *and* nature as if they existed in separate spheres, and we plan on "getting back to nature" over the summer, forgetting that we *are* nature *in* nature, always. This confusion about the nature of human nature has real consequences, because our common cultural scripts don't remind us of our natural lives and impacts. Except in science or Environmental Studies classes, college students don't customarily think of nature or the environment. And that fact—that omission—is educationally

important because, as one of my mentors wisely says, we are taught very well by what we are not taught. In this book, therefore, we'll pay attention to the *nature* of our lives, and the nature that results from our lives.

2) Consumption, Materials and Materialism

To parents and professors, students are people engaged in academic learning. To America's commercial interests however, students are materialistic consumers and a major market niche. In fact, whole books have been written on this subject. David A. Morrison's *Marketing to the Campus Crowd*, for example, notes that college students offer corporate America opportunities for "branding, selling, subsegmenting, and new product strategies," and that, conveniently, college students can be less price sensitive than other consumers, especially when subsidized by the "Bank of Mom and Dad." College students are a profitable market, says Morrison, because of:

- *Sheer volume of discretionary spending*
- *Rapid turnover (e.g., constant stream of new consumers)*
- *Propensity toward early adoption/innovation*
- *Strong influence on other key consumer segments as well as the mainstream marketplace as a whole*
- *High concentration*
- *Brand loyalties largely in flux*
- *High reception to the right advertising, sampling, and promotions (in contrast to the average consumer)*
- *Avid experimentation*

"The basic mantra behind college marketing," Morrison claims, "is to generate short-term financial gains to the bottom line and simultaneously establish long-term brand loyalties." And as marketing consultant Peter Zollo says of younger students, "school delivers more teens per square foot than anyplace else!"ⁱⁱⁱ

If we only consumed discrete objects disconnected from the rest of the world, this might not be a problem, but when we buy stuff, we also buy into a *system* of stuff called materialism. Materialism is the way that Americans manage their resource flows, both intentionally and unintentionally. When Jo College buys a computer, for example, she's thinking about its advantages for her connectedness, including (sometimes) her connection to academic resources. But while she's thinking about internet access and word processing, what she's actually doing is *world processing*, setting off a chain of demand and supply that has far-reaching environmental consequences. In our common-sense materialist mindset, she can ignore the environmental impacts of our purchases, because it's the nature of American consuming to let her focus on her stuff and her desires, and not on the material consequences of her life. But materialism isn't just material; it's ideological as well. Jo's computer reflects and affects her worldview, with webpages and pop-up ads reinforcing cultural scripts that tell us that consumption is natural, the normal activity of good Americans. So *The Nature of College* explores college life as a material witness to materialism, locating college consumer culture not just on campus but in the wider communities and the biosphere.^{iv}

3) The Moral Ecology of Everyday Life

In addition to offering information and interpretations of college life, *The Nature of College* should help readers to think carefully about the complexities and *complicities* of our lives by examining the moral ecology of everyday life. In *Habits of the Heart*, Robert Bellah defines moral ecology as "the web of moral understandings and commitments that tie people together in community." In this book, moral ecology also includes the web of social values that tie people and nature together. In these pages, therefore, we'll examine both the *expressed* and *operative* values of college culture (and American culture). Expressed values are the ones we *say*; operative values are the ones we *do*. As it happens, the operative values of our lives are not always the same as our expressed values. We say we believe in conservation and efficiency, freedom and fairness, equity and justice. But what we do is who we are, and our operative values—the ones we actually put into practice—often say something else. When we look honestly at our lives, we basically *buy into* different values. In countless polls, we express our desire for a clean, safe world, but our actions don't show it. In fact, our operative values include cheapness and novelty, fun and fashion, comfort and convenience, "cool" and conformity. When push comes to shove, we'd often rather look good than be good. We'd rather have "low, low prices" than high environmental standards. Our actual environmental ethic, sad to say, isn't always ethical. All our values are environmental values, but only some of them are good for the environment. And "the good life" of American culture isn't nearly as good as it needs to be, for people or the planet.^v

So this book is about the operative moral ecology of everyday life. It uncovers our implicit morality, the ethics built into the basic beliefs and behavior of “the good life.” It explores the habits of our hearts, but also the more mundane habits of our days. Studies show that about 45 percent of daily behavior is habitual, which means that we don’t really choose almost half of our daily choices. It’s also true that many of our habits are things we *don’t* do. Thoughtlessness is a habit, as are silence and apathy and inactivity. If our daily habits match our values, that’s ideal. But if our habits don’t match anymore, then it might be time for a change.^{vi}

This is a book of ordinary ethics. It focuses on the stuff that everybody does every day, exploring the significance of the seemingly insignificant. It investigates the culture of Joe and Jo College by probing the underlying ideas and assumptions of their lives, trying to figure out why they act the way they do, and why it matters to the global community. In the process, it creates a space for reflection and conversation about some big questions that sometimes slip under the radar. College is supposed to be a place where students can ponder a philosophy of life (and not just human life), but often they get too busy to ponder at all. Students do lots of thinking, but not a lot about the meaning of it all. If this book works, readers will get to compare their expressed values and their operative values, and decide if they’re leading the good life as *they* define it. In time, with practice at college and elsewhere, we might all learn to live our lives in line with our values, both individual and institutional.

4) Institutionalizing Environmentalism

The Nature of College is about our own experiences but it is also about the systems that shape those experiences. Americans focus so much on individuals and their choices that we sometimes forget the ways that systems structure choices for us. Even though we live in a world of systems—social, economic, political, intellectual *and* natural—we often only respond to their symptoms. The price of gas, for example, is a symptom of overlapping economic, political, international, military, intellectual, and natural systems, but we usually only pay attention to the price at the pump. In a system that encourages externalities—the natural and social costs of production and distribution that aren’t factored into the cost—that price obscures deep flaws in the system that creates it, flaws we ignore at our peril.^{vii}

If systems structure our choices, then institutions structure our systems and determine the choices we get in our lives. Institutions are communities defined by hope and habit, by stories and symbols, by patterns and privileges, by rules and regulations. A community—or an institution—is a way of saying “we, the people” in different settings. The family is one example of “we, the people.” A church is another example., but so are colleges, corporations, media companies and government bureaucracies. When it comes to environmentalism, college students and other Americans think that individual people choose to live environmentally or not. But we forget that institutions structure all the choices. When values are institutionalized, they come out as habits and routines and peer pressure and common sense, the standard operating procedures of everyday life. To most Americans, institutions are almost invisible, hidden behind the ontological individualism of American life.

In these pages, we’ll explore the powerful institutions that influence the habits of our hearts, and the ways in which those institutions allow us (or not) to responsibly inhabit a fragile planet. We’ll pay attention to the institutional force of our current environmental values, and consider the institutionalization of new values for the ecological revolution of the twenty-first century. In the 1930s, Catholic Worker Peter Maurin contended that institutions should be designed to make it easier for people to be good. These days, many American institutions make it difficult to be good for the earth. But, as American history has shown, institutions can be changed, and the people who propose and realize those changes are among our greatest heroes.^{viii}

In this book then, we’ll try to consider how human systems and institutions change natural systems. We’ll look at the inputs and outputs of natural and cultural systems, and at feedback loops in nature and culture. We’ll be thinking about colleges and universities, of course, but we’ll also explore the institutions that intersect our institutions of higher education—families, churches, corporations, government, and media companies. And we’ll look at the natural and cultural resources that can help us change the systems we live in. In the process, we’ll be studying the science (and art) of ecological design, the alignment of human systems and institutions with the cycles of nature. And we’ll be thinking about things—like a system of full-cost accounting that would begin to make it possible for us to be responsible consumers on a fragile planet—that make it easier for people to be good.

5) The Nature of Hope

College culture is not always a hopeful place. Fear of failing animates a lot of student activity, so many of us operate by avoiding failure instead of living inside our hope. Fear of failing academically keeps us working on reading and research and classwork, while fear of failing socially keeps us going along to get along, for fear that other students will make fun of us for our ideas and ideals, our hopes and dreams. The unfortunate result is what anthropologist Michael Moffatt calls “undergraduate cynical,” a way of talking tough that hides the sensitivity that could make a person vulnerable—or compassionate. Such a social construction of conversation reduces the unique space a college provides for “going deep,” and for thinking unconventionally about the unconventional issues of our day. Instead of sharing dreams and ideals freely, students generally share their deepest hopes with very few others. Superficiality and cynicism drive idealism out of the public sphere and a great opportunity is lost forever.^{ix}

If we seriously contemplate the nature of hope, however, we can replace our coping mechanisms with hoping mechanisms. *The Nature of College* tells the truth, and tells it straight, but this book is still about hope, resisting both pessimism and facile optimism. Histories of hope offer a usable past for environmental activists, and stories of new hope emerging in America (often on campuses) remind us that change is possible, and that our beliefs and behavior do matter. Because the everyday activities we define as “no big deal” add up to big environmental impacts, we can look forward to the ecological revolutions of the twenty-first century, knowing that with the right conceptual tools, we can make our green hopes into reality.^x

6) Words and Worlds

Words structure our worlds, so this is a book about words and the worlds we create with them. When we talk about a “good job” instead of “good work,” for example, it changes the nature of the conversation—and sometimes it changes nature itself. Words like “profit” and “progress” and “success” and “cheap” and “fun” and “cool”—words we don’t even think of as environmental—have a lot to do with the way we treat the natural world. So in the words of this book, we’ll pay attention to how we talk about our lives, We’ll also think about rhetoric and persuasion, about how to tell the truth so that people listen. For that reason, the language in this book is as playful as the ideas. There are even a few new words because, as Michael Pollan says, “names have a way of making visible things we don’t easily see.”^{xi}

The Nature of College is a collection of words in the form of an exploratory essay. An essay is a standard literary form, a useful way of making sense and making meaning. In college, the most common kind of essay is the expository essay, a persuasive argument supported by reason and evidence. *The Nature of College* has many features of the expository essay—ideas, evidence, facts, footnotes, etc.—but it’s ultimately exploratory. The expository essay tries to *prove* all of its contentions, while the exploratory essay prefers to *probe* connections, persuading readers not just by reason but by narrative arcs and imaginative leaps. In these pages, therefore, we’ll be probing connections between personal life, cultural patterns, and the natural world on college campuses. As an exploratory essay, this book will succeed not if it’s the last word on the nature of college, but if these words engage readers in a deeper conversation about the meanings of college, and the educational and institutional possibilities of a culture of permanence.

More importantly, words can *change* worlds. In *Teaching as a Subversive Activity*, Neil Postman and Charles Weingartner suggest that “We act on the basis of what we see. If we see things one way, we act accordingly. If we see them in another, we act differently. The ability to learn turns out to be a function of the extent to which one is capable of perception change. If a student goes through four years of school and comes out ‘seeing’ things in the way he did when he started, he will act the same. Which means he learned nothing. If he does not act the same, it means he changed his way of talking. It’s as complicated as that.” With any luck, the words in this book will help us to change our ways of seeing, our ways of talking, and our ways of acting.^{xii}

A Final Note

“We”

For several reasons, I’ve chosen not to write *The Nature of College* not about “them”—a group of alien beings called college students—but about “us,” learners struggling to learn how the world works so that we can work to make the world better. First, even though I’m an aging college professor, I still consider myself a college student, learning from professors I know, from texts I assign, and (most of all) from students in my classes. Second, I believe in empathy as a way of knowing, and in this book I’ve tried to imagine, from the inside out, what it feels like to be a college student in America today. Third, I want to invite students to take this text *personally*, to think deeply

and carefully about their assumptions and intentions, their institutions and cultural patterns. And finally, many Americans (myself included) share many of the ideas and ideals of today's college students, and many of the environmental impacts as well. As a reader, of course, you'll need to decide for yourself if you're a part of the "we" I'm describing.

Waking Up to Nature

Time clocks rob the world of wild possibility. That's what they're for.
Stephanie Mills, *Epicurean Simplicity*

To see what is in front of one's nose needs a constant struggle.
George Orwell

The obscure we see eventually. The completely obvious, it seems, takes longer.
Edward R. Murrow

When we try to pick out anything by itself, we find it hitched to everything else in the universe.
John Muir

Only that day dawns to which we are awake.
Henry David Thoreau, *Walden*

* * *

Although some of us wait until afternoon, most college students across America wake in the morning to the maddening sound of an alarm clock. As the contraption bleeps or buzzes, Joe College reaches out of his slumber, hits the snooze button, rolls over, and goes back to sleep. This sequence replays repeatedly until at last he throws back the blankets and gets out of bed. He's late—again—so he'll have to hurry if he wants breakfast before class.

Stumbling toward the bathroom, Joe begins a morning routine so well choreographed he should get a credit in dance for its flawless execution: he steps up to the urinal, relieves himself, flushes, shuffles to the sink, pumps the soap, washes his hands, dries them on a paper towel, aims a fade-away shot toward the wastebasket, and reaches for his toiletries. Groggied out by his "morning breath," he grabs toothbrush and toothpaste, turns on the water, wets the brush, spreads paste on the bristles, and begins to brush his teeth. In the mirror, his familiar face seems to be sporting a caveman wig, so today is a shower day, or at least a hat day. Spitting in the sink, Joe reels toward the showers and the dance continues.

Joe's sister, meanwhile, follows a related routine. She checks her e-mail, and scans her newsfeed on Facebook. She clicks the syllabus for Environmental Studies 101 to make sure she has the reading right, pulls up her Google calendar and confirms today's activities, and heads for the showers. She lathers up, shampoos her hair, rinses with conditioner, shaves her armpits and her legs, and enjoys a few additional minutes of hot, steamy water before she concludes. Toweling off, she's ready to brush and blow-dry her hair, and apply a little make-up.

Both students glance out the window to gauge the weather, but they're not much affected because they're moving between rooms that are heated or cooled to temperatures in the 70-degree range. Nature is burning or blowing to create this comfort zone, but they don't notice because that's just "natural." So, naturally, they check weather.com and head for the closet with the today's forecast in mind.^{xiii}

Like other college students, and most Americans, Jo and Joe College are practicing what Tim Clydesdale calls the "disengaged pragmatism" of everyday life: focusing on the tasks at hand and the day ahead. So far, in fact, the only time they've noticed nature was the weather. Waking up at college, they're waking up *in* nature, but they haven't noticed that, so in this chapter and the next, we'll try to wake up *to* the nature of our mornings as well.^{xiv}

Alarming: The Cultural Work of Clocks

It can be alarming to think deeply about an alarm clock. Normally college students notice it just twice a day, setting it at night and hearing it, regretfully, in the morning. But the time it tells transforms the whole day, because clock time conditions the environmental consciousness of college students.

The alarm clock is a part of college time, but it's American time, too. Most Americans are obsessed with time, as our language suggests: we're saving time or spending it, marking time or killing it. We have free time on the weekends—which suggests that we have slave time most of the week. Many of us even feel like we're doing time, caught in a prison of work and obligations. Whatever we call it, all of our times are structured by clock time, the social construction of weeks and days and hours and minutes that shape our appointment books—and our lives. Like many of our technical marvels, clocks and watches are machines that convert nature into culture—in this case, nature's time into human time. Like most technologies, they perform a specific task, but they perform “cultural work” as well, reinforcing common sense and common practices, and naturalizing the frameworks we use to navigate our lives.^{xv}

It's a natural fact, for example, that human beings need sleep and that animals, including humans, have circadian rhythms—cycles of brain wave activity, core body temperature swings, hormone production and cell regeneration schedules—that attune the body to the rotations of the planet. Historically, human beings adjusted their life cycles to these rhythms of day and night and slept until they were rested or disturbed—often by the “call” of nature. In the modern world, however, the body's circadian rhythms proved too imprecise for the demands of capitalism: people who followed natural rhythms might be late for the factory work of the industrial revolution. So the body had to be broken to the discipline of mechanical time, and clocks and watches (and alarm clocks) helped with that cultural work.^{xvi}

As early as the 1830s, Alexis de Tocqueville thought Americans were obsessed with time, always busy with the consuming passions of individualism: “The inhabitant of the United States” he observed, “attaches himself to the goods of this world as if he were assured of not dying, and he rushes so precipitately to grasp those that pass within his reach that one would say he fears at each instant he will cease to live before he has enjoyed them. He grasps them all but without clutching them, and he soon allows them to escape from his hands so as to run after new enjoyments.” This culture, in which “rush hour” might be any hour of the day, has survived and thrived in America, leading to a society plagued by what sociologists call “time poverty.” In a culture of time poverty, we don't have enough time for what really matters to us, because we're too busy doing other things. Even at college, which is designed to be an interval of “slow time” in our lives, many of us don't make time for meaningful work or for reflection upon our hopes and dreams, because there's “too much to do.” And our lack of time has environmental impacts because it drives us to convenience, where we often accept resource-intensive solutions to our time-management problems. We believe in fast food, for example, because we lead fast lives, circumscribed by the seconds of the clock.^{xvii}

An alarm clock tells us the time, but it also shows us the social construction of time. It tells us to get up and get to work “on time,” but in focusing our attention on today's time it marginalizes other important times of our lives, like yesterday or tomorrow. Yesterday, the clock presumes, is just history, and tomorrow is science fiction. Clock time is also just human time. It helps us get places on time, but it keeps us from considering natural time and—depending on our beliefs—supernatural time. By focusing our attention on the personal present, it keeps us from other temporal perspectives, perhaps until we're literally too late.

Past Time

Despite their enrollment at an educational institution designed to pass on cultural traditions from past to future, Joe and Jo College are not generally good at thinking in time. In the morning, college students don't remember—if we ever learned—the environmental history that would help us make sense of the present. So we don't know why we act the way we do. We don't know why environmental problems have developed. We don't know about environmental successes, or histories of hope. Playing by the rules of American presentism, we don't take time to think about past times—unless, of course, we're stuck in a History course.^{xviii}

Whether we acknowledge it or not, however, we live in history, and dead men rule our lives. We inhabit the institutions dead men created and the buildings they erected. We learn from books they wrote and ideas they devised. Daily, we use the technologies they invented—amusing ourselves among the ghosts of Thomas Edison, Henry Ford, and Philo Farnsworth. Most importantly, we live in the world that they developed, despoiled or protected. When Columbus discovered America, he came in solar-powered sailing ships, and encountered people who didn't use fossil fuels. But we use lots of fossil fuels, because dead men discovered coal and oil and exploited them to make our lives easy and efficient. On the other hand, dead men and women also helped to create a sublime

system of American national parks, and legislative protections (still not good enough) for wilderness and the environment. The past is alive in our present, but, because the clock calls us to our next appointment, we rush right past it.^{xix}

Future Time

American presentism also keeps us from a careful consideration of the future. College is, of course, a preparation for what comes next, and—despite the immediate demands of our clocks and watches—college students worry about “the future” a lot. But that “future” is usually individual and instrumental: we’re more concerned about preparation for graduate school or a career than about the fate of the earth. Like other Americans, college students don’t have many collective plans for the future, and few ideas at all about the long future (which is why environmental issues like global weirding are such challenging issues). Americans tend not to be very mindful of future generations, and when we are, we often ask, as devout utilitarians do, “What has the future ever done for us?” Indeed, Robert Paehlke suggests that “Time horizon may be the most important distinction between environmentalists and others.” But our consciousness of clocks keeps most of us locked into the common sense of short-term thinking.^{xx}

As a consequence, we don’t think much about the future as something we create today, both by our activity and our inactivity. We don’t notice that we are literally making history with every one of our everyday actions. As a result, we are collectively creating a future that few of us really want to live in. Like it or not, what we do today either reinforces ideas and institutions, or transforms them for tomorrow. When we approach our studies as tools for civic engagement, we learn how to change the world. When we explore possibilities for environmental responsibility in our own lives, we provide possibilities for future citizens. And so we create a future with our examples as a part of its usable past. Alternately, when we settle for a present that drives us to escape through TV, we create a future with more commercials and commercialism and couch potatoes, reinforcing images of people and society that often contradict our deepest values. When the alarm sounds in the morning, we might remember that it calls us not just to the work of the day, but to the work of shaping the future as well.

Nature’s Time

Even if our alarm clocks located us in a stream of historical continuity, they still wouldn’t connect us to biological or ecological time. Clocks ignore nature’s time—geological time and evolutionary time, and the long cycles of prairies and forests and oceans. When we plan our lives only by clock time, we forget nature’s rhythms and begin to assume that *our* time *is* time. Our belief in progress is another example of our confusion of human time and nature’s time. Though most natural rhythms are cyclical, Americans believe in a linear progression of time, with practically inevitable human improvement. But in nature’s time, it’s progress when the sun comes up each morning, and progress again when it goes down; progress when Spring sprouts every year, and once again when some dramatic greenery flashes bright colors for its funeral in the Fall. In nature’s time, efficiency isn’t measured by speed, but by sustainability and regeneration—the ability to extend the extravagant generosity of life to another generation. When our time-line meets nature’s time-circle, however, it increasingly results in extinctions, which are literally killing time for other species.

In nature’s time, minutes and seconds don’t mean much. We think we’re on time when we arrive at the appointed hour, but nature might think otherwise. It takes nature about 500 years to make an inch of topsoil, for example. So when we live in a way that depletes soil faster than that (and we do), we are not “on time,” no matter how fast or productive we might be. When we live in a way that threatens the ecosystem services that our descendants will need, we’re more “out of time” than on time.

Sacred Time

Whether or not gods exist, people and cultures often act as if there’s a supernatural relationship to the natural world. It may be Allah or Yahweh, the Corn Mother or the Rainbow Serpent, but people believe that something supernatural creates the world, and that our time is a divine gift in a purposeful cosmos. For example, the Bible—America’s most popular cosmological handbook—suggests that the universe is the work of a Creator, and that time is God’s gift, so that our time is not just ours, but God’s. If that’s true, perhaps Thoreau was right in observing that you can’t kill time without injuring eternity.^{xxi}

Many religious traditions structure time to point to such super/natural connections. In earlier Christian cultures, people told (and tolled) God's time with Angelus bells, which provided a religious frame for the day by calling people to prayer morning, noon and night. Jews and Christians still observe a Sabbath. In contemporary Islamic cultures, people orient themselves toward Mecca and pray at appointed times. All over the world, people are called to recognize the holy at traditional times in everyday life. But when bells ring at American colleges today, few students turn to prayer or contemplation. Sacred time used to be a moment for people to consider how to "redeem the time"—how to make ordinary time extraordinary, luminous with possibilities for good. Calls to prayer and holidays made time for people to listen to the sacred, and to apply the wisdom of holiness to their everyday lives. Although many religious Americans—and some college students—still take time for prayer and church services, we often see these visits as perfunctory obligations, rather than as an opportunity to imagine a better world. For most college students, Sunday is just the second day of the weekend. On campus, it's the day to recover from Saturday's Bacchanalian rituals and—in the evening—to start reading for next week's classes. But it could be different.^{xxii}

Shit Happens: The Call of Nature

In the morning, after the alarm sounds, nature calls. The bladder fills and sends nerve signals to the brain, saying "Do something!" The bowels concur, with a demand to "get moving!" It's one of the few times in a day that Joe and Jo College are conscious of nature's influence on their lives. So college students creak out of bed, shuffle into the bathroom, and relieve themselves. Flushing the toilet, we put nature behind us, and we don't think much of it. But the toilet is a place where the body's plumbing meets the plumbing of culture and nature, so it's a rich ecological niche.

College students talk shit all the time, but not ecologically. A superficial conversation is "shooting the shit." Something obvious or unbelievable is "no shit!" while "bullshit!" is a standard response to falsehood. If you care, you might "give a shit." If not, you might get "shit-faced" at a party. And if the party gets too wild, "the shit hits the fan." As a result we might "shit a brick." So shit is on the tip of our tongues—figuratively, of course—we just need to bring it to the front of our mind. Because shit isn't just a linguistic construct; it's a daily reality. Americans make about 5 billion gallons of waste a day without even thinking about it, but we don't *know* shit. Thankfully, that can change.^{xxiii}

When we need to take a shit on campus, we go to specialized space called a bathroom. In the average college residence hall, the bathrooms seem a long way from environmental studies, but waste management *is* an environmental study. If you're a human being of average size and weight, for example, your body produces about a pound of waste, solid and liquid, every day. It's one of the few forms of production still remaining in America, one type of manufacturing that hasn't been shipped offshore.

The process seems simple, but it's fairly complex. When Joe College orders a cheeseburger and french fries, he masticates his meal and swallows, sliding the food down the alimentary canal. There, a variety of digestive enzymes convert complex carbohydrates into simple sugars, transform fats into glycerol and fatty acids, and transmute proteins into amino acids and peptides. In Joe's small intestine, these digested nutrients are absorbed by blood and lymph vessels to be carried into the circulatory system to feed various organs, including his busy brain. What's left over is excremental, my dear Watson, the waste that waits until, as the bumpersticker says, shit happens. When it happens, we head to the toilet and the poop plops into a small pool of water where it's submerged along with its pungent smell. After wiping our butts with soft sheets of treated trees, we flush the toilet. To most of us, it's not worth a second thought.

This hasn't always been the case. Two hundred years ago, college students disposed of their bodily wastes on campus. In the winter, people used bedpans, and then carried their waste to the craphouse. The outhouse was removed from the main buildings, but it was close enough for people to comprehend the problem (and the possibilities) of waste. In cities, entrepreneurs regularly cleaned "night soil" from outhouses and sold it as a fertilizer for outlying farms.^{xxiv} With the arrival of indoor plumbing, though, when shit happens, it goes down the drain instead of back to nature. Most college students, like most Americans, live by what Philip Slater calls "the toilet bowl principle of American life"—out of sight is out of mind. But when the toilet flushes, shit doesn't just evaporate. It travels through sanitary sewers to a solid waste treatment plant. At most such plants, sewage receives several different treatments. After screening and grit removal, the mixture of excrement and urine and water and

paper and other assorted items enters a settling tank. There, solids drop to the bottom so that grease and plastics can be skimmed off the top. The water heads for secondary treatment, where micro-organisms feed on bacteria, purifying the liquid. Finally—using sand filters, natural or artificial wetlands, ultraviolet light, or ozone—the water is “polished” to bring it up to legal standards, and it’s discharged back into rivers. When we flush on campus, we’re intimately (and institutionally) involved in the water cycle.^{xxv}

Biologically, excretion reminds us of the beauties of the natural world, the ways in which our bodies are designed to manage the ins and outs of animal life. Ecologically, our bathroom break reminds us that all natural systems, including the human body, are involved in processes of consumption and return. Taking in nutrients, we expel wastes, which function in the grand scheme of nature as nutrients for other species. Culturally, our excretions are a mess: in the unnatural world of American culture, we treat shit like shit. “In the United States,” says Christopher Uhl, “we take two perfectly good resources—human manure and fresh water—and splat them together in the toilet bowl, making them both useless.” But if we ever got our shit together, perhaps we’d begin to see the systematic wastes of our lives, and return them to the productive and regenerative cycles of nature.^{xxvi}

The Artificial Waterfall

At some point in the day, most college students take part in a purification ritual called a shower. We walk down the hall to the bathroom carrying a plastic caddy containing our soap, shampoo and conditioner, as well as the other oils, lotions, and potions we expect to apply to our bodies. With a towel over our shoulder, and sometimes a washcloth or a loofah, we look for an open shower and set our supplies down on a bench. We draw a plastic curtain over the opening, hang up our clothes, and step into the shower itself. Then, ready to go, we open the valve to a torrent of cultural assumptions and expectations. Though turning the tap seems mechanical, it’s also organic, and very complex. In Northfield, Minnesota, for example, the water flowing in the shower is drawn from the Jordan Aquifer. It’s pumped through a purification plant for chlorination and fluoridation, and then to water towers that provide the pressure for the whole municipal system. In a hydraulic civilization, water goes not just where it falls or flows, but where we want it to.^{xxvii}

The shower gets us clean, but it, too, performs cultural work. Dirt is evil in America, and so we ritually cleanse our soles—and the rest of our bodies too—in our daily baptism, initiating us into a sect of sanitation. Free from the sins of stickiness and smelliness, we can go about the other routines of our day with an easy mind. Early in the morning, as we’re trying to wake up, a shower is cleansing—and stimulating. Later in the day, after a run or a game of basketball, it’s cleansing, but also relaxing. In either case, a shower is a way of washing the body that’s comforting and comfortable too. A shower, therefore, is often more than a mere necessity; it’s a luxury. And a long, hot shower? Nirvana. The water streaming over the skin, massaging the muscles beneath the surface, is a sheer delight. The sound of constant flow is soothing, like a cascading creek. And the steamy heat penetrates our pores, comforting us with wondrous warmth. As this suggests, we bathe not just physically, but also psychologically. When we’re dirty, we tell ourselves we need a shower. When we’re tired or stressed, we tell ourselves we *deserve* a shower. Slow showers are liquid selfishness, a place where we get to take care of ourselves, instead of our friends or parents or professors. A long shower, too, is a counterpoint to the culture of speed and efficiency so recently reinforced by our alarm clock. It removes us from the everyday world and rinses off the demands of daily life. We are in a free space. In a small way, a slow shower is a protest movement against a world of enforced time poverty: as we linger in the liquid tranquilizer, we’re *not* quick and we’re *not* efficient. A shower can be a coping mechanism for dealing with the pathologies of everyday life, instead of eliminating the pathologies.^{xxviii}

[*The Social Construction of Showers*

We all understand how a shower works, and how it can work to wake us up, but we need to wake up to how it functions in the moral ecology of everyday life. Looking analytically, a shower, just like the toilet before it, is one more way of transforming drinkable water into waste water. What flows down the drain finds its way (sooner or later) to the ocean, where it evaporates and circulates in clouds until it precipitates into places where we pump it once again. In the shower, we’re in the water cycle, which is affected by every turn of the tap.

We think of a shower as a private act, but when we get in the stall, we’re getting in with a lifetime of education and expectations. Every day, ads for soaps, shampoos, conditioners, gels and moisturizers teach us what clean really

means. They teach us about feelings—about comfort and pleasure, and joy and indulgence—and sometimes, for women especially, about sexiness. They teach us to get clean, but they also teach us to get that fresh, clean *feeling* that we have unconsciously learned to associate with the commodities we carry in our caddy. They don't tell us that soap works first by bonding dirt to hydrophobic fatty acids, encapsulating the dirt in droplets of water that can be rinsed away, or that shampoos generally use detergents like ammonium lauryl sulfate to remove our hair's natural oil and phthalates to dissolve scents and thicken lotions. And they certainly don't trouble us with information about the chemistry of conditioners, which coat the clean hair with *different* oils, but also with silicones, humectants, proteins, and quaternary ammonium compounds—primarily to make hair slick and easy to comb. We don't learn where the ingredients came from, or who was involved in manufacturing them, but that's okay, because our hair feels great, and that's what matters in the morning.^{xxix}

Indeed, we don't learn these things because shampoo commercials aren't about shampoo: they're about our cultural conceptions of beauty—about hair, and the meanings of hair. Shampoo companies hire models like Cindy Crawford or Eva Longoria or Jessica Simpson—who possess what's essentially *professional* hair—to teach us that a woman's hair, and not the brain beneath it, is what makes her sexy and attractive. Generally, these shampoo models have long, straight hair, and they wave it around in a motion we might call “the shampoo swirlie,” often filmed in slow motion. Watching the ads, we might believe that the purpose of shampoo is to train the hair to dance.

A guy's hair usually doesn't dance in ads. Joe College's shampoo can be stylish and scented, but for guys in TV ads, shampoo serves three putative purposes: washing hair after an athletic event, thus confirming one's manliness; getting rid of unsightly dandruff, thus confirming one's attractiveness; or convincing women to stroke the clean hair lovingly, thus confirming the gullibility of the guy who believes in such a scenario. Men's hair may be attractive, but it doesn't really have to be.

Shampoo ads also do cultural work by teaching us, or at least reminding us, that women are meant to smell like flowers, fruits, and vegetables; while for men, as usual, there's a narrower range of choices, and they tend not to be floral or fruity. If men smell, the ads tell us, they need to smell different—musky or musty, perhaps—thus confirming their independent gender identity. At the end of a shower, therefore, we can rinse off the shampoo, but it's harder to escape the images and assumptions locked in the lather of the ads, as they subtly shape the moral ecology of everyday life.

The Natural Resources of Showers

In the shower, we get in hot water when we forget where the hot water comes from, because there's a deep connection to the natural world. Both water and heat come to us from nature. A toilet is basically a small pond in the bathroom, while the shower is a waterfall positioned for our convenience. While they definitely depend on plumbing and human ingenuity, they rely more basically on precipitation and the re-charge of groundwater and aquifers—natural phenomena increasingly modified by human behavior. And because water in nature is seldom warm enough for a satisfying shower, Joe and Jo College use nature to heat nature, warming water by burning fossil fuels or causing chain reactions in uranium. While we luxuriate in the shower, we also suck up the world's fresh water and generate more greenhouse gases.^{xxx}

If a normal shower delivers three gallons of water a minute, then a 10 minute shower requires 30 gallons of water. With just one shower a day then, for the nine months of the school year, each of us will use 8100 gallons of water. If Every University has 10,000 students, that's more than 8 million gallons. Low-flow showerheads would allow the university to save 4 million gallons of water, plus the fuels needed to warm that much water. Students would still be clean, and our hair would still glisten, but so would our rivers and lakes.^{xxxi}

The American shower affects us, of course, but it also impresses the planet's other people, who often emulate American standards of cleanliness. “The British bath,” notes Elizabeth Shove, “is in danger of being abandoned in favour of showering on a daily or twice daily basis.” By itself, this English adjustment might be no big deal, but it's a small part of an energy-intensive shift in international comfort standards, and that's huge. As this suggests too, standards of cleanliness are never universal or permanent. American students now expect free and unlimited water for showers in their residence halls. At St. Olaf College in the early 1890s, however, one of the trustees thought that the purchase of a single tin bathtub was an unnecessary luxury for students. He only decided that the extravagance was justified when he discovered that the college was charging students a nickel a bath. If today's colleges charged

students for water by the gallon, it might help us learn the costs incurred when we linger luxuriously in the shower, and it might be a first step toward full-cost accounting (and accountability) for all the resources in our lives.^{xxxii}

We shower ourselves with water, in an artificial waterfall created by culture. Though our morning shower never seems like “getting back to nature,” it’s one place where we could wake up to nature, a place where we could practice mindfulness, confronting our systematic consumption, and immersing ourselves in the paradigm shift that will characterize the coming culture of permanence.

Mirror Image: The Nature of Looking Good

After performing their cleansing rituals, Joe and Jo College usually take part in rituals of self-inspection and self-improvement in front of the mirror. Mirrors adorn the walls in college bathrooms and dorm rooms and apartments, allowing us to see if an outfit looks good on us, or, more precisely, if we look good in it. The word itself comes from the Latin root “mirari”—“to admire”—making a mirror, at its root, a place for a mutual admiration society of one.

A mirror is a smooth surface that reflects the images of objects. But a mirror also performs cultural work, reflecting the patterns of American society. It’s a visual echo, and, like television, it’s a way of seeing—and not seeing. As a matter of physics, most mirrors reflect exactly the patterns of light and shade that hit them. But as a matter of culture, there can be significant distortions, because mirrors reflect not just the way we are but also the ways we hope (or fear) to be. For example, when we look at the mirror in the morning, we’re trained by years of advice and advertising to see not just our own reflection, but also its relationship to the ideal images in magazines or on TV. We’re trained to focus on particulars: we don’t usually see the whole picture because we’re concentrating on the so-called “problem areas” that popular culture has pinpointed for us: one student’s mirror highlights his pimples and the size of his nose, while another’s magnifies her worry about her make-up and hair. Mirrors permit us to objectify ourselves, to look at ourselves as others see us, or help us with “impression management”—the management of our appearance to manage the response of others. American culture teaches us to be attractive, and to dress for success, and the mirror allows us to see if we’ve succeeded.

But mirrors can’t do everything. Although they reveal the social self, they avert our attention from the natural self. Contemplating teeth and zits, facial hair and the dark circles under our eyes, we forget to appreciate the intricacy of the organism that stands before us. We forget, for example, the marvel of our eyes, which allow us to use a mirror effectively. An immense evolutionary advantage, they provided our ancestors with the hand-eye coordination that has made *homo sapiens* such a successful species. Containing about half the sensory receptors in the body, our eyes and vision use about 30 percent of the brain’s cortex to look at that bleary face in the mirror. But we don’t usually perceive the amazing ecological adaptation staring back at us. Eyeing the mirror to check out the surfaces of the self, we miss the nature of the body, and the nature of its connections to the rest of nature. Although he wasn’t talking about mirrors, Thoreau once said that he wanted to be “nature looking into nature.” That’s what happens in mirrors of America. But because we bring our cultural preoccupations to the mirror, we often turn out to be nature looking away from nature.^{xxxiii}

The Student Body

The student body in the bathroom mirror is both natural and cultural. The human body is, of course, a highly-evolved product of natural selection, with bifocal vision, bipedal locomotion, and nimble hands with opposable thumbs. It comes with a big brain that supports complex thinking, toolmaking and technologies, communication and cultures, and even college classwork—not to mention autonomic functions like breathing and blood flow. It’s a mammal’s body in the mirror, with warm blood and temperature control, an internal combustion engine we call the digestive system, and a tangle of bloodlines and nerves that bring it all together. Right now, this animal body is brushing the teeth that make it (along with an adaptable digestive system) omnivorous, able to eat both animal and plant life. But this is only the beginning. The natural body is in constant intercourse with nature.

We often speak about “people and nature,” as though the body was bounded by its skin, but this is a dangerous illusion. The body in the looking glass is constantly sharing elements with its environment, amassing atoms from literally everywhere. As ecologist Christopher Uhl suggests in *Developing Ecological Consciousness*, “If you were to put an ink dot on a map of the earth to designate the origins of the trillions of atoms that make up your body, the

map would be covered in ink. Our atoms have journeyed to us literally from everywhere on the planet. We are a part of their cycles.” We are dependent on the earth’s interdependence, and we forget it at our peril.^{xxxiv}

The natural body depends on the natural world, not just abstractly, but viscerally—not just occasionally, but constantly. Normally, for example, the body we see in the morning mirror is breathing, inhaling the oxygen that fuels the combustion of carbohydrates in the human body. People can live about three weeks without food, three days without water, but only three minutes without air. We don’t think much about that, though, because air is invisible, because it’s not yet a commodity, and because it’s automatic. However, if we had to buy the air we breathe, we’d pay a lot more attention. If all of us needed to inhale Perri-Air (as Mel Brooks does in *Spaceballs*) or visit an oxygen bar for our daily requirements, we’d be more mindful. If the three thousand gallons of air we take in each day were as expensive as gasoline, we’d notice. But air is still free—an ecosystem service provided by the planet—so we ignore it entirely (and allow industries to pollute it). Likewise, if we had to *choose* to breathe, we’d keep it in our consciousness, but the autonomic nervous system takes care of air on its own. As Christopher Uhl suggests, “Breathing happens on its own; you are not breathing so much as you are being breathed.”^{xxxv}

Even more amazing, the body we see in the mirror doesn’t just exist *in* a natural habitat; it *is* a habitat for nature, filled with micro-organisms that are essential to its functioning. Recent studies show that 90 percent of the cells in our bodies aren’t ours; they’re bacteria. In the microbiome that is us, some bacteria are helping to convert plant sugars to usable energy, some are making vitamins essential to our health, some are neutralizing chemicals that could cause cancer and other diseases, and some of the bacteria in our bodies are making food for other bacteria, including the cells that line the colon. These life forms help shape the form of human life. Every minute of every day, we have a relationship with nature more intimate than our relationship with our families and friends and partners. By nature, we are always in relationship with nature.^{xxxvi}

The relationship, however, is not always harmonious, so we protect ourselves against microbes that have proven deadly in the past. In the United States, vaccinations are mandatory, so almost all college students are armed against the natural flourishing of organisms that thrive by causing disease. But we rarely stop there: on any given day a lot of the bodies in college mirrors are teeming with antibiotics (a word that literally means “against life”), as we try to kill the living organisms that unsettle our digestive and respiratory systems. And many of us buy antibacterial soaps and lotions, which are probably counterproductive, because they leave our bodies susceptible to the hardy bacteria that develop resistance to our common pharmaceuticals.^{xxxvii}

The natural body also absorbs the chemical elements of our culture. If we could look *into* the body, we’d see stuff we don’t imagine when we look in the mirror. In “The Pollution Within,” *National Geographic* writer David Duncan recounts the chemicals that testing found in his body—polybrominated diphenyl ethers (used in flame retardants, and implicated in thyroid disruptions and neurological problems in mice), DDT (used as a pesticide until it was banned in 1973), the insecticides chlordane and heptachlor, PCBs (banned in 1976), bisphenol A (used in hard plastics like Nalgene bottles and safety goggles), phthalates (used in shampoos, car dashboards, and plastic food wrap), perfluorinated acids (PFAs), dioxins (used in making paper) and mercury (from coal-fueled power plants). Like most Americans, including Jo and Joe College, Duncan is literally poisoned by the stuff our culture uses to free us from our natural limitations: gasoline, plastics, and fossil fuels. Like it or not, the environmental impacts of American culture end up in our bodies and our blood. What goes around comes around, and the outside environment comes in.^{xxxviii}

We miss a lot in the mirror, but some of what we see is also related to basic biology. The culture of cosmetics, for example, may be related to our natural need for healthy mates. Although their ideas are still disputed, sociobiologists remind us that, when we’re thinking about appearances, we’re often thinking about the appearance of health—especially the appearance of people who look healthy enough to reproduce productively. Teeth are a sign of health, so we brace them and brush them to make them more attractive. Lustrous hair is another indicator of natural health, so we shampoo, condition, and color it. And women go even further. Nature doesn’t call Jo College to cosmetics, for example, but cosmetics can imitate the signs of nature. Although college girls seldom think of cosmetics in terms of evolutionary biology, they often involve biomimicry—a youthful look, with smooth skin and full lips, makes the face appear healthier to prospective suitors, appealing, literally, to the animal in men. In the twentieth century, a tan also became an indication of healthy outdoor activity, so many of us get tanned, if only from a bottle or a booth. We want to look well—or as Carl Elliott says, “better than well”—and that’s natural. But how we get that look is decidedly not.^{xxxix}

Right now, when Joe and Jo College look in the mirror, they're hoping to see Beauty or Handsome looking back, because they're trying to meet social expectations. But they could look for a sense of beauty that's more than skin deep, a sense of beauty that met ecological expectations by connecting them to the biotic community. When Aldo Leopold articulated his land ethic, beauty was one of his criteria for when "a thing is right." But he clearly didn't mean scenic beauty, since he derides the shallowness of people who only like the landscapes of nature. For Leopold, beauty wasn't just what you could see, but how you might relate—beauty was functional, harmonious, whole. What if we tried to arrange our lives so that when we looked in the mirror, we would see the loveliness (and lovingness) of people who harmonized with nature? Wouldn't that be beautiful?

Waking Up to Responsibility

At college, when we wake up, we do what comes naturally, even though most of it is what comes culturally. Even though we wake up *in* nature, we don't generally wake up *to* nature because American culture works so hard to distance us from our environmental impacts and undermine our ecological consciousness. We get all sorts of cultural cues about time and busy-ness and convenience, but few cues about the natural world in which our harried activity occurs. We receive constant commercial messages about cleanliness and looking good, but we don't read or receive many of nature's messages—the ones she sends as news about gas prices and oil wars, global weirding and habitat loss, disease and extinctions, and the seasonal cycles of our campus habitat. As a result, we don't see or feel ourselves as environmental actors, participating (wisely or wantonly) in the rhythms and cycles of the living earth.

When we wake up, then, some of us are conscious, but few of us are conscientious. But we've been participating fully in the moral ecology of everyday life by running through the routines that we all perform perfunctorily as part of college life (or "the good life"). Indeed, most college students have made at least five ethical choices before breakfast. But we don't *feel* like ethical actors because we're just doing what comes culturally. We've made these choices not by our active options but by our passive participation in *systems* of choice. As this suggests, one of the most powerful things we do is to define normality for each other. If it's normal to flip on the lights in the bathroom, we normally think it's OK. But it might be more complicated than that. For example, when Joe and Jo College think they are just lighting up a room, they're also generating greenhouse gases. If they thought about it, they might think that it's "no big deal"—and that would be true, if they only lived today. But Americans live a long time, so all of our "no big deals" add up to major environmental impacts. As Eric Sorenson points out in his *Seven Wonders for a Cool Planet*, "If the average North American life expectancy holds at seventy-eight years, each person can expect to produce 1,630 tons of carbon dioxide over his or her lifetime." The everyday actions of students are choices camouflaged as routines, but each of our habits is, in fact, a moral choice. Things are better or worse because of what we do, from our personal appearance to planetary health.^{xl}

For that reason, we might want to wake up not just to the routines of the day, but to mindfulness. Mindful of the social construction of college culture and the busyness of campus life, we might try to set aside time for some big questions—like the goodness of the good life, or the health of the ecosystem services that we depend on. Mindful of the life-giving properties of water, we might try to conserve it for future generations. Mindful of our animal nature, we might try to be creatures who enhance habitats, instead of despoiling them. Mindful of the complexities of the human body and the other bodies that support it, we might nurture a sense of wonder for the natural world that includes us so generously.

We might also begin to imagine and invent tools that *re-mind* us of our responsibilities for the life of the planet. Most current technologies are designed to be easy, and easy is, sadly, often just a synonym for careless. The thermostat maintains the temperature in our room; the TV stands ready for instantaneous power-up; the car starts with the turn of a key. Nothing reminds us that ambient temperatures and instantaneous electronics and automotive travel are environmental issues. Nothing tells us about the implicit choices embedded in our machines. But we can remind ourselves of our environmental impacts—and change them—by designing machines for ethical impact as well as aesthetic appeal. In *Sustainability by Design*, for example, David Ehrenfeld suggests that a dual-flush toilet disrupts the normal flow of life just enough to make us mindful of our choices. Instead of just flushing, we have to make a choice about how much water to use—and if we know anything at all, we know the choice is both environmental and ethical. Eventually, this water-saving option might become second nature to us, and we might establish a habit that conserves water and habitats.^{xli}

We might also consider re-inventing the habits that threaten the planet's natural (and cultural) habitats, so that our habits teach the people around us about the routines of a regenerative life. Unlike most human beings in most of history, Joe and Jo College live in a segregated society, having separated themselves from the reflective experience of the natural world. Americans value "getting back to nature" on vacation, but that common phrase illustrates just how far we've removed ourselves from nature in our everyday lives. Instead of just living *on* the earth, therefore, we might begin to live *in* the earth's cycles and rhythms, not just as consumers of ecosystem services, but as sources of regenerative design as well.^{xlii}

Fortunately, Joe and Jo College live in an environment that allows for reconsideration and reconstruction of the way we live in the world: the college campus. Unlike most Americans in the workaday world, college students could easily wake up to systems thinking—to see the systems that operate beneath the surfaces of everyday life *and* to change them. In the college environment of hope and opportunity, why not practice the mapping and modeling of natural systems, as well as the altered stocks and flows that result from our ordinary consumption? Why not pay attention to the inputs and outputs of our natural and cultural systems, and to feedback loops in nature and culture? Why not consider the cultural resources that we have to change the systems we live in, aligning our human systems with the (eco)systems of nature? Why not make our lives mean something? Why not?^{xliii}

Because academic success won't mean much in a world of ecological failures, and a college degree won't be so advantageous on a planet warmed by five degrees. Because the grade we get in biology won't matter that much if we compromise the planet's biological systems. Cleanliness may still be next to godliness, but it won't seem so special if it sucks up the world's freshwater supplies. Putting on a cosmetic face in the morning may make us more attractive, but it won't matter much if we get the guy of our dreams in a world of imminent nightmares. Indeed, if we're not careful *and* committed to environmental activism, we might find ourselves up shit creek without a paddle.

Our biggest environmental impacts don't usually happen before breakfast, but if we really woke up to our place in the world, we would see the amazing intricacy of nature and our part in it, and the amazing damage we can do without thinking. We would be alert to the complexity and complicity of our lives, to the repercussions and responsibilities of our everyday activity. We would be aware that the college campus reveals the nature of our values. We would begin to understand the nature of college culture, including the power of habit, the power of example, and the power of institutions. And we would begin to use our culture to change the nature of our relationship with the natural world.

ⁱ I first encountered concept of the culture of nature in Alexander Wilson’s provocative book, *The Culture of Nature: North American Landscape from Disney to the Exxon Valdez* (Cambridge, MA: Blackwell, 1992). For an excellent history of “nature’s role in American history” (the subtitle of the book), see Ted Steinberg’s *Down to Earth* (New York: Oxford, 2002).

ⁱⁱ Philip Cafaro, *Thoreau’s Living Ethics: Walden and the Pursuit of Virtue* (Athens: University of Georgia Press, 2006), pp. 161-65.

ⁱⁱⁱ David A. Morrison, *Marketing to the Campus Crowd: Everything You Need to Know to Capture the \$200 Billion College Market* (Chicago: Dearborn Trade Publishing, 2004), pp. 3-4; Peter Zollo, *Getting Wiser to Teen: More Insights into Marketing to Teenagers* (Ithaca, NY: New Strategist Publications, 2003), p. 197.

^{iv} In “Consumption and Choice,” Alan Warde suggests that consumption isn’t just an individual endeavor. Instead “consumption is a collective enterprise that is, above all, embedded in routine social practices. Consequently, most consumption becomes normalized within the practical content of daily lives and becomes taken-for-granted.” Alan Warde, “Consumption and Choice,” at <http://www.lancs.ac.uk/fass/projects/esf/session1.htm>.

^v Robert N. Bellah, *Habits of the Heart: Individualism and Commitment in American Life* (Berkeley: University of California Press, 1985), p. 335

^{vi} Charles Duhigg, “Warning: Habits May Be Good for You,” *New York Times* (13 July 2008) at <http://www.nytimes.com/2008/07/13/business/13habit.html?em&ex=1216180800&en=893d6d16b2643e20&ei=5087%0A>.

^{vii} In “Varieties of Overconsumption,” David Schmitz and Elizabeth Willott note that “people overconsume when externalities are not internalized. For example, people overconsume nuclear power when the price of electricity does not include the price of proper disposal of nuclear waste.” Schmitz and Willott, “Varieties of Overconsumption,” *Ethics, Place and Environment* (October 2006): 359.

^{viii} A summer school at Lancaster University in England followed a similar formulation in 2001. “Rather than concentrating on individual beliefs and attitudes or the behavior of ‘green’ consumers, the Summer School programme assumes that questions of sustainability and consumption have to do with the routine organization of everyday life and the mediation of lifestyles and ‘choices’ through social institutions and sociotechnical infrastructures. The programme takes consumption to be a collective enterprise held together by social expectations, cultural conventions, and material constraints. “Introducing Consumption, Everyday Life and Sustainability,” at <http://www.lancs.ac.uk/fass/projects/esf/online%20handbook.pdf>, p. 7

^{ix} Mariolina Salvatori, “Understanding the Students We Teach,” *ADE Bulletin* (Spring 1992): 69-75, reprinted at <http://web2.ade.org/ade/bulletin/n101/101069.htm>. For more on the importance of “free spaces” to social change, see Harry Boyte, *The Citizen Solution: How You Can Make a Difference* (Minneapolis: Minnesota Historical Society Press, 2008).

^x The phrase “hoping mechanisms” comes from my friend Julie Madden, the social justice coordinator at St. Joan of Arc in Minneapolis.

^{xi} Michael Pollan, *In Defense of Food: An Eater’s Manifesto* (New York: Penguin, 2008), p. 28.

^{xii} Neil Postman and Charles Weingartner, *Teaching as a Subversive Activity* (New York: Dell, 1969), p. 121.

^{xiii} The Environmental Protection Agency reports that buildings use 40 percent of American energy, and two-thirds of electricity, and a large portion of that load is devoted to space heating, so these invisible environmental impacts are a big deal. *Buildings and the Environment: A Statistical Summary*, compiled by U.S. Environmental Protection Agency Green Building Workgroup (2004) at <http://www.epa.gov/greenbuilding/pubs/gbstats.pdf>. The comfort range of indoor air temperatures is, as Hal Wilhite points out, culturally determined. He notes that in Japan “the practice is still to heat the body, not the space.” People use space heaters and blankets to keep warm in rooms that are, by Western standards, still cool. Wilhite, “The Socio-Cultural Construction of Comfort in Japan and Norway,” in *Consumption, Everyday Life and Sustainability* (2001) at <http://www.lancs.ac.uk/fass/projects/esf/onlinehandbook.pdf>.

^{xiv} Tim Clydesdale, *The First Year Out: Understanding American Teen After High School* (Chicago: University of Chicago, 2007), p. 40.

^{xv} For a lively history of time, see Jay Griffiths, *A Sideways Look at Time* (New York: Jeremy Tarcher, 1999). In *The Age of Missing Information*, Bill McKibben suggests that even after the introduction of the 24-hour-day, the hours seasonally varied in length. McKibben, *The Age of Missing Information* (New York: Random House, 1992), p. 142.

^{xvi} Griffiths, *A Sideways Look at Time*, pp. 196-204. Now, of course, almost all our appliances—cars, microwaves, cell phones, etc. are embedded with clocks, and some of them are synchronized by satellite.

^{xvii} Alexis de Tocqueville, *Democracy in America* (Chicago: University of Chicago Press, 2000), p. 512. In today's America we work up to nine full weeks more per-year than Europeans. Cash rich and time poor, we desire lifestyles so expensive that we can't afford the time to live them. For a good critique of the American culture of time see John de Graaf, *Take Back Your Time: Fighting Overwork and Time Poverty in America* (San Francisco: Berrett-Koehler, 2003).

^{xviii} For a good introduction to environmental history, see Ted Steinberg's *Down to Earth: Nature's Role in American History* (New York: Oxford, 2002) or Carolyn Merchant's *American Environmental History: An Introduction* (New York: Columbia University Press, 2007). Anything by William Cronon is worth reading; I'm waiting anxiously for *Saving Nature in Time*.

^{xix} The wind that drove the Nina, the Pinta, and the Santa Maria is a form of solar power, since the sun creates pressure gradients that cause the wind to blow.

^{xx} Robert Paehlke, *Environmentalism and the Future of Progressive Politics* (New Haven: Yale University Press, 1989), p. 158. For America's systematic neglect of children, see the Children's Defense Fund website at <http://www.childrensdefense.org/>.

^{xxi} Henry David Thoreau, *Walden* (New York: Harper Classics, 1965), p. 6.

^{xxii} Many American reformers have set their internal clocks to God's time, including Martin Luther King. King's merger of sacred and secular, of the prophetic voice and civic republicanism, made him question the nature of American time, especially the doctrine of progress. In his magnificent epistle, the "Letter from Birmingham Jail," he argued against "the strangely irrational notion that there is something in the flow of time that will inevitably cure all ills. Actually," he insisted, in a passage that seems especially relevant to our times, "time itself is neutral; it can be used either destructively or constructively. More and more I feel that the people of ill will have used time much more effectively than the people of good will. We will have to repent in this generation not merely for the hateful words and actions of the bad people but for the appalling silence of the good people. Human progress never rolls in on wheels of inevitability; it comes through the tireless efforts of [people] willing to be co-workers with God, and without this hard work, time itself becomes an ally of the forces of social stagnation." Martin Luther King, Jr., *Why We Can't Wait* (New York: Signet, 1964). For a different sense of Sunday, see Winton U. Solberg, *Redeem the Time: The Puritan Sabbath in Early America* (Cambridge: Harvard University Press, 1977). For more on the possibilities of Sabbath, see Scott Russell Sanders, "Wilderness as a Sabbath for the Land," in *A Conservationist Manifesto* (Bloomington: Indiana University Press, 2009), pp. 159-67..

^{xxiii} Frederick Kaufman, "Wasteland: A Journey Through the American Cloaca," *Harper's* (February 2008): 46.

^{xxiv} Steinberg, *Down to Earth*, pp. 163-68. For a modern look at this business of reclamation, see Kaufman, "Wasteland," pp. 46-59

^{xxv} Jamie Benidickson, *The Culture of Flushing: A Social and Legal History of Sewage* (University of British Columbia Press, 2007). The sludge that remains also receives additional treatment, using bacterial processes to reduce the number of disease-carrying organisms in the waste. After its purification, some sludge can be used as a fertilizer or soil amendment on agricultural lands. This isn't ideal, because human wastes contain traces of all the chemicals that are in our system. And in an increasingly chemical culture, that can sometimes be a lot. Sewage routinely contains what the United States Geological Survey calls "emerging contaminants"—caffeine, antibiotics, anti-depressants, tranquilizers, painkillers, and hormones—and not all of these substances can be filtered by conventional water treatment. Concentrations are generally low, but concerns still exist about the development of antibiotic-resistant bacteria in our water systems. See Andrew Revkin, "We Are What We Drink Is What We Are," *Dot Earth Blog* at <http://dotearth.blogs.nytimes.com/2008/03/11/we-are-what-we-drink-is-what-we-are/>.

^{xxvi} Christopher Uhl, *Developing Ecological Consciousness: Paths to a Sustainable Future* (Lanham, MD: Rowman & Littlefield, 2003), p. 59. Stephen Salter, professor emeritus of engineering design at the University of Edinburgh, thinks the Swedish model of converting wastes to energy is promising. Wastes can generate power as syngas, biogas, or electricity, and heat pumps can extract energy for use in district heating or cooling projects. For a diagram of the possibilities, see "Waste Not: Making the Most of Our Sewage" at <http://www2.canada.com/victoriatimescolonist/features/sewage/2007-waste-not.pdf>.

^{xxvii} We think of a shower as a necessity, but as Tim Kasser notes, "a hot shower is clearly a luxury, especially when we consider that most of the world's population has never experienced such a pleasure. What has happened is that this material pleasure has become the new baseline." As poet Randall Jarrell suggests, "the frontier of necessity" marches on. Tim Kasser, *The High Cost of Materialism* (Cambridge: MIT Press, 2002), p. 58.

^{xxviii} With its steady flow of warm water, the shower is a place for physical cleansing and psychological soothing, but it can also be a place for ideas. Studies show that showers can energize the mind and promote insightful thinking. Warm water stimulates nerve endings in the skin, releasing beta-endorphins to the brain, causing pleasure. At the same time, the soothing stimulation activates the brain. According to neuroscientist Frank Rice, such stimulation “can lead to something that is a new thought.” And because we’re not doing anything—or anything we need a lot of brainpower for—the seclusion of the shower is a good place “for ideas to form themselves into meaningful thoughts that we might not have otherwise.” Almost literally, the shower is a flow experience in which our mind is free to make connections that otherwise elude it. If we were contemplating environmental issues—which mostly we’re not—a shower could help us lead us to new ideas and intuitions, like using less water or questioning our social conceptions of beauty. Tom Keyser, “Morning Shower Gets Under Your Skin,” *Star Tribune* (27 April 2007).

^{xxix} For more on these and other chemicals, see the Environmental Working Groups’s Campaign for Safe Cosmetics at <http://www.safecosmetics.org/>.

^{xxx} Gus Speth reminds us that the world is experiencing a water crisis, and that it promises to get worse. More than a billion people worldwide lack easy access to fresh water, even though human beings already withdraw over half of available water. About half of the world’s wetlands have already been lost, and people are “mining” finite supplies of groundwater like it was going out of style—which it is. Even in the United States, which is relatively wet, the EPA estimates that if water consumption remains at 100 gallons per person per day, 36 states will face water shortages by 2013—just when today’s first-year students graduate. James Gustave Speth, *The Bridge at the End of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* (New Haven: Yale University Press, 2008), pp. 32-34.

^{xxxi} At Penn State in 1998, researchers found that “students consume about 60 gallons of water per person per day: 40 in showers, 10 in toilet flushing, 3 in the sink, and 7 in clothes washing. They seldom drink water.” Christopher Uhl and Garrett Fitzgerald, “The Sustainable University,” at <http://www.rps.psu.edu/may99/sustainable.html>. Both low-flow showerheads and timed showers, however, arouse students’ sense of entitlement, the expectation that they can use as much as they want of any resource the college provides. Even so, college students and other Americans still use less water in the shower than in our food. In the aggregate, agriculture consumes eighty percent of America’s freshwater resources. See Chapter 4.

^{xxxii} Elizabeth Shove, “Ratchets, Standards and the Reinvention of Normality,” in *Consumption, Everyday Life and Sustainability*, at <http://www.lancs.ac.uk/fass/projects/esf/onlinehandbook.pdf>. The St. Olaf bathtub story is recounted on the website of the Shaw-Olson Center for College History at <http://www.stolaf.edu/collections/archives/scripts/oldmain/5.html>. Pricing ecosystem services like water can be a way of bringing our remote control of nature to mind. One problem for environmentalism is that many of our environmental impacts are out of sight and out of mind, and so they’re not salient in our consciousness. We need ways to un-distance ourselves by finding of making our impacts sensual and salient.

^{xxxiii} Andrea Olsen, *Body and Earth: An Experiential Guide* (Middlebury: Middlebury College Press, 2002), pp. 84-85.

^{xxxiv} Uhl also reminds us that our bodies—like all other earthly bodies—are stardust, an evolutionary adaptation of matter that resulted from the Big Bang. Christopher Uhl, *Developing Ecological Consciousness*, pp. 14-20, 52.

^{xxxv} Christopher Uhl, *Developing Ecological Consciousness*, pp. 93, 98; US Environmental Protection Agency, “Why Should You Be Concerned About Air Pollution?” at <http://www.epa.gov/air/caa/peg/concern.html>.

^{xxxvi} Rich Weiss, “Gut Reaction,” *Washington Post Weekly* (June 12-18, 2007). See also “Bacteria Outnumber Cells in Human Body,” *All Things Considered* at <http://www.npr.org/templates/story/story.php?storyId=5527426>.

^{xxxvii} Tara Parker Pope, “Germ Fighters May Lead to Hardier Germs,” *New York Times* (30 October 2007) at <http://query.nytimes.com/gst/fullpage.html?res=950DE3DC1638F933A05753C1A9619C8B63&scp=4&sq=antibacterial+resistance&st=nyt>.

^{xxxviii} David E. Duncan, “The Pollution Within,” *National Geographic* (October 2006) at <http://ngm.nationalgeographic.com/2006/10/toxic-people/duncan-text>. Duncan points out that all of these chemicals have benefits, and that dosages are still low, but he reminds us that we are conducting a massive chemistry experiment on the planet and on our bodies. Other organisms are even more susceptible to our chemical experiments. Amphibians, for example, absorb our toxins through the skin so that we can see in frogs and toads some of the mutations that come from our chemicalization of the world.

^{xxxix} Carl Elliott, *Better Than Well: American Medicine Meets the American Dream* (W.W. Norton, 2004). Women look for men who are tall and strong, with a facial structure uncompromised by diseases. And before the age of silicone, full breasts may have helped a man estimate a woman’s age.

^{x1} Eric Sorenson, *Seven Wonders for a Cool Planet* (San Francisco: Sierra Club Books, 2008), p. 35. For an instructive essay on the nature of habits and routines, see Bente Halkier, “Routinisation or Reflexivity? Consumers and Normative Claims for Environmental Consideration,” in *Ordinary Consumption*, ed. Jukka Gronow and Alan Warde (New York: Routledge, 2001), pp. 25-44. For more on the moral choices involved in global weirding, see Stephen M. Gardiner, “Ethics and Global Climate Change,” *Ethics* (September 2004): 555-600 and the “White Paper on the Ethical Dimensions of Climate Change” produced by the Rock Ethics Institute at Penn State, available online at <http://www.psu.edu/dept/rockethics/climate/whitepaper/edcc-whitepaper.pdf>. And thanks to Maren Gelle for the connection between our conscious and conscientious lives.

^{xlii} John R. Ehrenfeld, *Sustainability by Design: A Subversive Strategy for Transforming Our Consumer Culture* (New Haven: Yale University Press, 2008), pp. 147, 154-55. Ehrenfeld calls this process “presencing”—bringing the “out of sight and out of mind” into conscious consideration.

^{xliii} Anthony A. Leiserowitz and Lisa O. Fernandez, *Toward a New Consciousness: Values to Sustain Human and Natural Communities* (Yale School of Forestry and Environmental Studies, 2008), p. 18. A pdf of this publication is located at <http://environment.yale.edu/documents/downloads/o-u/Toward-A-New-Consciousness.pdf>.

^{xliiii} Tony Cortese of Second Nature (www.secondnature.org) suggests that such systems thinking is essential as a common language in colleges and universities preparing students for the ecological revolution of the 21st century. He contends, that “without such interdisciplinary systemic thinking, the net results to solve these problems are often narrow, ineffective solutions, or worse, actually increase the harm to people and the environment in another place or another time. Systems thinking is essential to developing a shared framework for understanding and dealing with complex, nonlinear systems that are characteristic of both society and the natural world.” For a great (and free) introduction to systems thinking, see *Linking Thinking: New Perspectives on Thinking and Learning for Sustainability*, at http://www.eauc.org.uk/file_uploads/linkingthinking-302.pdf.