## ARTICLES

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**The Blue River Declaration: An Ethic of the Earth**  
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With introduction and context by Michael Nelson, MN is pleased to reprint this thoughtful and lively declaration by a distinguished group of engaged thinkers in search of “a concordance between ecological and moral principles, and... an ethic that is of, rather than against, the Earth...”

**The Historical Sense of Being in the Writings of Aldo Leopold**  
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Noting that Leopold’s “reflections on the interactions between humans and the land forced him into the philosophical realm,” this wide-ranging article focuses on history in his writings. It develops a comparison and contrast between the philosophical perspectives of Leopold and Heidegger.

**Advising Ethics in Synthetic Biology: A Review of Two Reports**  
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Can government regulation control the development and use of synthetic biology from an ethical perspective before that technology is fully developed and before problematic social or ecological consequences occur? This article reviews and compares two recent reports—one from the US and one from the EU—that broach the issue of precautionary and ethical regulation.

**Civic Agriculture in Chicago**  
*By GAVIN VAN HORN // PAGE 26*

This is a wide-ranging article on the theory and practice of “civic agriculture” focusing in particular on initiatives now underway in Chicago and the Chicago region. Not simply a greener alternative to conventional agriculture, civic agriculture links the cultivation of soil with the cultivation of citizenship, in particular democratic ecological citizenship. This article also provides a discussion of the concept and ethics of place.

## REVIEWS AND REFLECTIONS

**In Search of the Ethics of Place**  
*By JULIANA DEVRIES // PAGE 42*
NATURAL SYSTEMS HAVE FUNCTIONAL limits; human actions have systemic consequences. What part of that don’t we understand?

Not much, actually. In truth, most human beings most of the time do understand this in a multiplicity of ways—cognitively, scientifically, experientially, ethically, and emotionally. They do so not only because of the advance of science, literacy, and education, but also because it is knowledge deeply ingrained in ordinary human experience itself, our fundamental encounter with the world as metabolic creatures. Anthropological studies of hunting and gathering cultures confirm the power of such knowledge and the essential humanity of ways of life that have been rooted in it. So does important recent work on the ethics and epistemology of place, some of which is reviewed by Juliana DeVries in this issue.

Our phenomenological understanding of natural limits and the human consequences of ignoring them has been enlarged and enhanced in our time by a growing body of research and practice in ecological restoration and in the interdisciplinary field of conservation biology. Dangerous transformations in atmospheric, ocean, and polar and glacial systems have spurred massive efforts to increase our understanding of what is causing the (mainly deleterious and disruptive) changes, much as the AIDS pandemic prompted over the course of three decades a significant advance in the scientific understanding of the human immune system. Other symptoms of planetary illness have also given impetus to the search for an understanding of systemic effects on a large scale; such symptoms include alarming rates of biodiversity loss, the build-up of environmental toxins and chemicals with unknown long-term effects, and the depletion or pollution of fresh water sources.

Maybe the metaphors of the human immune system writ large and a kind of ecological acquired immune deficiency syndrome suggest some useful lines of thought. The planetary systems that support life in its most fundamental physical, chemical, and organic manifestations have boundaries and thresholds. And so do the biological and social systems that support flourishing, abundant, healthy life, with its capacity for evolutionary adaptation, its biotic diversity, its resilience.

What’s more, human beings do not stand apart from these systems of life by any means. We fully partake of, and depend upon, the systemic preconditions of life for our own survival. Yes. But, short of our very survival being at stake, a less noticed fact is that we also depend upon the systemic preconditions of flourishing life for our own humanity. What part of that don’t we understand?

Well, quite a lot, actually. We think of the human realm as set apart from the rest of the world as the only locus of meaning and value. Planetary systems, even when they are scientifically well understood, are seen as things we live off of, not as places we live within. The cultural concepts available to individuals in contemporary America to define a self-identity are growing increasingly thin and impoverished. People with a consumer’s sense of relationship and a tourist’s sense of place cannot grasp the notion that our humanity depends on healthy natural and social systems or that we have responsibility for preserving them. Aren’t most of us consumers and tourists now?
But these considerations do not get to the root of the problem for they are ideological and attitudinal. I think that the real root of our problem is properly called “political” although like our common parlance for expressing self-identity, our current language for talking about politics is deeply impoverished. Still, the problem is political in the following, fundamental sense: the problem of politics is not to seek power, but to resist it; and not to deny vulnerability and dependency, but to embrace them creatively. The problem of politics is to resist the kind of power and domination that actually render its agents impotent and enthralled. The problem of politics is to accept restraints on behalf of communal agency and relational freedom. Democratic politics says no to pride, anthropocentric narcissism, and desire, and says yes to the accommodation of natural limits in ways that are just and promote the beauty, health, and integrity of the political community.

In this formulation, I deliberately invoke the land ethic and appropriate it in the cause of what I am here calling democratic politics as the solution to the great challenge of our time. Leopold wanted human beings to think of themselves as, and to act as though they were, “plain members and citizens” of the biotic community. He used this democratic trope, with its classical pedigree and protestant resonance, to good effect. To be a citizen in fact is to be a plain citizen. And to be a citizen is to be just.

Democracy calls for just, plain citizens. Aristotle well understood, I believe, this notion when he said that human beings were “political animals” (zoon politicon). By this he meant that humans could—and must—live in political communities if they are to live in accordance with their nature. And he defined politics in terms of creating a culture and social organization of individuals with a special kind of self-identity (citizenship), ruling themselves in common with equitable and just laws (isonomia), and seeking to achieve the human good together and the common good for all (politia or res publica). Citizenship for Aristotle was active, not passive. It consisted of ruling and being ruled in turn.

When viewed from this vantage point, it is clear that what we now call “politics” and “democracy” in the United States is quite far removed from structures and value systems that can be expected to lead toward governance that is just in its trusteeship over the good of the human and the biotic community. Our current politics cannot be the crucible for the reconciliation of humans and natural systems, nor of accommodation to the functional limits of those systems, because it offers no counterpoint to the broader ethos and worldview of technological mastery of nature. What we call politics today is not a bridle on the orientation of mastery but a handmaiden or extension of that orientation. And this politics cannot really be the crucible for the reconciliation of humans and natural systems, nor of accommodation to the functional limits of those systems, because it offers no counterpoint to the broader ethos and worldview of technological mastery of nature. What we call politics today is not a bridle on the orientation of mastery but a handmaiden or extension of that orientation.

And this politics cannot really be a democracy in the normative sense because its values are the values of competition and mastery, not the values of citizenship and ruling and being ruled in turn. I say this despite the trappings we do have of democratic procedure, such as free and fair (i.e., purchased at exceedingly great expense and gerrymandered) elections.

What would another politics look like, and can one be devised that will govern us both for living once more within the safe operating margins of planetary systems and for controlling the consequences of our actions?
Here is a sketch of two possible answers, two available modes of another democratic politics in an Anthropocene age. The first involves a reorientation of our culture and worldview; a transformation of our “soul” as a political community, turning us from being a people of competitive consumption into a people of sustainable ecological responsibility, from “too big to fail” to “small is beautiful” (remember that?).

The second kind of alternative democratic politics is about the institutionalization and empowerment of participatory and deliberative governance within a diverse and pluralistic society and culture, a “panarchy” as the Resilience Alliance scientists call it. This is the kind of democratic governance that grows directly out of what Hannah Arendt called “action in concert with others, shaped by debate and deliberation.”

There are some important similarities between these two types of democratic politics. They are both committed to the strategy of creating counter-publics in order to bring about change and to challenge the hegemony of mainstream culture and politics. They often share strategy and tactics and mix in real-world political activism and large-scale protest movements. I am not sure how useful this distinction is for understanding the popular protests that have taken place in many Muslim countries during the past year or recently in Russia. But they do seem to be definite elements of the Occupy movement here in the United States. Another politics does not have to supplant mainstream politics, it just needs to set cultural and social forces in motion that will alter perceptions and change the parameters of what is considered realistic in elite policy circles.

However, there are important differences as well. Worldview democracy strives to bring into being and to express deep cultural and ethical commitments. It offers not just a new direction of governance but a new form of life, a new understanding of human well-being, and a new story concerning nature, its laws, and its meanings. If this is a vision that leaders actually try to instill in the masses of people and if they can do so, then democratic change can bubble up in either the form of direct participatory democracy or via electoral mechanisms of representative democracy. If this cultural transformation of hearts and minds does not proceed well, however, leaders will be tempted to assume interpretative and expressive authority for themselves. They will become the guardians of the truths and values of the worldview and the agents of its enactment in the world. Democratic citizenship will become an unnecessary step in the process.

The temptation to become a transformational leader/prophet in this more authoritarian sense is particularly strong when circumstances make one pessimistic about the willingness or the capacity of the masses to internalize new values and support change. A recent PEW survey found that 59 percent of Americans believed in global warming in 2010, compared with 79 percent in 2006.

The dilemma of deliberative democracy is rather different. It is designed to thrive on pluralism of belief and difference of opinion. But it must inculcate at least a minimal set of value commitments to the procedures of “debate and deliberation.” Realism, reason, and integrity preserving compromise (the genius of media-
tion and getting to yes) are its creed. Toleration and diversity are its life-blood. Deliberative democratic governance has been shown to function well on a medium to small scale, in population units of 100,000 or less, and when its political relationships are closely embedded in non-political social or civic relationships within the community. Under these conditions, it is alert to natural, social, and historical place. It can be attentive to ecological resiliency and social justice at the same time.

On the other hand, deliberative democracy is extremely vulnerable to forces that disrupt the fabric of communities, are socially divisive, undermine trust, and drive people to close ranks into postures of defensive resentment. The global and domestic economic dislocations of the past twenty years, the sharply rising inequality in the distribution of wealth and income, the churning of the job market, and the marginalization of those without marketable skills are some of the many factors that tatter civic society, privatize self-consciousness, and undermine the possibility of the kind of citizenship that deliberative democracy in its proper form and function requires. Are these factors temporary aberrations, or are they becoming the normal institutionalized patterns of global capitalism? If they are, then we have a perfect democratic storm: humanity is exceeding the safe operating margins of planetary systems at precisely the historical moment when the political economy of the world makes it least likely that democratic governance, especially deliberative democratic governance, will be able to respond.

No one, I think—least of all me—has through-going answers to this dilemma. But many wise and dedicated people are tackling it one step and one bite at a time. A sampling of ideas and new approaches are represented in this issue of MN.

This issue begins with an important statement of principles and values from the Blue River Quorum, a distinguished group of engaged conservationists and environmentalists who have thought deeply about another way of living, governing ourselves, and pursuing the human and the natural good more richly than we have been doing of late. Their goal is succinctly and powerfully stated: “a concordance between ecological and moral principles, and . . . an ethic that is of, rather than against, the Earth.” This declaration is reprinted with a brief introduction of background and context by one of the members of the Quorum, Michael Nelson.

The Blue River Declaration resounds with echoes of the thought and inspiration of Aldo Leopold. Qi Feng Lin, who is currently a fellow working with the Center and based at McGill University, explores the notion of history and being in Leopold’s work. In addition to discussing a dimension of Leopold’s thought that is sometimes overlooked, this article explores a connection with approaches to metaphysics and ontology developed by Martin Heidegger, one of the most notable and influential philosophers of the twentieth century.

From the historical nature of being, we then turn to the artificial nature of life in Joachim Boldt’s discussion of the ethics and regulation of synthetic biology. Readers will recall that Boldt previously addressed synthetic biology in an essay in Minding Nature 3.1 (April 2010). The question is, Can government regulation control the development and use of scientific technology
from an ethical perspective before that technology is fully developed and before problematic social or ecological consequences occur? Boldt reviews and compares two recent reports—one from the European Union’s Group on Ethics in Science and New Technologies, and the other from the U.S. Presidential Commission for the Study of Bioethical Issues. While there is a good deal of overlap between the two documents, the European and the American perspectives do differ in some important ways. For example, while the European report, in Boldt’s words, “contemplates environmental ethics as a possible overarching assessment framework for biotechnology,” the American analysis is much more skeptical of an ecocentric perspective, and basically sets it aside. This is not the first time that American bioethicists have been less critical than their European counterparts when it comes to biotechnology. A similar pattern of response has been evident for many years in the discussion of genetically modified food, for example.

However that may be, the biotechnological worldview concerning agriculture and food stands in sharp contrast to the perspective of “civic agriculture” that my colleague Gavin Van Horn explores in his essay. His overriding concern is consonant with what I have said about the need for another politics. The study of civic agriculture is part of a broader reflection on, as he aptly puts it, “both what we are for and what we are against, how we understand our place within the cosmos and in our particular neighborhood,” and it “offer[s] us a way to make sense of the larger systems of which we are a part.” Accordingly, civic agriculture is not only about healthy food and healthy eating; it is about healthy communities—citizenship and an ethic of place. Drawing on case studies of local practice in the Chicago area—Prairie Crossing in Grayslake, the Academy for Global Citizenship, and the Experimental Station in the Hyde Park neighborhood of Chicago—Van Horn inaugurates what I expect and hope will be a growing and expanding body of public discourse on the theory and practice of civic agriculture, as an important part of the broader movement of civic renewal in America. (For further reading on this general topic, I would recommend Civic Innovation in America: Community Empowerment, Public Policy, and the Movement for Civic Renewal by Carmen Sirianni and Lewis Friedland.)

Can we find—or fashion—another economics and another politics that can take us closer to Blue River? We could do worse—and we are. Just as it is imperative to become responsible, as Hans Jonas teaches us, so too it is imperative to sustain hope.
Among the ancient, moss-draped Douglas firs at the H.J. Andrews Experimental Forest in the Oregon Cascades, twenty-three people gathered to take seriously the task of penning an environmental ethic appropriate for our time. We were philosophers, scientists, writers, poets, students, and professors of various bents. Over four intense days we thought collaboratively and open-mindedly, we learned from one another, and we worked hard to create something together none of us could create alone.

The following convictions brought us together and shaped our views as we began our work: We live at a time of profound environmental crisis. Our most fundamental ideas about the nature of this world, our assumptions about the relationship between human beings and this world, and our corresponding notions of value and proper conduct are flawed at their core, inaccurate, harmful to both humans and this world, and desperately in need of rethinking. Our current ethical beliefs, while consistent with those ideas (beliefs that commit us to ideas mistakenly equating happiness with accumulation, or the belief that growth can be unlimited), are likewise dysfunctional. These beliefs are incompatible with the facts of the working world, a world that is in fact resilient yet finite, interdependent, co-evolved, and inclusive of humans, boldly rejecting all forms of human exceptionalism. Our current ways of living on this planet are not only destructive, they are morally shameful.

We also believed, desperately, in the necessity of a new environmental ethic. We were encouraged by Aldo Leopold’s assurance that extending ethics to “the land” was “an evolutionary possibility.” We could do it. His urging that such an ethical extension was “an ecological necessity” infused our work with a sense of urgency. We had to do it. We were following at least half of Leopold’s advice when he pointed out, “nothing so important as an ethic is ever ‘written’ … it evolve[s] in the minds of a thinking community.”

So we gathered our thinking community. We knew, too, that an ethic must inspire us to be better people, to live better lives. We took seriously the advice of French author, Antoine de Saint-Exupéry, who wrote, “If you want to build a ship, don’t drum up men and gather wood, divide the work and give orders. Instead, teach them to yearn for the vast and endless sea.” So we wanted to write just such an ethical statement: a belief or set of beliefs about what is right, and good, and worthy, and of value; beliefs that guide our actions and behaviors with each other and with the Earth.

Finally, we began with the belief that we fiercely protect what we love, and we love what we feel we belong to. Again, Aldo Leopold: “All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts.” Since our current lives and institutions tragically enact an ethic not of, or for, this Earth (our home), an ethic not worthy of us as Earthlings (members of the community of Earth), the work to nurture a new environmental ethic is also the work to re-weave communities, both human to human and human to non-human. Let us, all of us, begin this work.

Michael P. Nelson is Professor of Fisheries and Wildlife at Michigan State University in East Lansing, Michigan.
The Blue River Declaration: An Ethic of the Earth

By THE BLUE RIVER QUORUM

A truly adaptive civilization will align its ethics with the ways of the Earth. A civilization that ignores the deep constraints of its world will find itself in exactly the situation we face now, on the threshold of making the planet inhospitable to humankind and other species. The questions of our time are thus: What is our best current understanding of the nature of the world? What does that understanding tell us about how we might create a concordance between ecological and moral principles, and thus imagine an ethic that is of, rather than against, the Earth?

WHAT IS THE WORLD?

In our time, science, religious traditions, Earth’s many cultures, and artistic insights are all converging on a shared understanding of the nature of the world: The Earth is our home. It will always be our only source of shelter, sustenance, and inspiration. There is no other place for us to go.

The Earth is part of the creative unfolding of the universe. From the raw materials of the stars, life sprang forth and radiated into species after species, including human beings. The human species is richly varied, with a multitude of persons, cultures, and histories. We humans are kin to one another and to all the other beings on the planet; we share common ancestors and common substance, and we will share a common fate. Like humans, other beings are not merely commodities or service-providers, but have their own intelligence, agency, and urging toward life.

We live in a world of nested systems. Living things are created and shaped by their relationships to others and to the environment. No one is merely an isolated ego in a bag of skin, but something more resembling a note in a multidimensional symphony.

The world is dynamic at every scale. By processes that are probabilistic and often unpredictable, the world unfolds into emergent states of being. Our time of song and suffering is one such point in time. The life systems of the world can be resilient, having the ability to endure through change. But changes create cascades of new events. When small changes build up and cross thresholds, sudden large transformations can occur. Thus, the world in its present form—the world we love and inhabit—is contingent. It may be, or it may cease to be. If the Earth changes in ways that undermine our lives, there is nothing we can do to change it back.

The Earth is finite in its resources and capacities. All its inhabitants live within its limitations and by its rules. And although life on Earth is resilient and robust, rapid irreversible changes and mass extinc tion events have occurred in the past. As a result of ignoring the Earth’s boundaries, we are on the brink of causing a transformation of the Earth and the sixth great mass extinction.
Our knowledge of the Earth will always be incomplete. But we know that the world is beautiful. Its life forms, unique in the universe, are wonderful in their grandeur and detail. It follows that the world is worthy of reverence, awe, and care.

WHO ARE WE HUMANS?

We humans have become who we are through a long process of biological and cultural evolution. As do many other social species, we possess a complex and sometimes contradictory set of possibilities. We are competitive and cooperative, callous and empathetic, destructive and healing, intuitive and rational. Moreover, we are creatures of consciousness, emotion, and imagination, beings through whom the universe has evolved the capacity to celebrate its own beauty and explore its own meaning in the languages of science and story.

We are dependent on the sun and the Earth for everything. Without warmth, air, water, and fellow beings, we would quickly die. At the same time, we are co-creators of the Earth as we know it, shaping with our decisions the future of the places we inhabit, even as our relation to those places shapes us. In this way, we are members of a community of interdependent parts.

Humans are beings who search for meaning. Our beliefs about the origins of the cosmos influence the way we relate to each other, to other living things, and to the habitats we both depend upon and constitute. Sometimes, we experience wonder and awe at the mysteries of the universe, and fall silent in reverence. Yet, as we strive to comprehend the world, we often divide it into hierarchies of value—pure/impure, spiritual/material, human/subhuman. Although we often exclude and exploit those we judge less valuable than ourselves, we yearn for belonging.

We are born to care. From the first moments of our lives, we seek connection. We deeply value loving and being loved. We find comfort in close connection to other people, other species, and to the wild world itself.

We are adaptable and resilient. Our imagination gives us the ability to envision alternative futures and to adapt our behaviors toward their achievement. When we are at our best, we develop cultural systems in which we, other living beings, and ecosystems can flourish.

We are moral beings. We have the capacity to reason about what is better and worse, just and unjust, worthy and demeaning, and we have the capacity to act in ways that are better, more just, more worthy, more beautiful. Because we are these things, we can change. Because we are these things, change will be difficult.

HOW, THEN, SHALL WE LIVE?

Humanity is called to imagine an ethic that not only acknowledges but emulates the ways by which life thrives on Earth. How do we act when we truly understand that we live in complete dependence on an Earth that is interconnected, interdependent, finite, and resilient?

Given that life on Earth is interconnected, we are called to affirm that all flourishing is mutual, and that damage to the part entails damage to the whole. Accordingly, our virtues are cooperation, respect, prudence, foresight, and justice. We have the responsibility to honor our obligations to future generations of all beings and to take their interests into account when we reflect on the consequences of our actions. To discount the future, to take all we need for our own well-being and leave nothing for others, is unthinkable. We should take only what the Earth offers, and leave as much and as good as we take. To live by a principle of reciprocity, giving as we receive, re-creates the richness of life, even as we partake of it. Then, our harvests are respectful and thoughtful. We learn to listen, which means that we learn to value congeniality, patience, fairness, and moral courage, which creates the possibility of heroism in the face of disagreement and discord. Moreover, the new ethic calls us to remedy destructive distributions of wealth and power. It is wrong when some are made to bear the risks of the recklessness of others, or assume the burden of others’
privilege, or pay with their health and hopes the real costs of destructive practices.

Given that humanity is inescapably dependent on the Earth for gifts both material and spiritual, we are called to be grateful and humble. To be grateful is to express joy for the fertility of the Earth, to be attentive to its gifts, to celebrate its bounty, and to accept responsibility for its care. Humility is based on an understanding of our own roots in the soil; we recognize the danger we face and the damage we do when we get that wrong. So we are well-advised to humble ourselves in order to claim to knowledge; and with art and heart and science, to strive for continuous learning that is open to evidence from all ways of knowing and from the Earth itself. The generosity of the Earth models generosity in our relations with others, and calls for collective outrage when we fail in that duty. A new ethic calls us to defend and nurture the regenerative potential of the Earth, to return Earth’s generosity with our own healing gifts of mind, body, emotion, and spirit. We can find joy and justice in sustaining lives that sustain our own.

Given that the Earth’s resources and resilience are finite, human flourishing depends on embracing a new ethic of self-restraint to replace a destructive ethos of excess. Greed is not a virtue; rather, the endless and pointless accumulation of wealth is a social pathology and a terrible mistake, with destructive social, spiritual, and ecological consequences. Limitless economic growth as a measure of human well-being is inconsistent with the continuity of life on Earth. It should be replaced by an economics of regeneration. Simple lifestyles that include thriftiness, beauty, community, and sharing are pathways to happiness. Celebrated virtues are generosity and resourcefulness.

Given that life on Earth is resilient, humanity can take courage in Earth’s power to heal. We can find guidance in the richness of diverse cultures and ecosystems if we honor and protect difference. Equality and justice are necessary conditions for civilizations that endure, and truth-telling has strong regenerative power. Virtues we can embody are human courage, creative imagination, and perseverance in the face of long odds. The effect of humans on the land can be healing; our obligation is to imagine into existence new ways to live that create resilient and robust habitats. If we can undo some of the damage we have done, this is the best work available to us. On the other hand, damaging the natural sources of resilience—degrading oceans, atmosphere, soil, biodiversity—is both foolhardy and an offense against the future, not worthy of us as rational and moral beings. If hope fails us, the moral abdication of despair is not an alternative. Beyond hope we can inhabit the wide moral ground of personal integrity, matching our actions to our moral convictions. Through conscientious decisions, we can refuse to be made into instruments of destruction. We can make our lives and our communities into works of art that express our deepest values.

The necessity of achieving a concordance between ecological and moral principles, and the new ethic born of this necessity, calls into question far more than we might think. It calls us to question our current capitalist economic systems, our educational systems, our food production systems, our systems of land use and ownership. It calls us to re-examine what it means to be happy, and what it means to be smart. This will not be easy. But new futures are continuously being imagined and tested, resulting in new social and ecological possibilities. This questioning will release the power and beauty of the human imagination to create more collaborative economies, more mindful ways of living, more deeply felt arts, and more inclusive processes that acknowledge the ways of life of all beings. In this sheltering home, we can begin to restore both the natural world and the human spirit.
The American conservationist Aldo Leopold (1887–1948) gave much thought to the relationship between humans and nature and how human society can operate in a manner attuned to the principles of ecology. Having worked in different positions on the frontline of conservation, he was alarmed at the thoughtless destruction of the biophysical landscape and the mental dissociation from the natural environment that were brought about by changes in both rural and urban life and by modern developments in economics and technology. Seeking to counter these tendencies—which are not unlike those of our present circumstances—and recognizing that evolving technologies, policies, and economics are inadequate or may even hinder conservation efforts, Leopold turned his mind toward understanding human behavior and the relationship between humans and nature.

Leopold’s intellectual enterprise culminated in a capstone concept called the land ethic, articulated in an essay of the same name in *A Sand County Almanac*. He proposed that the domain of ethical consideration be extended to include “the community,” what he used to mean “the soil, waters, fauna, and flora, as well as people.” The land ethic, he wrote, transforms the role of *Homo sapiens* from conqueror to “plain member and citizen of the land-community.” The aim of conservation, it followed, was to create new means for *Homo sapiens* to live within the capacity of the biosphere.

Leopold’s view that human society needs to engage in conservation practices in order to “put human ecology on a permanent footing” is *prima facie* simple and easy to understand. However, conservation is a difficult concept to grasp in terms of the specific objectives and actions that are needed. The issue of conservation not only forces us to rethink the different aspects of modern living; it also reflects the complex and unfathomable quality of nature and the universe and raises the metaphysical question of the purpose of human existence. Leopold may not have been a philosopher in the formal academic sense, but his reflections on the interactions between humans and the land forced him into the philosophical realm.

In his writings Leopold often touched on topics like history and wilderness that he felt had the potential to affect human character. History represents the experience of previous generations from which one can draw lessons. Wilderness, on the other hand, represents unexplored terrain in our physical landscape; wilderness areas have provided “wealth to the human spirit.”

In this article, I discuss Leopold’s historical sense of being by highlighting history in his writing. I show that Leopold’s extensive use of history in his writing helps ground his sense of being. Before discussing this in Leopold’s writing, I briefly describe Martin Heidegger’s concept of historical being. It provides a
framework for thinking about how an awareness of history can elucidate the nature of one’s being that I then use to think about Leopold’s use of history. The article concludes with a brief reflection of Leopold as a historical figure.

HEIDEGGER’S HISTORICAL BEING

The central concern of the German philosopher Martin Heidegger (1889–1976) is the question of the meaning of being—what does “to exist” mean? A crucial difference is made between being and beings (entities). Accordingly, Heidegger’s question is concerned with the concept of being, “which make[s] beings intelligible as beings.”

In his 1953 book *Introduction to Metaphysics* Heidegger wrote that the contemplation of human existence is ineluctably linked to considerations of history. According to Heidegger, history is not synonymous with the past. Instead, history is viewed more broadly as happening or as the occurrence of events, “an acting and being acted upon which pass through the present, which are determined from out of the future, and which take over the past.”

The essential question Heidegger is posing can be translated as “Why are there essents rather than nothing?” (“Essents” refer to existents, or existent things or beings; in a later translation the word “being” is used instead.) Heidegger views this question as a historical question in the sense that this questioning marks the dawn of history. This assertion arises from Parmenides’ image of man as “historical being (as the historical custodian of being),” which Heidegger hails as a crucial definition of being-human for the West. The key step is apprehension, *Vernehmung*, which is thought of slightly differently here: it is not a function that man has as an attribute, but rather a happening that has man. Heidegger notes that being-human differs from being in general in that both being and apprehension reside in humans. Apprehension is the process in which man first enters into history as a being.

But how is the essence of being-human distinguished from the essence of being in general? How do the two relate to each other? Apprehension brings together being-human and being in that it enables humans to contemplate the essence of being, which includes being-human; however, apprehension also differentiates the former from the latter since it is only in man that apprehension resides. Heidegger writes: “The separation between being and being-human comes to light in their togetherness.”

A connection between self and others is established through the apprehension of oneself in the context of history. “Man’s selfhood means this: he must transform the being that discloses itself to him into history and bring himself to stand in it. Selfhood does not mean that he is primarily an ‘ego’ and an individual. This he is no more than he is a we, a community.”

Heidegger’s focus on the historical nature of being-human does not mean that one is restricted to following the actions of one’s cultural ancestors. Instead, one authentically engages with one’s cultural heritage as a guiding resource from which one can draw in one’s own life. One is genuinely free when one recognizes that one is a finite being with a heritage and when one achieves an authentic relationship with this heritage through the creative appropriation of it.

According to Heidegger’s concept of humans as historical beings, history plays a central role in being-human. With this in mind I now discuss how Leopold uses history in his writing.

HISTORY IN THE WRITING OF ALDO LEOPOLD

Leopold frequently evoked history in his writings to provide a rich context for his readers and to connect seemingly disparate events. Leopold displayed an aptitude for history in his high school in Burlington, Iowa: in history class his notes and essays ranged
over topics from the Greeks to the Romans to the heroes of American independence, and the essays were accompanied by carefully prepared maps.\textsuperscript{15} This fascination with history continued into his adult life: in his later writing his references range from the history of hunting in feudal Europe, the Holy Roman Empire, and the Mongolian dynasty in East Asia (in an essay on protecting wilderness) to the various historical vignettes of Wisconsin and the American midwest (recounted during the sawing of an oak tree).\textsuperscript{16}

In his professional life Leopold grappled with complicated issues at the interface of humans and the environment. He habitually drew upon history as he tried to understand the characteristics of the land and the roots of human behavior.\textsuperscript{17} He not only displayed a solid grasp of human and natural history but could weave them together to form a coherent narrative of the interaction between humans and the land. This is shown, for example, in his 1933 essay “The Conservation Ethic,” which was widely read and frequently cited. In the essay he notes that a “harmonious relation to land is more intricate, and of more consequence to civilization, than the historian of its progress seem to realize.”\textsuperscript{18} The essay was a significant milepost in Leopold’s intellectual development and was incorporated fifteen years later into the capstone essay “The Land Ethic” in A Sand County Almanac.\textsuperscript{19}

Leopold’s use of history can be interpreted as seeking to achieve three interrelated goals: (1) to underscore the place of humans in history; (2) to illustrate how historical events have been to some extent influenced by humans’ interaction with the land; and (3) to raise ecological and historical awareness and spur action toward careful intervention in the environment. Each of these will now be explored in turn.

**THE PLACE OF HUMANS IN HISTORY**

The historical events cited in Leopold’s writing have the effect of forcing the reader to consider the biophysical basis of their lives. He mentions events in natural history that occur on geological, evolutionary, and ecological time-scales, thus providing a counter-perspective to the short-sighted human time-scale that most people are accustomed to. We are reminded that “we harness cars to the solar energy impounded in carboniferous forests,” and that the land of Wisconsin had remained largely stable from the end of the glacial period twenty thousand years ago until 1840.\textsuperscript{20} History is also embodied in species that have endured through the ages, such as the sandhill cranes that Leopold describes in the essay “Marshland Elegy”:

> [O]ur appreciation of the crane grows with the slow unravelling of earthly history. His tribe, we now know, stems out of the remote Eocene. The other members of the fauna in which he originated are long since entombed within the hills. When we hear his call we hear no mere bird. We hear the trumpet in the orchestra of evolution. He is the symbol of our untamable past, of that incredible sweep of millennia which underlies and conditions the daily affairs of birds and men.

And so they live and have their being—these cranes—not in the constricted present, but in the wider reaches of evolutionary time. Their annual return is the ticking of the geologic clock. Upon the place of their return they confer a peculiar distinction. Amid the endless mediocrity of the commonplace, a crane marsh holds a paleontological patent of nobility, won in the march of aeons, and revocable only by shot gun. The sadness discernible in some marsh arises, perhaps, from their once having harbored cranes. Now they stand humbled, adrift in history.\textsuperscript{21}

Cranes may not possess a sense of time but their species and life-cycle, as Leopold describes them, unfold to the cadence of geological time, extending from the Eocene some 50 million years ago to the present. In comparison, *Homo sapiens* is a youthful species that emerged from present-day Ethiopia about 195,000 years ago.\textsuperscript{22} From this perspective the tendency of modern humans to focus on the short term comes across as callous, however insuperable it may be. More forethought and reflection are needed
in the relationship of humans to the land and to the animals and plants that grow upon it.

Leopold refers to significant historical events in the human realm as well. In “The Land Ethic,” for example, Leopold alludes to the Mosaic Decalogue, created to govern relationships between individuals, and to the episode in which “God-like Odysseus” hanged the slave-girls who had been unfaithful to his household during his absence. Leopold used these historical examples to show how ethical criteria have evolved and expanded over time into new spheres (e.g., treating human-chattels as property was appropriate in ancient Greece but unacceptable now). This had the effect of locating the ethical system during his time in the scale of ethical evolution, marking preceding changes and hinting at impending changes. Leopold felt that the time had come to extend ethical criteria to include the broader biotic community. Leopold’s conviction was that humans would hopefully reconsider themselves and the biotic community in a different way when confronted with the realities of natural history.

THE INFLUENCE OF THE PHYSICAL ENVIRONMENT ON HUMAN HISTORY

Leopold held that a durable civilization must be based on harmonious relations to land. He notes that “[u]nforeseen ecological reactions not only make or break history in a few exception enterprises—they condition, circumscribe, delimit, and warp all enterprises, both economic and cultural, that pertain to land.” An “ecological interpretation of history” would reveal that historical events were actually “biotic interactions between people and land.” As an example, Leopold cites the effect of plant succession in Kentucky on the history of the Mississippi Valley in the eighteenth and nineteenth centuries:

It is time now to ponder the fact that the cane-lands [of Kentucky], when subjected to the particular mixture of forces represented by the cow, plow, fire, and axe of the pioneer, became bluegrass. What if the plant succession inherent in this dark and bloody ground had, under the impact of these forces, given us some worthless sedge, shrub, or weed? Would Boone and Kenton have held out? Would there have been any overflow into Ohio, Indiana, Illinois, and Missouri? Any Louisiana Purchase? Any transcontinental union of new states?

Any Civil War?...The subsequent drama of American history, here and elsewhere, hung in large degree on the reaction of particular soils to the impact of particular forces exerted by a particular kind and degree of human occupation.

Leopold contended that the critical events in American history “hung on a ‘fortuitous concourse of elements,’ the interplay of which we now dimly decipher by hindsight only.” In a 1941 essay, “Planning for Wildlife,” he proffered a reason for why Nazi Germany coveted Ukraine: the latter’s “prairie soils favor an annual grass, wheat, as the first stage in its plant succession.” If the drama of human history is in part an expression of the human appetite for natural resources, then the environmental and ecological context of history needs to be appreciated.

HISTORY AS A GUIDE FOR FUTURE ACTION

For some readers Leopold may come across as misanthropic, but his aim was to reveal the extent to which modern civilization is at odds with the biophysical realities of the land. He was trying to clarifying the goals and concept of “conservation”: the ways in which our modern civilization could become self-perpetuating instead of self-destructive (or, in Leopold’s words, how human ecology could be set “on a permanent footing”). Leopold realized that this work is immensely difficult and unprecedented. The human ingenuity reflected in engineering achievements pales in comparison to “our utter ineptitude in keeping land fit to live upon.”

Leopold grappled with complicated issues at the interface of humans and the environment. He habitually drew upon history as he tried to understand the characteristics of the land and the roots of human behavior.
figuring out how to align human action along ecological principles. “We now decipher these reactions retrospectively. What could possibly be more important than to foresee and control them?” Leopold recognized that humans occupy a special place in the biotic community. We are the only species capable of making such a lasting impact on the land in such a short span of time. This is felicitously captured in Leopold’s citation of the 1927 poem *Tristram* by Edwin Arlington Robinson:

> Whether you will or not,  
> You are a king, Tristram, for you are one  
> Of the time-tested few that leave the world,  
> When they are gone, not the same place it was.  
> Mark what you leave.\(^3^1\)

The implication here is that humans need to extend ethical criteria to embrace our interactions with land. Leopold made plain that the prevailing “Abrahamic” conception of man as conqueror of the biotic community and of land as property belonging to man needs to be urgently replaced, since man was—and still is—growing in numbers and mechanized capability. This historical import of this task was not lost on Leopold. Failure in not effecting a change in our collective mindset would have long-lasting consequences.

In his 1923 essay “Some Fundamentals of Conservation in the Southwest,” Leopold revealed his awareness of how our present actions become part of history and will subsequently be judged in the future. In the essay’s conclusion Leopold asked whether the “special nobility inherent in the human race” will be manifested as “a society decently respectful of its own and all other life, capable of inhabiting the earth without defiling it,” or as a society possessing self-destructive traits, like the potato bug, “which exterminated the potato, and thereby exterminated itself”; either way, “we will be judged in ‘the derisive silence of eternity.’”\(^3^2\)

**LEOPOLD’S HISTORICAL SENSE OF BEING**

How does Leopold’s sense of history fit into the context of Heidegger’s concept of historical being? While Leopold did not explicitly ask Heidegger’s fundamental question of the essence of being, he appeared to have traced the same path. The question of conservation that Leopold was reflecting upon—how humans can enter into a harmonious relationship with the land—may not be a historical question in Heidegger’s sense that it marked the beginning of history. However—and as noted earlier—previous societies have had to grapple with environmental conservation issues in order to survive, and the course of history is partially influenced by the ability of societies to overcome this challenge.\(^3^3\) In this sense, the problem of conservation can be considered as a historical problem.

While pursuing the question of conservation, Leopold turned toward history, referring to history that is both immediate and distant, both human and natural. History provides a rich source of lessons and experience through which the full measure of human being was revealed. For Leopold, two key steps arise in our relation to history. First, he had a strong sense of learning from history in order to recognize the importance of preserving civilization by maintaining the critical “state of mutual and interdependent cooperation between human animals, other animals, plants, and soils.”\(^3^4\) The imperative here is to align human activity along ecological principles. Guidance for this challenge can be gleaned from historical precedents, which is similar to Heidegger’s idea of engaging with one’s cultural heritage by creatively appropriating it as a guiding resource.

Second, Leopold was mindful of the fact that history is being made every day and was therefore aware that actions need to be carefully considered. This brings to mind Heidegger’s view that one must consider the historical nature of one’s being and how history is happening through the present. In an essay written around 1938, Leopold deplored the overworked status of the technical staff at the Wisconsin Conservation Commission, calling it “a dangerous condition when history is being made daily.”\(^3^5\) His historical awareness is illustrated again in the 1942 essay “The Last Stand.” The last stand of old-growth northern hardwoods in Michigan’s Porcupine Mountains was threatened by wartime cutting, and Leopold wrote the essay to raise public awareness. Leopold cites how the old-growth maple forest is “one of the most highly organized...
communities on earth” that cannot be replaced by artificial planting. He portrayed the Porcupine stand as “a chapter in national history which we should not be allowed to forget. When we abolish the last sample of the Great Uncut, we are, in a sense, burning books.” Cutting the old-growth stand constitutes a historical act of destroying the ecological heritage of the country while extending the destruction caused by the Second World War; hence, cutting it must be avoided.

Wilderness is one of the domains in which individuals can cultivate a sense of history. Invoking Daniel Boone (1734–1820), a famous pioneer and frontiersman in American history, Leopold notes the following on the value of wildlife in American culture:

there is value in any experience that reminds us of our distinctive national origins and evolution, i.e. that stimulates awareness of history. Such awareness is ‘nationalism’ in its best sense. For lack of any other short name, I shall call this, in our case, the ‘split-rail value.’ For example: a boy scout has tanned a coonskin cap, and goes Daniel-Booneing in the willow thicket below the tracks. He is re-enacting American history. He is, to that extent, culturally prepared to face the dark and bloody realities of the present.

In wilderness one can re-enact the same action as their ancestors—like the boy scout who explores the willow thicket—thereby participating in an historical act. The hunter is likewise re-enacting an atavistic and allegorical drama when he is pursuing his quarry—“the eternal chase!” For Leopold, the pattern of historical relationships between humans and other organisms or things is replicated, to a certain extent, during the development of individual humans: “ontogeny repeats phylogeny in society as well as in the individual.” Thus, the boy scout will explore the willow thicket just as Leopold had explored in his adolescence the swamp woods and ravines in Burlington, Iowa.

This can be interpreted as an example of what Heidegger means when he writes that by apprehending oneself in the context of history, a connection is established between self and others (though when Heidegger formulated his concept of being, he was probably not thinking of community as including soils, water, and other species, as Leopold did). Leopold’s account of human and natural history draws relationships between an individual human being and other species, other humans, and other objects, past and present. Accordingly, one is connected to the sandhill crane through evolutionary history and to one’s cultural ancestors by re-enacting the same drama on the land. One is therefore not acting in a vacuum in the present; instead one possesses a rich heritage that one can authentically engage with as one’s being is advanced through the progress of time.

REFLECTIONS

How does Leopold’s personal history compare with what we have discussed so far? Leopold’s open and inquiring mind allowed his thinking to broaden with maturity. This enabled him to evolve from a young forester with “narrowly focused values and over-simplified intellectual concepts” to, in later life, a professor in wildlife management who was concerned with the broader issue of conservation.

Leopold’s willingness to revise his thinking is illustrated by the issue of predator control. His enthusiastic stance on predator control softened when the extermination of predators at the Kaibab Plateau in northern Arizona led to an unchecked deer population in the late 1910s. By 1924–1925, an estimated 60 percent of the deer population was removed naturally through mass starvation and artificially through reinstated hunting. It would take science and management techniques two decades to catch up with the experience at Kaibab.

Leopold reflected on his change in thinking on the issue of predator control in an essay, “Thinking Like a Mountain,” written in April 1944 after much prodding from his former student and long-time collaborator Albert Hochbaum. Leopold’s memory is cherished today because of his “courage to change and grow in professional life, to put his thoughts on paper, and to risk criticism of his unconventional beliefs.”

How is Leopold viewed today as a historical figure? We look to him for inspiration and try to decipher through his writings how he might have responded to our present environmental situation. In this sense he
can be thought of as our intellectual progenitor whose works we retrieve for our own use. Through his writing we are forced to reflect on whether things have improved in the ethical and environmental realms since his time; it is probably fair to say that the same issues that he was grappling with have on the whole regressed since then. At the same time, we are reminded that his articulation of the land ethic marks only the beginning of the work that is needed to achieve conservation. Leopold’s work—especially his land ethic—is a template for us to follow and not the final word on the matter. He recognized this himself: “nothing so important as an ethic is ever ‘written.’”

How do we proceed? If we are historical beings, as Heidegger asserts, then our present task is to apprehend ourselves in the context of history and to inform our actions by our cultural resources, including those bequeathed to us by Leopold.

Qi Feng Lin is a doctoral student at the McGill University Department of Natural Resource Sciences and School of Environment and a fellow of the Center for Humans and Nature. For his dissertation he will be examining the concept of the person with respect to forest conservation and drawing from the writings of Aldo Leopold, among others.

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NOTES
3. Leopold, A Sand County Almanac, 204.
In the wake of increasing public and academic debate on ethical issues of synthetic biology, in May 2008 the President of the EU Commission, José Manuel Barroso, requested the Commission’s European Group on Ethics in Science and New Technologies (EGE) to issue an opinion on ethical, legal, and social implications of synthetic biology. The opinion No. 25, “Ethics of synthetic biology,” appeared online in November 2009 and was published in print in 2010.1

In May 2010, the J. Craig Venter Institute announced the successful implantation of a fully synthetic genome into a bacterial cell. Following up on the announcement, President Obama officially asked the US Presidential Commission for the Study of Bioethical Issues (PCBI) to compile a study within six months on synthetic biology’s implications with regard to opportunities, risks, and potential ethical boundaries.2

The EGE’s sixty-page opinion outlines the current state of affairs with regard to synthetic biology research, including its applications, and discusses EU legal and governance issues. The report also lays bare ethical issues and evaluative criteria, and it concludes with twenty-six recommendations that roughly correspond to the ethical issues identified in the document.

The Presidential Commission’s report, a work of 180 pages, is divided into two parts. The first addresses the science itself, its “applications, benefits, and risks,” and the existing legal and governance “oversight” framework in the United States. The second part comprises eighteen recommendations that are systematically derived from a set of five ethical criteria.

Taking a closer look at the content of these reports is interesting for two reasons. Firstly, so far neither the US nor EU governments have taken steps to establish governance frameworks specifically aimed at the challenges and promises of synthetic biology. Hence, the two opinions may indicate whether establishing such a framework is seen as necessary and meaningful, as well as what it may come to look like. Secondly, at present there is no general consensus in the academic debate on a shared set of ethical criteria according to which emerging biotechnologies are to be assessed. The choice of criteria in these reports may pave the way for such a consensus and give a first impression of how it may look.
When ethically assessing synthetic biology and its applications, the central question inevitably becomes whether this new area of research contains specific characteristics that require an ethical evaluation different from that of already established technologies. Simply put, does synthetic biology pose ethical concerns that differ significantly from those previously posed by older forms of genetic engineering, and should the social regulation of synthetic biology therefore be different?

Both the Presidential Commission and the EGE cautiously answer this question in the affirmative. The PCBI notes that the field aims to “address human needs by the creation of organisms with novel or enhanced characteristics or traits” (p. 47). In doing so, “the quest for predictable functions and standardization lies at the heart of synthetic biology” (p. 49). The EGE points out that synthetic biology uses biotechnology to “intentionally design and build engineered biological systems” (p. 15). Besides “synchronic use” of multiple technologies, synthetic biology is characterized, the EGE claims, by the complexity of the systems that are to be designed and produced, which range from genetic networks to genomes to whole organisms with radically new properties. Hence, the two advisory bodies agree that the design and engineering approach of synthetic biology is a specific characteristic of this field of research, carrying with it the ability to create novel biological parts and organisms and implying the aspiration to predict the behavior of the parts and wholes as precisely as possible.

The ethical perspective and tone of the two reports is different in interesting ways. The Presidential Commission highlights in detail the range of application opportunities that may “benefit mankind in unprecedented ways” (p. 56). The EGE completes its analysis of the field’s specific characteristics by pointing to synthetic biology’s “mechanistic view” of biological phenomena. This difference in emphasis lays the ground for some differences in the set of ethical criteria that these reports offer for assessing the social implications and governance of synthetic biology.

EGE: LOOKING FOR ETHICAL FUNDAMENTALS

Stressing the need for a consistent ethical framework for new technologies, the EGE first of all (and somewhat surprisingly, given the current scope of applications of synthetic biology) invokes human dignity as a fundamental ethical concept that must be taken into account. The EGE report affirms the role of human dignity as a guiding principle from which more specific principles, possibly including harm inflicted upon animals and the environment, can be derived.

However, the EGE does not make an explicit attempt to connect human dignity to ethical issues relevant for synthetic biology—which it identifies as the use of the concepts of “life” and “nature,” along with transparency and public participation in the development of the field—and specific issues required by each field of application (p. 39ff). However, throughout the report, the EGE does not strictly adhere to this scheme. Besides general remarks concerning the concept of life, the aspects that finally structure its recommendations are biosafety, biosecurity, governance, intellectual property, science and society dialogue, and research funding. Thus, the EGE adopts a scheme of aspects that is familiar from many debates on ethical issues of synthetic biology and other emerging technologies, but is not systematically linked to more basic ethical principles.

Still, in the EGE’s initial reflections that are devoted to the concept of life in synthetic biology, one may discern an implicit link to ethical foundations. Here the EGE points at debates on the mere instrumental value assigned to life in synthetic biology and alternative understandings of this concept that imply different attitudes toward life and the environment. Distinguishing anthropocentric from ecocentric approaches to environmental ethics, the EGE indicates that all of these positions highlight “uncertainty, potentiality, and complexity” of synthetic biology products (p. 41). Furthermore, adopting an ecocentric approach, the EGE writes, does not necessarily result in unmitigated opposition to synthetic biology. Ecocentrist arguments may just as well lead to a balancing of consequences and interests, the group confirms (p. 41).

Under the heading of “biosafety,” the EGE refers to the precautionary principle as a risk-assessment cornerstone for environmental protection within the European Union. The group stresses that this
principle does not require refraining from action, since refraining from action may carry greater risks than taking action. The group does, however, point to the challenge that the potentially high degree of novelty of a synthetic organism poses to established risk-assessment procedures. The group thus calls for a survey of risk-assessment procedures, identification of assessment gaps, and long-term ecological impact assessment studies prior to environmental applications. Biosecurity concerns prompt the EGE to demand licensing and registering DNA synthesizers and broadening the Biological Toxin Weapons Declaration.

With regard to governance, the EGE states that an impact assessment must include both the risks and the opportunities of a new technology. The assessment ought to encompass its environmental and social implications, and it should take into account the benefit-burden ratio of the technology that may be replaced, as well. Taking up biosafety and biosecurity issues, the EGE urges the European Commission to propose a unified governance framework for synthetic biology, including a review of the relevant legal provisions.

The group acknowledges the complexity of patenting and common heritage issues and calls for public dialogue concerning these and all other ethical topics related to synthetic biology. Finally, the EGE recommends funding research in synthetic biology, as well as financing research on the ethical and conceptual issues identified in the opinion.

THE PRESIDENTIAL COMMISSION: ESTABLISHING A FIVE PRINCIPLES APPROACH

The PCBI report begins by noting the existence of a broadly accepted set of criteria deployed in medical ethics, and it deplores the lack of a similarly approved ethical evaluation scheme for biotechnologies. The Commission’s explicit aim is not only to provide a report on synthetic biology but, in doing so, to propose a more general ethical framework that can serve for the assessment not only of synthetic biology but of other emerging biotechnologies, too.

In contrast to the EGE, the PCBI does not embark on its endeavor by choosing one fundamental principle from which more concrete principles are to be derived. Instead, it suggests a set of five criteria that are meant to cover the field of ethical issues in biotechnology. The set comprises public beneficence, responsible stewardship, intellectual freedom and responsibility, democratic deliberation, and justice and fairness.

At first sight, this list appears to resemble closely what has come to be known as the four principles approach in medical ethics: beneficence, non-maleficence, autonomy, and justice, which had been invoked by previous bioethics commissions in the United States and elsewhere as core criteria. In this report, public beneficence seems to correspond to beneficence and non-maleficence, intellectual freedom and responsibility match autonomy, and justice and fairness stand parallel to the principle of justice in medical ethics. In addition, responsible stewardship can be understood as a call to take the role and value of nature into account when assessing biotechnologies. Finally, since the question of how to relate to the promises and perils of an emerging biotechnology affects the public or society as a whole, the principle of democratic deliberation is added to the evaluation scheme as a procedural maxim and a method of governance.

It is striking, though, that by adding democratic deliberation and responsible stewardship to the list, the general outlook encouraged by this bioethics framework becomes rather dialogic and tentative when compared to the principles of medical ethics. Whereas ascertaining beneficent consequences of a therapeutic measure can appear to be a question of matters of fact best answered by medical experts, interpreting what it means to act as a responsible steward and debating these interpretations in public forums implies a more equal relation between those offering and promoting a new technology and those who will be affected by it. As it seems, evaluating a technology’s consequences not only according to the principle of beneficence, but also with regard to responsible stewardship establishes a complementary ethical perspective on the technology in question.

It may therefore be more fruitful to think about the Commission’s framework as a set of alternative ethical perspectives on biotechnology: Intellectual freedom captures the spirit of individual development and creativity, public beneficence follows the consequentialist ideal of maximizing the societal sum
of well-being, justice and fairness enact the value of just distribution of goods, responsible stewardship introduces core values of environmental ethics, and democratic deliberation is the expression of a procedural ethics of communication.

Taken in this way, it is obviously illusory to expect that an evaluation according to this scheme will ever lead to unambiguous results. On the contrary, one may suspect that results can become internally contradictory. However, the Commission does not dwell on these theoretical issues but puts the scheme to the test, by systematically applying it to synthetic biology.

Having reviewed the actual and potential applications of synthetic biology, the Commission explores measures to safeguard and maximize public benefit of synthetic biology. Since the “anticipated benefits portend dramatic potential improvements in energy production, the economy, health care, and other areas that would enhance public welfare,” the main task from this perspective is to make sure that synthetic biology continues “to grow in ways that offer the greatest potential net benefit to individuals and communities” (p. 113). As a means to this end, the Commission recommends a review of public funding—including research on risk assessment and ethical issues—and support for promising synthetic biology research. The Commission worries that claims to intellectual property rights unduly limit scientific ingenuity and asks for an official evaluation of the effects of research licensing on scientific and technological innovation.

Turning to the perspective of responsible stewardship, the Commission asks “What can and should we, as a society, do in response to the emergent field of synthetic biology to be responsible stewards of nature, the earth’s bounty, human health and well being, and the world’s safety, now and into the future?” (p. 123). Clearly, the focus is on consequences again, albeit now also encompassing consequences for non-human nature (“the earth’s bounty”). The Commission contrasts the precautionary principle to the “proactionary” principle and discards both in favor of “prudent vigilance” (p. 124). Prudent vigilance is described as a middle way between the precautionary principle’s purported ban on synthetic biology until all risks are determined and the proactionary principle’s neglect of potential risks. According to this principle, synthetic biology is allowed to proceed while potential risks are carefully monitored and mitigated over time.

In its report the EGE took a seemingly much more favorable view of the precautionary principle. Nonetheless, the PCBI recommendation does not flatly contradict the EGE’s endorsement of the precautionary principle. To begin with, the EGE does promote funding and fostering research and development in synthetic biology in general. Moreover, it deems acceptable the weighing of risks and opportunities of acting versus not acting. Thus, the EGE’s concept of the precautionary principle may be closer to the Commission’s “prudent vigilance” than one may suspect at first sight.

The kinship of the Commission’s prudent vigilance and the EGE’s precautionary principle is confirmed by the Commission’s insistence on the uncertainty of predictions regarding synthetic biology products. Quoting the National Science Advisory Board for Biosecurity, the Commission points to “varying degrees of uncertainty regarding the predictability of biological properties of partially or completely synthetic agents or materials” (p. 125). In accordance with the EGE, the Commission asks for an analysis of current risk-assessment activities, including identification of gaps in risk-assessment procedures. However, in order to mitigate risks, the Commission sets a significant part of its hope on built-in safety mechanisms such as “suicide genes,” a technology-based solution to the problem of risks that the EGE only notes in the margin.

The Commission completes the chapter on responsible stewardship by reviewing “moral objections.” These objections hold, according to the Commission, that “synthetic biology is intrinsically objectionable from a moral perspective and should therefore not be allowed to proceed” (p. 135). In effect, the positions that the Commission numbers among these arguments coincide with what the EGE counts as ecocentric strands of environmental ethics, i.e., arguments based on the presumption that life is intrinsically valuable. In stark contrast to the EGE, which contemplates environmental ethics as a possible overarching assessment framework for biotechnology, the Commission gives much less credence to the ecocentric perspective. ...five criteria that are meant to cover the field of ethical issues in biotechnology. The set comprises public beneficence, responsible stewardship, intellectual freedom and responsibility, democratic deliberation, and justice and fairness.
In addition, while the EGE assumes that ecocentric positions are capable of incorporating a nuanced balancing of burdens and benefits, the Commission regards them as necessarily leading to dichotomic reasoning. This is all the more surprising given that the Commission’s own emphasis on nature, the “earth’s bounty,” and the “world’s safety” within the perspective of responsible stewardship bears resemblance to ecocentric ethics. In any case, the Commission concludes that, at least for the present and with respect to the current capacities of synthetic biology, such intrinsic moral objections are not pertinent to policy and regulation (p. 139).

Next, the Commission takes up the perspective of intellectual freedom and responsibility. This point of view gives priority to promoting “the creative spirit of scientists and unambiguously protect[ing] their intellectual freedom” (p. 141). Before deriving recommendations from this perspective, the Commission takes pains to clarify that responsible stewardship and democratic deliberation are, however, “components” of intellectual freedom, coupling intellectual freedom with responsibility. This seems to indicate that the Commission regards its five bioethics principles as hierarchically ordered complements of each other. If this is the case, the question emerges whether there is only one hierarchy with a specific set of values taking the lead, or whether each perspective, while being modified by its counterparts, stands on its own. Now, since the recommendations generated within each perspective are meant to complement each other, the Commission appears to opt for an approach in which the different perspectives are balanced against each other and thus ordered according to their respective weight and relevance. Hence, if one were to further build upon this approach, it would be essential to lay bare and justify this relative weighing scheme.

In the recommendations derived from the principle of intellectual freedom, the Commission on the one hand states that restrictions on research should limit the free pursuit of knowledge only when the perceived risks are “too great” (p. 144). On the other hand, to follow this perspective requires, the Commission argues, that one “reject a culture of play and adopt a culture of responsibility” with regard to research conduct, oversight, and export control (p. 147ff).

Finally, spelling out the principle of democratic deliberation, the Commission emphasizes the importance of public participation and discussion. It refers to examples from biomedical research where the public’s opinions have shaped research policies at an early stage of the research process. While these examples speak in favor of a dialogue in which all parties, scientists, the public, NGOs, and so on can inform and influence each other, the Commission stresses, as a last recommendation, that “buzzwords” such as “creating life” ought to be fact-checked by a private organization in order to ensure correctly informed discussions. Taking into account the intermingling of fact and value in expressions of everyday language, one may suspect that in the eyes of critics this recommendation will in effect turn the dialogue into a biased exchange that discredits those who oppose a certain alley of research as not being able to grasp the facts.

**CONCLUSION**

In terms of their respective recommendations, the EGE’s opinion document and the Presidential
Commission’s report are widely in accordance with each other. Both promote measures to initiate and foster synthetic biology; both advise that this should be done in a cautious manner, continuously monitoring risks; both call for a review of risk assessment procedures and legal provisions; and both recommend embedding synthetic biology research in a broader context of public dialogue and social and cultural values and benefits.

The similarity of their recommendations notwithstanding, the two reports differ remarkably concerning the evaluative schemes that they bring to bear upon synthetic biology. The EGE makes an attempt to introduce fundamental values—i.e., human dignity and environmental ethics—as a starting point for ethical reflections on biotechnologies. The group does not systematically follow this approach, though, but settles for an independent and well-known set of criteria. The Presidential Commission, in contrast, aims to establish five complementary ethical principles that are meant to capture the whole range of relevant issues. Still, rather than giving expression to different ethical “aspects” of synthetic biology, the principles appear to rest on diverse perspectives, each of which can be used to evaluate all “aspects” of the field. As it seems, one would have to lay bare in more detail the relations and respective weight assigned to the perspectives in order to render conclusions drawn from the principles more cogent. Taking into account the controversy in Europe about field release and labeling of genetically engineered crops, it is to be expected that the two approaches’ comprehensiveness and persuasiveness will be put to a decisive test when synthetic biology’s food, plant, or other higher organism applications eventually become available.

Joachim Boldt is in the Department of Medical Ethics and the History of Medicine and BIOSS Cluster of Excellence at the University of Freiburg in Freiburg, Germany.

NOTES
Civic Agriculture in Chicago

By GAVIN VAN HORN

What Is Civic Agriculture?
Throughout the United States, farmers’ markets are proliferating, Community Supported Agriculture (CSA) businesses are gaining members, and vegetable gardens are being planted at schools, in neighborhoods, and even at the White House.1 Bestselling books such as The Omnivore’s Dilemma and Fast Food Nation, as well as film documentaries like Food, Inc., have brought food-related issues and concerns into popular consciousness, spawning a discussion that transcends-of-the-moment dietary fads, such as Atkins or South Beach.2 Descriptions like “organic,” “fair-trade,” “grass-fed,” and even “locavore” are becoming more prominent as grocery stores adjust the stock on their shelves to match a growing public demand. Ever aware of consumer trends (and market share), companies such as Wal-Mart have made a point of “going local,” creating a niche in their produce section touting the freshness of their close-to-home vegetables.3

Amidst this sometimes dizzying array of food options, a more subtle grassroots movement exists—one in which food is not merely one more lifestyle choice harried shoppers must make, and one in which food is not reduced to “product” and individuals to “consumers.” This movement is in part a reaction to what is called commodity, industrial, or conventional agriculture, terms that describe the dominant forms of agriculture in the United States. In the twentieth century, these became increasingly mechanized, dependent on chemical inputs and biotechnology, and subsidized by federal dollars in order to achieve maximum productivity (for a few commodity crops) and efficiency.4 This trend resulted in the “hollowing out” of small and mid-size family farms, which were unable to compete against the consolidation of land under agricultural corporations, and in attendant disruption of rural economies and communities.5

Determining the origins of one’s food or even having access to healthy foods can be challenging in the present agricultural system. The sheer scale of conventional agriculture creates a system in which farms (and farmers) and their “products” become units of production—abstract entities that can be exchanged and traded with little attention to the relational and qualitative social impacts of such decisions.

There are many who recognize that the culture of agriculture is in jeopardy.6 The foment about locally based foods, increasing organic options, and the burgeoning of farmers’ markets is a partial response to the disconnection and loss of food cultures brought about by conventional agriculture. Each of these is important, but there are signs that a wider movement is taking root in which food is understood as a way to build community and care for place—a social exchange as much or more than it is a nutritional or economic exchange.
Various terms are used for capturing the ways in which people are building community by focusing on the social impacts of food production and distribution, but the one I have found most helpful is civic agriculture. Civic agriculture has been described as an “ideal type,” a term that it is a broad umbrella sheltering a number of concerns about regional food production, local economic security, and social development. According to anthropologist Laura DeLind, in contrast to conventional agriculture, civic agriculture “scans from the ground up, attending to less standardized, more direct and self-reliant approaches to food production, distribution, and consumption” that are “responsive to particular ecological and socioeconomic contexts.” Civic agriculture, however, is not merely a greener alternative to conventional agriculture. What is most distinctive about the term is that it places emphasis on the potential civic character of agriculture. That is, it links the cultivation of soil with the cultivation of citizenship. As DeLind asserts, civic agriculture is “a tool and a venue . . . for nurturing a sense of belonging to a place and an organic sense of citizenship.”

The pairing of civic with agriculture encourages us to consider citizenship in ways that are strikingly different from dominant conceptions of what it means to “be a citizen.” Specifically, it cuts against a view of citizenship that is founded upon the sanctity of radical individualism and the supposition that values are private and subjective. In his book Community and the Politics of Place, Daniel Kemmis explains that this view is rooted in the Madisonian idea that society consists of self-interested individuals whose desires must be balanced (and adjudicated, when necessary) against one another in a competitive marketplace. Civic agriculture, in contrast, encourages thinking in terms of collective need, mutual cooperation, and the responsibilities we have to our shared ecologies. Deeper connections to the sources of our sustenance (and the broader health of the soils and waters upon which these sources of sustenance depend) may indeed be one of the more direct ways to awaken a sense of being “a plain member and citizen” of the land-community, as Aldo Leopold put it.

I hope to provide a convincing case that this linkage is critical if a deeper commitment to and understanding of place and community are desirable goals. For examples, I draw from my interactions with three groups within the Chicagoland region that demonstrate different forms of civic agriculture—an engaged, community-based citizenship in which growing and eating good food is a means of affirming and developing civic, ethical, and ecological commitments.

THE VALUE OF CIVIC AGRICULTURE (METHODS AND MOTIVES)

Before I provide some of the details about the groups I researched and the people who were kind enough to share their insights and time with me, I would like to say a few words about what animates this project. I sometimes jokingly refer to the work I do as “story-foraging,” in that I seek to discover and understand the ways in which people order their experiences of place into meaningful and morally significant wholes. Writer N. Scott Momaday provided some valuable insights about the relationship between place and story when he wrote, “We know who we are (and where we are) only with reference to the things about us, the points of reference in both our immediate and infinite worlds, the places and points among which we are born, grow old, and die. There is in this simple cartology the idea of odyssey. And in odyssey there is story.”

I understand story to have particular relevance for conservation—to how people care for and relate to the more-than-human world. Stories provide us with the ability to reflect upon both what we are for and what we are against, how we understand our place within the cosmos and in our particular neighborhood, and they offer us a way to make sense of the larger systems of which we are a part. In considering how cities can become places of profound community engagement, Kemmis highlighted another function of story: “It is precisely the healing of places—the creation of new structures of wholeness—and the remembrance of the stories of what it took to do this that gives citizens a place to stand, a place to look back in memory and forward in anticipation.”

As I conducted interviews, I sought such “remembrances” about food—why it matters, what it means to people, how it connects people to their places. When I spoke with people, I hoped to identify common elements of why participants feel the need for agricultural alternatives and how their participation has shaped their understanding of community and citizenship. I selected the sites I chose on the basis of whether the group in question focused on agriculture as an opportunity to engage in a broader public understanding of community. That is, did the growing and distribution of food include a clear social
component, in which food was the medium for building community bonds and ecological understanding? I also looked for different kinds of civic agriculture—based on geographic location, organizational type, and demographic diversity. My hope is that highlighting these themes and groups will bring attention to how unconventional agricultures are emerging in the Chicagoland region, and how these alternative agricultures may be critical to building stronger communities, binding people to their places, and creating reasons to hope for a sustainable urban food culture.

**PRAIRIE CROSSING**

*Agriculture, I think, is important for sane living. I really mean that. Digging in the dirt, dealing with animals, is real, it’s hands on. And I want to lead a real life not a virtual life. ...Agriculture does keep us connected to the realities of life and death.* —L. Weins

Superficially at least, Prairie Crossing is the clearest example among the three groups that were part of my research that might fit comfortably under the term “alternative agriculture.” Alternative agriculture, which sometimes goes by other names such as local, ecological, organic, or place-based, represents commercial food production and animal husbandry that is consciously swimming against the tide of conventional agriculture. In Illinois, the vast majority of agriculture is conventional, meaning that farmland is heavily mechanized and chemically dependent (for pest control and fertilization), and its crops are predominantly raised for export to both national and international markets. Forage crops, corn, and soy beans dominate the rural landscape, so much so that there are those who question whether the state’s motto as the “Prairie State” is losing its meaning. Prairie Crossing, as the name implies, ascribes to a different paradigm.

Prairie Crossing is a 677-acre “farm-centered housing development” in Grayslake, Illinois, located about forty miles northwest of Chicago. Because of two separate Metra lines that intersect (hence, *Prairie Crossing*) on its southwestern edge, Prairie Crossing commuters who work in Chicago can travel to downtown by rail in about an hour. From early in its conception, Prairie Crossing was envisioned as a place that would defy typical suburban conventions, eschewing cookie-cutter houses and postage-stamp crabgrass lawns in favor of clustered development, open space preserves, and prairie grasses.

Central to the identity of Prairie Crossing is its farmland, an area of more than ninety acres that includes Sandhill Organics, which is one of the more successful Community Supported Agriculture (CSA) businesses in Illinois. Cognizant of the need for replicating the success of this model in adjacent areas, Prairie Crossing initiated a Farm Business Development Center (FBDC) in the early 2000s, as an experimental piece of farm operations. The purpose of the FBDC at Prairie Crossing is to assist “farmer-entrepreneurs” in all the skills necessary to run a successful farm business, from marketing to financial management, crop choice, and labor decision-making. Farmers can work up to five years in the program, with the ultimate goal of securing a long-term land lease that allows them to farm professionally.

The Sandhill Organics CSA and the farm incubator program are both attempts to reverse a trend in the United States that has been intensifying in the last century: the separation of people from the sources of their food. Linda Wiens, a senior associate for the Liberty Prairie Foundation noted that as agriculture has been pushed further and further away from where people actually live, food knowledge and farming impacts become obscured. Prairie Crossing was intended as a model that would show how farming, community, and land conservation are compatible while “retaining the key elements of the character of this region.”

Between its farms, its informal neighborly networks, its conservation volunteer programs, and its educational initiatives, a lot happens at Prairie Crossing. Rather than attempt a detailed account of these programs and their histories, I would like to focus on two of Prairie Crossing’s “guiding principles” (the full list of ten can be found at [http://www.prairiecrossing.com/pc/site/guiding-principles.html](http://www.prairiecrossing.com/pc/site/guiding-principles.html)) that are directly related to civic agriculture: a sense of place and a sense of community, and how these are mutually reinforced through the various forms of agriculture that occur at Prairie Crossing.
As one might expect, people are attracted to Prairie Crossing for different reasons: its natural aesthetics, its architectural appeal, its open spaces and amenities, and so forth. The people with whom I spoke, however, oftentimes described a journey of growing ethical and ecological awareness as they became more invested in the activities at Prairie Crossing.

Erin Cummisford is an example of a concerned parent who moved to Prairie Crossing seven years ago because it seemed like a healthy community in which to raise her children. Since that time, she has seen a shift in her perspectives that was not expected. While it remains important to her that her kids can come home and run “straight out the backdoor” to play with trusted neighbors, she noted that her views about farming and food have been profoundly altered by living in the community. Erin had experience with gardening before coming to Prairie Crossing, but she “always thought organic was a little silly,” a kind of overreaction, and the ethics of food was something she “never thought about before, really, at all.”

Erin’s experiences with Sandhill Organics and with the other farmers at Prairie Crossing during field tours, harvest festivals, and her personal interactions with them have brought these connections to light. “As you start to get older, you begin to think, ‘I don’t think everybody in charge knows what they’re doing.’ . . . You start to learn more, and think, ‘Is it really okay to eat all these chemicals?’” These might have remained speculative questions were it not for the conversations that are part of the daily life at Prairie Crossing. “Is my money going toward things I believe in? If you’re buying something at the grocery store, you have no idea. . . . The importance of a community like PC is that you bounce those ideas off each other.” The conversation does not end at the boundaries of Prairie Crossing. Erin, for example, said she has become a “bridge” between her church community and Prairie Crossing by organizing “ethics of eating” discussions for her home congregation and sharing her experiences at other regional meetings.

The sharing of ideas at Prairie Crossing, of course, is not limited to food. From rain barrels to bioswales to prairie restoration, there is a kind of “think tank” (as Erin put it) energy in the community that allows for the exchange of information as well as skills. Bill Pogson is another person with whom I spoke who recognized a shift in his perspectives based on his experiences at Prairie Crossing. Bill moved to Prairie Crossing in 2001 from New Jersey, knowing nothing about the area. He and his wife bought a house because “the place looked different.” This “happy accident” has since led him to appreciate the value of a community with a conservation focus. “The people here infected me with their interests,” Bill said. “Personally, I’m a very strong skeptic in a positive way of wanting to find out the truth. So I question things, I look to the technical side of things, try to stay away from the emotional things in trying to make my decisions.” His inquiries have helped him gain a deeper understanding of the relationship between farming and land health and defined a role for him in relation to others. He now does part-time work as a mechanical jack-of-all-trades in the community. His involvement with the farming operations (e.g., fixing irrigation systems, keeping the tractors operational, building greenhouses) has furthered his education about sustainable agriculture and helped him understand how farming is connected to public policy. “I’d like to see people more involved in farms, so if they do have an inquiring mind I can get them from the cynical side of skepticism to the positive side of what’s going on, and learning that organic is not just a politically left-wing marker but is something that is biologically desirable.” One of the things that has impressed Bill most is the way in which “Here conservation is not just an annual check to the conservation fund, but it’s something you do or are aware of on a daily basis.”

This relational dailyness is facilitated by the many ways in which people at Prairie Crossing come together around food. The community was designed to help foster such interaction. Linda Weins described this as a “New Urbanism” that is actually quite old: “Keep[ing] the houses close together so everyone can enjoy the spaces, and keep[ing] people living close to where they are working makes sense, and keeping people where they can interact.” These intentional arrangements of housing and space, with access to walking paths, porches that back up to gardening areas, and the on-site farms means “there is a lot of getting together over food,” ranging from a weekly farmers’ market, to potluck dinners, to the annual tomato harvest at Sandhill Organics.

“A sense of place and a sense of community—featured in Prairie Crossing’s guiding principles—will be critical if this agriculturally inspired vision is to be realized on the landscape.
Like the other groups in my research, farms (and gardens) are central but growing healthy food is far from the only, or possibly the most important, aspect of civic agricultural practice. Rather, it is the social engagement facilitated by growing, buying, preparing, and eating food that fosters a sense of community identity. One example of such get-togethers that I attended was the monthly farm-community lunch. Teachers from the charter school, farm workers, Liberty Prairie Conservancy staff, and interested community members shared a homemade, seasonal meal while discussing the food-related question of the month (in this case, “Why do some people not want to have a share in a CSA, and what do you think would convince them otherwise?”). The enjoyment of the meal was enhanced by the diverse perspectives and insights of those present around the table.

One Prairie Crossing homeowner, Maryanne Natarajan, observed that the diverse skill sets and professions represented in the community have helped her understand how she can do more than “just complaining to the neighbors” and instead “make a difference.” In particular, she noted how neighbors recently banded together and became versed in county ordinances and governance in order to address concerns about a nearby landfill. This kind of landscape-wide perspective is also reflected in her own family’s practice of contributing their composted food scraps to the farms at Prairie Crossing. Once a week, similar to how recycling bins are visible in city neighborhoods, there are weekly compost pickups and deliveries to a community compost pile. For Maryanne, whose family now has in-house worm bins to facilitate the decomposition process, being a part of this community composting “brought the whole [food]

cycle into perspective,” endowing it with a certain everydayness that no longer seems novel.

Not all people who live at Prairie Crossing are deeply involved in the life and cycles of the community, but generally there is a deep spirit of volunteerism that seems fueled by the “belief that community and conservation can go hand in hand.”

From a civic agriculture perspective, it might not be that community and conservation can go together; for enduring community health, it may be necessary that they do. I asked Vicky Ranney, who was one of the primary developers of Prairie Crossing and continues to actively guide its programs, how agriculture is linked to conservation. She responded, “It’s all part of the same thing. It’s totally a seamless web if it’s done organically, or at least sustainably . . . If it’s good for the land, then it’s good for rare natural areas nearby, it’s good for bringing in money for forest preserve districts or other municipal bodies that need some return on their land.”

The Liberty Prairie Conservancy (LPC), a non-profit conservation group whose offices are located at Prairie Crossing, has focused on making the connections between sustainable farming and private and public land conservation. One of the goals of the LPC is to begin to place farmers from Prairie Crossing’s incubator program onto lands that were once farmed conventionally. Nathan Aaberg, the director of development and community relations for the LPC and a Prairie Crossing resident, summarized well the “seamless web” to which Vicky referred. “A land ethic has to permeate everything that we do in terms of how we relate to nature. The most fundamental way we relate to the earth is through agriculture . . . and the dominant modes of producing are really deleterious.”

Nathan did not come to these views overnight. Like others, he described the process of discovery that was part of his experience of being at Prairie Crossing, which eventually informed his beliefs about why agriculture was so fundamental:

One of the things that has been revealed to me over time, is that it’s not just a natural world phenomena, it’s not just an environmental issue. It’s also a community issue. How you produce things, especially in the case of food, shapes the economy we live in; the economy shapes the families we have, the lives we live—it’s all wrapped together. How we farm, how we distribute the food, what kind of food we

Prairie Crossing
A community like Prairie Crossing reveals the synergies that can occur when a space is created to honor agriculture as a network of relationships rather than just a process of growing some foodstuff in a soil-like medium. “I think that we are coming back to the idea of the farmer as the real founding citizen for this country,” Vicky told me. “That hasn’t been around for years and years. But Matt and Peg [the farmers who run Sandhill Organics], for example, are people like that . . . . What we have to work for is setting the seeds so that in terms of regulations and facilities that these new farmers really can live a good life . . . . It’s our job here to try to set up the whole system right, so that farmers can not only provide something good for us but so that they can have good lives for themselves.”

Whether a farm can operate sustainably while farmers make a good living depends on a broader cultural awareness and value for farming. Civic agriculture calls attention to setting “the whole system right” by underscoring that agriculture needs to be set within a broader engagement with place. Food is an entry point to understand and value these connections. Although it is certainly possible to reach this understanding as an adult (which is evident from Erin’s, Bill’s, and Nathan’s comments), creating a culture that collectively values, supports, and respects farming as critical to its survival is an intergenerational process. There are a number of ways in which Prairie Crossing has sought to encourage such learning, and many people with whom I spoke noted the success of exposing young people to farming through various educational partnerships.

One example is The Learning Farm, which includes extensive on-site collaboration with students from the Prairie Crossing Charter School as well as Montessori 7th-9th graders. The Montessori middle-schoolers run, according to Learning Farm manager Eric Carlberg, “every aspect” of a farmers’ market business dedicated to growing and selling micro-greens. Eric Carlberg, who manages The Learning Farm program, described how he has witnessed initial reluctance on the part of many young people transform into deep involvement over the course of the program.

The business aspect is one side of the Learning Farm, an educational experience in how to manage and adapt to customer demand, but more important to Eric were the possibilities for the cultivation of character. A bit of the latter was revealed, Eric pointed out, by the “mantra” the middle school students chose for their group: “when you cultivate the soil, you cultivate your soul.” By paying close attention to the weather, the soil, and the plants, students become invested in the process of farming and what it means in relation to themselves and the landscape.

Another notable way that young people from outside the Prairie Crossing community are mentored in farming is through the Prairie Farm Corps program. The PFC recruits kids who are interested in learning how to manage their own CSA business from the county’s public high schools. Eric told me that this program has engaged a diverse bunch of students, some with behavioral issues at their respective schools and many from low-income families. Young people who have been through the program are now returning as leaders and mentors in their own right, teaching their peers the techniques and lessons that they have learned. Eric now relies on these repeat PFC students to manage a great deal of the program on their own.

These programs highlight the way in which agriculture at Prairie Crossing is understood as a process of cultivating and nurturing people as well as soil. From a regional perspective, this may mean that Prairie Crossing becomes a metaphorical beehive, pollinating the landscape by “repopulating” (Linda’s term) the surrounding area with farmers trained in the incubator program and young people who have hands-on experience with local forms of farming. Vicky also saw an opportunity for Prairie Crossing to be a “food hub” amidst other emerging hubs, so “that the whole system could be built back up.”

Growing healthy food is...[not] the most important, aspect of civic agricultural practice. Rather, it is the social engagement facilitated by growing, buying, preparing, and eating food that fosters a sense of community identity.
Civic agriculture calls attention to setting “the whole system right” by underscoring that agriculture needs to be set within a broader engagement with place. When “it was still a cornfield” in the early 1990s, told me that it was these principles that convinced her and her husband to move: “It was the idea that you get people out together working as caretakers—it’s the stewardship model—and it’s through their interaction with the land that they get to know each other.” In this respect, PC might not only “incubate” farms, it could provide a viable template as an incubator for similar farm-based communities, reminding “us that others have lived on this land before, and that others, to whom we have responsibility, will live here after us.”

ACADEMY FOR GLOBAL CITIZENSHIP

We don’t have the luxury of starting a new community, starting fresh, starting new. We have the luxury of starting a school new. . . . If we look at the infrastructure that’s already built in those cities and community there’s a lot of efficiencies there, and there’s a lot of sustainability there. It’s how do we implement these values, if you want to call them that, or systems, or way of life in a system that already exists. . . . How do we share that information, how do we implement what we are doing city-wide with something’s that’s already placed? And it starts with our school and our families, it goes out to the Chicago Public School system, and beyond, and beyond, and beyond. —Dan Schnitzer

The Academy for Global Citizenship (AGC) is a charter school in southwest Chicago that is set apart by its sustainability-based education philosophy. My initial interest in AGC sprang from what I had heard about their on-site gardens and their all-organic meal program for students. Once I began to speak with teachers, parents, and administrators I found out that—as impressive and forward-thinking as the focus on food is at AGC—its educational objectives and influence are much more comprehensive, impacting the students’ parents and the larger community.

Fronting a street with a steady stream of traffic, AGC is presently located in a former barrel factory in southwest Chicago, and it would be easy to zip by the school’s half-acre property if one was not watching for it. Take a few steps beyond the sliding chain-link fence that encloses the school’s small parking lot, however, and it becomes apparent that something unique is happening on this site. As one walks toward the school entrance, the din of familiar car noises gives way to the laughter and shouts of children. Beyond the modestly sized greenhouse, an outdoor play area, and a long row of raised-bed gardens, one might hear a more unexpected sound: the clucking of chickens.

The 61st Street Community Garden*

The loss of the 61st Street Community Garden was the loss of “a living thing on a lot of different levels,” long-time Experimental Station social activist Jamie Kalven informed me. The “living thing” to which Jamie was referring was a thriving constellation of human relationships enmeshed with a piece of land just to the north of the Experimental Station building, on the southeastern edge of the University of Chicago’s campus. When I first saw it, no trace of the community garden was left. Piles of dirt and construction equipment filled the space, lying dormant under a March sun.

Gardening in various forms has long been a part of the culture of Experimental Station. In the late 1990s, the 61st Street Community Garden was established on a vacant parcel of university property through a special agreement that allowed the gardeners temporary use of the site. Over a decade later, the garden had developed into a 130-household enterprise that was an “extraordinary, unique, precious community institution” with a “collective elegance.”

When the university informed the community garden’s plot-holders about its plans to use the space as a temporary staging area for construction of a new campus building, many people found it difficult to comprehend the loss. In talks with administrative and facilities officials, Jamie struggled to find a language that would communicate the importance of the garden to those who did not see why the garden could not be relocated. “That site was so cultivated from square inch to square inch in terms of the quality of attention, care, sustained engagement of these little plots,” Jamie observed, “and I
Tucked in a nook next to the building, the chicken coop is a student favorite, and like the rest of the environment at AGC, the students are encouraged to interact, care for, and learn from those things that constitute their larger “classroom.” The chickens, like the gardens and greenhouse, are educational opportunities set within the larger sustainability-based curriculum.

One of AGC’s goals is to use the garden to help students “become better stewards of the earth.” When I asked Dan Schnitzer, the AGC’s Director of Sustainability and Operations, what this meant, he told me three things stand out to him about how students learn to be earth stewards.

First, he said, stewardship is simply developing appreciation, and even awe, for one’s surroundings. “It can’t be fear that motivates. That’s what we teach our kids. …You have to teach them to love and respect first.” Dan believes that working with the natural curiosity of the students inspires much of the learning that takes place at AGC; as he put it, “Don’t do less bad; do good!” In the garden, for example, students take an active role, learning how to plant, what to plant, when to plant it, and how to divide up tasks. Gardening thus becomes a teaching tool for science lessons, for understanding cultural connections to specific foods, and for discussing health issues, but there are also the simple joys that derive from watching things grow that students themselves have planted. One parent laughed when she told me that she and her son “have to leave through the back door every day because he has to see the garden” so he can check on the plants.

The second stewardship principle reinforces the “citizenship” portion of the Academy’s name. Dan emphasized that the students are encouraged to take ownership of their actions and environment. This often is phrased as “being principled,” meaning that students are encouraged to be conscious and respectful of others, ideally without having to be reminded by parents or teachers. The garden is a hands-on medium to begin to learn such lessons. As sustainability and wellness teacher Joe Phillips noted, the AGC resists “feeding [the students] information in a passive way”; gardening has been a way that they “take ownership of the physical surroundings.” This is particularly valuable in an urban context, where nature may be perceived as something distant and unrelated to everyday life. One student’s mother was impressed by how “the school uses every last inch,” which affirmed to her “that no matter how small your space, you can grow something.”

In a “racialized setting” like Chicago, Jamie told me, in which public space may be viewed with suspicion or associated with criminal activity, “A really important part of the farming, market, gardening initiatives, and energy has to do with the regeneration of public space where neighbors find each other, are visible to each other, share news, engage in conversation, [and] hang out.” As I have highlighted, the 61st Street Farmers’ Market offers such a civic context. The community garden offered similar opportunities for public engagement. Unlike a farmers’ market, however, the garden was a continuously visible part of the neighborhood’s geography, and perhaps the sweat-dependent cultivation of food and beauty created a more intimate form of embedded relationality, impossible to duplicate.

Jamie shared the following reflections with me about what made the garden unique: “The garden was in a somewhat marginal location, you could be very alone there. It was a big space, not a lot of traffic. And a number of women told me . . . that they just felt safe in the garden, they felt deeply safe in the garden when they were alone, as the sun was going down, at odd times. The way that I interpreted that was the level and degree of cultivation, the quality of attention that had been given to the immediate environment around you felt like presence. It was a kind of presence. Even when people weren’t there, there was this protective presence of care and attention. I still don’t know what to make of it, but it strikes me as very suggestive of what contributes to our well-being and at-homeness in the world.”

Some of the gardeners have been able to find other community gardens nearby (though none, of course, so close to Experimental Station). Abandoned lots in the area have also been recently reclaimed for gardening. Still, it is clear that something special was lost when the 61st Street Community Garden was bulldozed. “I think it’s fair to say that many of those relationships have atrophied in the absence of the garden,” Jamie said. “We simply aren’t mindful of the value of relationships that inhere in particular places. It’s a sense of community,
Lastly, Dan told me that stewardship includes learning about the symbiotic relationships between people and the earth. For example, classroom worm bins (a student favorite) give teachers the opportunity to talk about decomposition, the food web, and ecological cycles. Leftovers from the cafeteria go into these bins, eventually becoming compost that provides nutrified soil for the garden. This activity is not confined to the school; I spoke with two students who now have their own vermiculture projects at home, and Dan told me about a first-grader who asked for a worm composting bin for her birthday. Teachers take advantage of the school’s gardening programs to encourage critical thinking in other lessons, as well. Second-grade teacher Mayra Jiminez mentioned one unit she just completed with her students entitled “Creature Features.” Though the unit was primarily about animal classification, Mayra was pleasantly surprised to find that student knowledge about food issues resonated in their questions about animals (e.g., Why are some animals carnivores? Why do we keep pets when they should be living naturally in their own environment?). For Mayra, thinking critically about food is “the anchor for our school, but it trickles into everything.”

One reason for this is that careful planning and attention goes into the meals at AGC. Unlike standard cafeteria fare, the breakfasts and lunches at AGC are all organic and, when possible, locally sourced. Students are encouraged to be “risk-takers” in trying unfamiliar foods, and also abide by a “zero-plate” policy in which everything that is not eaten is composted. Another anomaly of AGC’s cafeteria in comparison to other Chicago public schools is that glassware and tableware are used instead of throwaway packaging and plastic forks and spoons. These efforts fit within the overall educational philosophy at AGC that affirms a respect for materials and their connection to larger materials cycles.

The parents with whom I spoke returned enthusiastically to the topic of school meals on several occasions, noting that it makes avoiding “junk food” at home much easier. According to one mother, even when her children were presented with several choices, they often opted for the healthier snack because of their experiences at school. Other parents mentioned the physiological and behavioral differences they noticed, which have encouraged them to try new recipes and to change their own eating habits. One parent, for example, referred to her second-grade son as a “food ambassador” to their family, noting that her husband has been able to lower his cholesterol from the 300s to 180 in a three-month period. Other parents mentioned how their cooking repertoires have expanded dramatically as their children have been introduced to new vegetables and meal possibilities.

Beyond healthy eating and educational opportunities to think about food, there are tangible ways in which AGC’s food policies are impacting the larger community and possibly even providing further opportunities for some farmers in Illinois to consider alternative practices. In terms of the school’s families, well-attended organic cooking classes are held during the week, with recipe selections that are often drawn from the school’s weekly menu. In addition, through a relationship with a local food distributor (Goodness Greenness), at least 25 of the school’s 170 families now also pick up organic produce boxes at the school. A few of the parents with whom I spoke noted how this has led to more socializing around food both within their families and without. In terms of the larger community, Chartwell’s—the food service provider for Chicago Public Schools—has responded to AGC by increasing its local food purchases ($1.8 to $2.3 million in the past year) and issuing a request to its contracted farmers to eliminate organo-phosphates in their food production, promising preference to those farmers who do so. AGC is currently working on a food policy manual with Chartwell’s through which AGC could become its own food vendor.
Reflecting on AGC’s food initiatives, one teacher noted that she has watched parents “mobilizing” around food issues. This comment provides a key insight about civic agriculture. Food may provide one of the most useful entry points into both personal and public relationships to the larger ecology of which one is a part. Awareness of where food comes from is one collateral impact of determining how to eat well, but cooking, recycling, composting, giving food away to neighbors, learning how to build home gardens, gathering for school “tastings,” and so on build bonds between students and parents that also radiate outward into the community. As Dan put it, though the school families are its “first community,” AGC’s goal is to work “from the center out” so that it becomes a vibrant hub for change in the larger community. So while AGC teachers try to instruct students through the world at hand, there is also a reciprocity with the world at large. Joe summarized this: “I think the name of the school helps myself and our students identify the mission, that they are citizens of a global society and their actions have a chain reaction in the rest of the world . . . [AGC] is not just a name, we really try to embody it.”

With plans to expand one grade per year until it educates through the eighth grade (currently, the oldest class level is fourth grade), AGC is in its infancy. There is much promise, however. Students are already providing input for the school’s menu. One second-grader, responding to requests following a school project, began teaching parents how to make recycled paper. Another started her own conservation group for endangered species. Compared to other schools, AGC is providing a different baseline of normality. As one teacher told me, environmental issues “will eventually become in-your-face issues that we’ll have to deal with,” and “these kids will already be thinking in those terms.”

Thinking through the question *What does it mean to be a citizen?* in terms of how we produce, eat, and distribute food means thinking about the health of our own immediate communities in relation to the larger landscape. The students at AGC are offered a rare space to consider these issues at a young age. The hope is that the critical thinking skills they are now learning will be reflected in the ways they shape their future communities. “I’ve never really been politically active, but I think this is a way to be politically active,” Joe told me,

To condition—in the best sense of the word—that this is a normal way to live. You can eat healthy food and lead a healthy life. It shouldn’t be that radical. In some ways it’s kind of weird that we’ve gotten to this point where AGC is seen as this exceptional thing. It’s funny that farming has come a long way recently but for a while it was a real uphill battle. . . . We’re really just trying to get back in history to something that was sustainable.

The Academy for Global Citizenship is a promising educational model for civic agriculture, showing how the activities at a school can be integrated into an overarching vision of sustainability that radiates into the community as a whole. Although AGC only opened its doors in 2008, Dan’s assertion that “we’re creating agents of change in the community” is already apparent. In a school that, at present, is so small that it can be easily overlooked from the street, big ideas are finding a foothold.

**EXPERIMENTAL STATION**

*Food is such a focal point of any culture and determines how that culture survives or doesn’t or sustains itself. If you have access to food, you’re going to be around. If there is no food, that community is gone, one way or the other.* —D. Ryan 42

Thus far we have seen examples of civic agricultural practice from a farm-based suburban community and a charter school with a sustainability mission. The final group that I visited was Experimental Station, a community-based non-profit organization on the south side of Chicago. Like the other groups with which I interacted, the community building efforts of Experimental Station do not focus solely on food. For example, Experimental Station’s building is the home of a thriving bicycle repair shop, where neighborhood kids learn how to repair and maintain bicycles in exchange for credit-hours that can be applied toward purchasing their own bike parts and bikes. Experimental Station also serves as a unique community space for independent journalism, cooking

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42 D. Ryan.
becoming a source of meaningful continuity in relation to landscape cycles and seasons. By providing a space where people could more directly connect to their food and those who grew it, perhaps a farmers’ market would serve a similar integrating function. As she told me, the social potential of a farmers’ market, particularly the idea of overcoming anonymity between residents of Hyde Park and Woodlawn, was critical in the planning process.

Dennis Ryan, who was hired as the market manager, stated what his own experiences have led him to believe, “I don’t think you can have a culture without food. One determines the other.”

Dennis grew up in an Italian neighborhood in Providence, Rhode Island. He recalled memories from his childhood of local food peddlers, yelling in Italian, and how in his own extended family “not everybody got along but food brought us together.” He also witnessed his childhood neighborhood transition from “artisan” foods into a “food desert” as community-based vendors succumbed to the competition of large grocery stores. When later in life he became interested in the relationship between sustainability, cooking, and farming, he realized “something wasn’t being addressed in the foodie world,” which focused on high-end specialty foods and failed to focus on how food could be critical to a community’s health and identity.

The 61st Street Farmers’ Market, which opened in 2008, was meant to address those concerns. Nevertheless, Dennis noted, a farmers’ market is “not just like popping up a tent.” Each community has different needs that must be balanced properly if a market is to succeed:

Experimental Station—in various incarnations—was a place recognized and valued by many in the community for decades. The director at the Station, Connie Spreen, observed that one of the things that makes the Station special is that people with various social and environmental interests “creates this pool of resources. Just like in nature, it becomes a little ecology that deepens and matures over time, where things interact, they support one another.”

How could this “little ecology” respond to food quality and access problems in the neighborhood? Experimental Station did not have to start from scratch: in addition to the Woodlawn Buying Club for staple and bulk foods (started in 1998 and still operating), the Station had a strong group of community gardeners associated with it (the 61st Street Community Garden), and popular community events like the wood-fired oven bread baking fed into the early energy and planning behind the farmers’ market.

Connie was especially interested in Experimental Station’s potential role in starting a farmers’ market. As a child, she grew up on her family’s farms in Wisconsin. When she moved to Minneapolis and later Chicago, she discovered that gardening offered a context for weaving together her past and present, and how this fertile mix of people and activities is not confined to the building. For many years, staff and those heavily involved in Experimental Station projects recognized that their neighborhood had a food problem. Experimental Station is located on the border that divides Hyde Park (an affluent neighborhood that is also home to the University of Chicago) and Woodlawn, a neighborhood in which fast-food restaurants far outnumber grocery stores. Indeed, Woodlawn ranks seventy-first out of seventy-seven Chicago community areas in distance residents must travel, on average, to the nearest supermarket.

Corey Chatman, a staff member at Experimental Station, compared his experiences of trying to find fresh food in Woodlawn to searching for the Loch Ness monster. Further elaborating on the problems that residents face in terms of food access, Corey said, “Just to the north of us we have one of the top twenty schools in the nation. . . . Just to the south of us we have a major food desert in Woodlawn. We have vacant lots. If there’s any store there’s a liquor store on one corner, then there’s a currency exchange, and then there’s another liquor store.”

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Experimental Station’s commitment to the Woodlawn community meant that they were also committed to making food affordable and increasing knowledge about the origins, benefits, and preparation of the foods sold at the Market.

To address the affordability challenge, from its opening day the 61st Street Farmers’ Market has accepted Link money (Illinois Link is a state-subsidized food assistance program), providing low-income patrons with access to the Market’s food. From 2008–2010,
the Market had a 1000 percent increase in Link-related purchases. In 2010, this translated to $10,000 worth of sales (not including an additional $7,000 through a value-matching program).49 “Food should not be a class thing but unfortunately because everything is so tied to the dollar it’s hard not to be,” Ryan observed. From his perspective, Link “levels the playing field,” which is reflected in the numbers of shoppers themselves, with patrons of the Market now evenly divided between Hyde Park and Woodlawn residents.

Because of the success with the Link program, Experimental Station has also been at the forefront of helping other farmers’ markets in Chicago and across Illinois effectively manage Link sales. Beginning with a pilot program that included five city-based farmers’ markets (the first time Chicago city markets ever accepted Link), staff from the Experimental Station facilitated the use of wireless EBT (Electronic Benefit Transfer) machines, simplifying the process for using Link benefits. During this trial period, Dennis said, these markets “broke every record in Illinois ever set for Link sales.” Experimental Station staff also played a large role in collaborating on the passage of the Farmers’ Market Technology Improvement Act, a piece of state legislation that set aside funds to pay for wireless EBT machines. Because of the program’s success, in 2011, the ability to use Link benefits expanded further to twenty farmers’ markets, including sites outside of Chicago. Dennis is hopeful that these efforts will make the 61st Street Farmers’ Market “less of an anomaly and more of the norm” because “it’s a large-impact, low-overhead solution that any politician can understand.”

Certainly economic statistics indicate the impact this program has already had. What these statistics do less well in quantifying is the effects this program has on food cultures and the ways in which people build relationships that otherwise would not have been built. According to Spreen, providing Link card users with access to farmers’ markets is a way of “trying to rebuild all of that. How do you make food something central to your life that is a source of pleasure, and a source of community, and a source of connectivity? . . . It’s not just about nutrition. There’s a danger there [in framing it only in those terms]. It’s how you connect on all those different levels with food as a central element.” One would be hard-pressed to come up with a better definition of civic agriculture than this.

The motto of the Market is “connect with your food,” and two things stand out about this in relation to civic agriculture. The first, a sense of seasonality, and the connection to larger biotic cycles of the region, is the most visible, for it involves the food products themselves. Like many farmers’ markets, the 61st Street Farmers’ Market places a priority on locally sourced food, attracting farmers who are from within the region and focus on sustainably grown food and its environmental impacts. The second is the way in which the Market facilitates a multi-generational knowledge of food, creating shared cultural connections based on food knowledge.

Such food knowledge is promoted at the Market, but it is also nurtured and reinforced through the various programs at Experimental Station. Cooking classes have long been a part of Experimental Station’s programs, and there are now weekly, seasonally themed classes for adults and youth (many of whom work in the bike shop), in which participants learn how to prepare healthy, sustainably grown food (like the produce that can be purchased in the farmers’ market that Experimental Station hosts during the year).

These cooking classes have been particularly meaningful for several of the young people who frequent Experimental Station. Many kids who are associated with the bike shop have also gravitated toward these classes. The classes also appeal to those who “don’t want to have their hands covered in bike grease” but for whom “olive oil is all right,” as bike shop manager Aaron Swanton put it. Between these classes and the farmers’ market, Swanton noted he could see how the kids were picking up ideas about conscientious eating.50 Connie affirmed this, stating that there are about twenty or so kids who are part of the “kitchen scene” and have “developed a group mentality around kale.” Kevin Applewhite,
who grew up working in the bike shop and now manages the bike share program at the University of Chicago, said that the Market, the small garden on the side of the bike shop, and the cooking classes have helped many kids understand that nature “is not just about how big the forest is, it can be inside your neighborhood.”

Food-based education is a big component of the regular Saturday farmers’ markets, too, with the “Market School” featuring people from the community who share their knowledge with others, from dietary considerations to how to use vermiculture to enhance a garden. Dennis pointed out that this has been a great way for neighbors to share with neighbors. One example is Phyllis, who suggested the idea of using samples of farmers’ products to show how to cook specific dishes, increasing both patrons’ knowledge of and interest in sometimes unfamiliar products. Much to the delight of the farmers, Phyllis now regularly conducts these demonstrations. The market also provides a space for exchanging information and resources that show how pursuing a career in sustainable agriculture or the culinary arts is possible. Finally, Dennis noted a woman who shops for her family of four on a budget of $10, showing how careful planning can stretch dollars that are used for some of the highest quality food available.

One can appreciate through these examples how the web of relationships at Experimental Station grows, weaving new patterns as lines of interest intersect with one another. People I spoke with often referred to the larger “ecology” of the Market, Blackstone Bicycle Works, and the many other Station projects. These relationships and the way in which they are strengthened, Connie observed, “leads to a rich civic life” connecting people to place and one another. As Dennis put it, “there’s no culture in a drive-thru” but “soil is a living thing. How you treat your soil is going to determine how your society grows or sustains itself. . . . Obviously from growing food, but also to how you use the land, how you use it to bring community together instead of pulling it apart.” Experimental Station owns no acreages, no vast swaths of land; nonetheless, it highlights that the practice of civic agriculture is as important in the city as it is in rural areas. Indeed, agriculture may be one of the most robust forms of sociality and collaboration between these landscapes. Stitching these geographies together through the 61st Street Farmers’ Market shows how soil can be valued even when it is not one’s own.

Drinking a cup of apple cider or coffee while browsing the organic greens, the bottles of locally made hot sauce and salsas, the vegan soul food, the Michigan cranberries, or the organic and pasture-raised beef, pork, and lamb roasts, a first-time shopper might be forgiven for just seeing a vibrant, attractive farmers’ market. But if one were to return to the market with regularity, if one were to spend some time around the coffee pot discussing vegetables, or sit with others at the chef demonstrations, or participate in the workshops, one would likely understand what the market planners intended from the beginning: a new public space has been created where food has become the medium for social interaction and, therefore, the space has become a place of memory and meaning. Experimental Station has thus become a catalyst for knitting together people with their local neighborhoods, people with the agricultural community, and people with one another. Like “good poetry” that “shakes you awake, makes you see the world differently, opens up vistas of perception that you hadn’t previously experienced, and provides pleasure,” the 61st Street Farmers’ Market, as Connie put it, aims “to help awaken you to the rhythms of nature of which we are part, to help you experience your connectedness to the health of the land, the local economy, and your neighbors, and to help you see that the most everyday experience—eating—can be the source of immense pleasure and beauty.”

CONSIDERING THE SPIRIT OF AGRICULTURE

Between the three groups that I have highlighted, the demographic differences (e.g., race, income, location, mobility) are significant. Prairie Crossing is an upper-middle-class suburban community; a majority of the students at the Academy for Global Citizenship are from Spanish-speaking families, and the neighborhood is likewise comprised primarily of working-class Mexican families; Experimental Station is located on the border between an affluent, predominantly white neighborhood (Hyde Park) and a predominantly low-income, African American neighborhood (Woodlawn). The needs and desires of these different communities are wide ranging; the problems they face are particular to their neighborhoods. And yet, in their own ways each of these groups recognizes the critical importance of food as a form of public engagement and discourse, a way to build stronger communities, both in terms of immediate and local provisioning and in relation to the regional agricultural systems that are necessarily connected to Chicago’s food needs.
These groups are also responding locally to what has been a nationwide phenomenon, the marginalization of agriculture—or perhaps the obfuscation is more accurate—in terms of our everyday interactions and knowledge of our food sources. The promise of civic agriculture—which is embodied in the network of relationships at Prairie Crossing, the Academy for Global Citizenship, and Experimental Station—is that it brings these systemic problems of disconnection within the realm of first-hand experience, providing a way to more directly perceive and engage in the well-being of one’s community. Stated differently, engaging in the collective work and pleasure of growing, distributing, and eating food can lead to the rediscovery of place and to becoming more deeply committed to that place.

This understanding of community provides an example of what sustainability scholar Ben Minteer described as a “third-way tradition” of environmentalism. In *The Landscape of Reform*, Minteer argued that a civic and pragmatic orientation has long-animated conservation in America, though it “has been obscured by contemporary efforts in environmentalism to divorce environmental values from human goods; to argue for the ‘intrinsic value’ of nature and assert its independence from other moral and political ends.”54 Rather than set human interests against the well-being of nature, “this pragmatic strain in environmental thought views humans as thoroughly embedded in natural systems.”55 Retracing the prominent historical strands of this movement, Minteer offered a number of examples of how this “third way” tradition seeks to reconcile social and environmental values by encouraging democratic engagement and civic regeneration.

That humans are “thoroughly embedded in natural systems” is not just a philosophical point of reference; it is a truth with physical and psychological implications. According to DeLind, human beings “find ourselves enmeshed in a collective on-going story or conversation that has a particular history and physical design. It is a conversation that defines us (wherever and whoever we are), that carries meaning for our cells and for our lives. Food, of course, is the interlocutor.”56 The principles of civic agriculture can be shared across regions, but their particular manifestations—akin to a regional dialect—will be shaped by an ongoing conversation with real places.

As a conversation with place, civic agriculture points beyond lifestyle choices, to the public need for communities to invest in the quality of their food. Thus, civic agriculture is not simply about better methods of farming, nor is it about greener consumption patterns; it is about discovering and working toward what DeLind referred to as “a sense of belonging to a place and an organic sense of citizenship.”57 Unlike an anemic understanding of citizenship-as-voting (or not voting), the practice of civic agriculture provides a means to a more grounded sense of what it means to live (and live well) in place—a way to realize and internalize how our bodies are embedded within the larger ecological and social commons. In some ways, civic agriculture is *the communal process of making visible* our connection to and dependence on the land.

A recurring theme among those with whom I spoke was the importance of making food production and community engagement visible. Prairie Crossing resident Nathan Aarberg said, “I think it’s really important to see people farming. It’s not somewhere out in Iowa—there’s a value in having farming visible to the community and not somewhere far away.”58 His neighbor, Erin Cumminsford, concurred, “When there’s a farmer’s face associated with your food, it’s way more meaningful. . . . If you pick up something and it’s in a little bag, you have no connection to it. If you grew it, or you know someone who grew it, it’s almost a spiritual type of experience.”59 As the middle-schoolers at the Learning Farm affirmed, “when you cultivate the soil, you cultivate your soul.”60

Because of its location and its commitment to sustainable agriculture, the community at Prairie Crossing is privileged to have farms within walking distance. In an urban context, such direct experiences of agricultural lands are often limited. Yet, as I noted, the Academy for Global Citizenship—in addition to connecting students and parents to farmers through the food they serve—educates its community on the ways in which small-scale farming is possible in the city. Likewise, at the Experimental Station, the 61st Street Farmers’ Market creates a public space that involves more than just the exchange of produce between sustainable farmers and savvy patrons. As Jamie Kalven said, urban agriculture is a social act in that it has the potential to create “a sort of feedback loop between action and perception.” The 61st Street Farmers’ Market makes relationships between farmers, land care, food, and local communities more visible. “If you show people a way to act,” Jamie asserted,
“even if it’s small and seems nominal [like fixing up a vacant lot] I think of that as opening up a little more space for perception. . . . The more that you’re able to act, the more you’re able to see; the more you’re able to see, the more you’re compelled to act.”

Jamie’s comment speaks to another theme that emerged among my respondents. In addition to making a community visible to itself, civic agriculture creates a public space for envisioning a different relationship between people and land. Sometimes this vision involves growing levels of personal and communal determination in food access. But it also includes thinking about how to work toward changing the dysfunctional system of conventional agriculture, as it is currently constituted. In the end, engaging in civic agriculture is a physical manifestation and affirmation of belonging to a place, and a groping toward how we may belong in an enduring way. By attending to what constitutes an enduring agriculture, we are also engaging in a journey of collective discovery about what it means to mutually dwell in place.

A question to consider is how effective neighborhood-based groups like Prairie Crossing, the Academy for Global Citizenship, and Experimental Station can be in creating a regional identity (and demand) for sustainable food practices. Each of these . . .

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groups was described as a “hub” for innovative ideas and practices. And, rightly, each has responded to the needs of the community it serves, while modeling practices that others may emulate. Is it possible, or desirable, to “connect the dots” between these civic agriculture hubs, creating a collective regional network out of which a shared language and activism can challenge and change the dominant food culture?

My hope is that lines of connection between places, some now faint, will become more visible. There are stirrings in the Chicago area, as promising as fresh green shoots emerging from rich soil after a late spring rain.

Gavin Van Horn is director of Midwest Cultures of Conservation at the Center for Humans and Nature.

Author’s note: This is the first in what I hope will be an annual account of research findings and theoretical reflections upon the burgeoning local forms of agriculture in the Chicagoland region. A description of the project, “The Spirit of Agriculture,” can be found at http://www.humansandnature.org/programs/regional-cultures-of-conservation/the-spirit-of-agriculture-civitas-in-horto-citizenship-in-the-garden/.

Special thanks and appreciation are due to Robert Wengronowitz, who was an intern for the Center for Humans and Nature during the first year of this project. Bobby gave much of his time, insight, home-made bread, and wit to our research.

NOTES


6. For some of the most evocative writing on this topic, see W. Berry, The Unsettling of America, and W. Jackson, Consulting the Genius of Place: An Ecological Approach to a New Agriculture (Berkeley, CA: Counterpoint, 2010).


9. Bruce Jennings has argued for a similar rethinking of the city as the moral context for a civic bioethics, B. Jennings, “From the Urban to the Civic: The Moral Possibilities of the City,” Journal of Urban Health 78, no. 1 (2001): 88-102. See in particular his helpful discussion about the political history of the terms urbs (city as a physical marketplace based on instrumental social individualism) and civitas (city as a common moral space for pursuing common commitments of human flourishing).


14. Peter Forbes’s work is especially helpful in making these connections explicit. See in particular his essay “Giving Way to the Story,” in The Story Handbook: Language and Storytelling for Land Conservationists, ed. H. Whyborn (San Francisco, Ca: Trust for Public Land, 2002). Forbes argues, “Without these stories of connection and relationship, there is increasingly one dominant story to hear and one story to tell. This is the story where the point of trees is board feet, the point of undeveloped land in Lake Co., Illinois (http://www.prairiecrossing.com/libertyprairiefoundation/LPF-Publication9-10.pdf) (all sold by 2006). Moreover, the homes were planned and built with density in mind, allowing 60 of supporting healthy forms of farming. This led to hiring an organic farmer and beginning the use of pesticides and herbicides. She and George were keen to attract families that believed that this area had been farmed since the 1840s, the farms were conventional and relied heavily upon the use of chemicals to ensure the survival of development, fire suppression, invasive species, suburban sprawl, and agriculture. See Chicago Wilderness Biodiversity Recovery Plan (1999), 52, at http://chicagowilderness.org/pdf/biodiversity_recovery_plan_slash.pdf.


18. “There are a great many tidbits of cultural history lying in this ground, yet few Illinoisans have any idea what it was that ‘The Prairie State’ was named after” (S. Packard, Stargrass Prairie [self-published, 1982], 8). Only 0.005% of Illinois’ high-quality prairie remains due to a combination of development, fire suppression, invasive species, suburban sprawl, and agriculture. See Chicago Wilderness Biodiversity Recovery Plan (1999), 52, at http://chicagowilderness.org/pdf/biodiversity_recovery_plan_slash.pdf.

19. Gaylord and Dorothy Donnelly purchased the property in 1987 and established Prairie Holding Corporation, which was to oversee the development of the land in a way that was attuned to its cultural and ecological history. According to Vicky Ranney (who, along with her husband George, was one of the most critical people in planning the development), though the lands in the area had been farmed since the 1840s, the farms were conventional and relied heavily upon the use of pesticides and herbicides. She and George were keen to attract families that believed that “growing up on or near a farm was a healthy way to raise kids” and also appreciated the value of supporting healthy forms of farming. This led to hiring an organic farmer and beginning the community’s first CSA in the early 1990s.

20. Though local zoning would permit 1,600 housing units, for example, Prairie Crossing has 350 (all sold by 2006). Moreover, the homes were planned and built with density in mind, allowing 60 percent of the site to be preserved as open land. See V. Ranney, K. Kirley, and M. Sands, Building Communities with Farms: Insights from Developers, Architects and Farmers on Integrating Agriculture and Development (Greyslake, IL: Liberty Prairie Foundation, n.d.), 8, at http://prairiecrossing.com/libertyprairiefoundation/LPF-Publications10.pdf.

21. Ibid., 7. See also http://www.prairiecrossingfarms.com/about.html.

22. The FBDC has already seen some early successes. For example, “graduates” Chris and Tania Cumberly are now running the organic CSA at Tempel Farms, one of the largest areas of undeveloped land in Lake Co., Illinois (http://www.tempelefarm.org/organicfarm.html).

23. Beeman and Pritchard, A Green and Permanent Land. For an overview of global agricultural changes, see J.R. McNeill, Something New under the Sun: An Environmental History of the Human Animal Population to Include Goats, Cows, and Pigs. The second-graders I spoke with were naturally excited about this prospect.


26. AGC opened in August 2008 with one kindergarten class and plans to expand one grade per year until they reach the eighth grade (their oldest class at present is fourth grade). For more information about AGC’s various programs, see http://www.agcchicago.org/.

27. AGC is currently in the midst of a fundraising initiative that, if successful, would enable the school to move to a much larger space that includes a sizable piece of land so the school can grow its own food. If this occurs, then the school will move forward with plans to expand their non-human animal population to include goats, cows, and pigs. The second-graders I spoke with were naturally excited about this prospect.

28. All E. Carlberg quotations in the following paragraphs are from an interview with G. Van Horn, April 29, 2011.


30. All B. Pogson quotations in the following paragraphs are from an interview with G. Van Horn, April 29, 2011.

31. All M. Natarajan quotations in this paragraph are from an interview with G. Van Horn and B. Wengronowitz, April 29, 2011.

32. Ibid.


34. All E. Carlberg quotations in the following paragraphs are from an interview with G. Van Horn, April 29, 2011.

35. V. Ranney, interview with G. Van Horn and B. Wengronowitz, April 21, 2011.


38. AGC opened in August 2008 with one kindergarten class and plans to expand one grade per year until they reach the eighth grade (their oldest class at present is fourth grade). For more information about AGC’s various programs, see http://www.agcchicago.org/.

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41. All D. Schnitzer quotations in the following paragraphs are from an interview with G. Van Horn, March 28, 2011. All other interviews were conducted by G. Van Horn, June 21, 2011.

42. D. Ryan, interview with G. Van Horn, March 8, 2011.


44. C. Chatman, interview with G. Van Horn, March 11, 2011.

45. The building that now goes by the name Experimental Station has been used for various materials recycling and community-oriented programs for over forty years. Throughout the 1970s and 1980s, before it became Experimental Station in 2002, the building was known as “The Resource Center,” or simply “The Building,” and it was the site of a car-sharing/repair collective, a food cooperative, a woodworking shop, and a storage place for a miscellany of mechanical tools. The building was also the site of a popular reuse program, in which donated and salvaged goods could be exchanged “three-bags-for-one.”

46. All quotes from C. Spreen are from an interview with G. Van Horn and B. Wengronowitz, May 23, 2011.

47. All quotes from D. Ryan are from an interview with G. Van Horn, March 8, 2011.

48. Ryan listed the following as critical components: 1) access points, 2) financial means, 3) food knowledge, and 4) support for the farmers.

49. The “Double Value Coupon Program” is a Wholesome Wave Foundation program. Experimental Station receives funding from this program that is used to double the value of Link purchases at select farmers’ markets up to $25 per person per week. For more information, see http://wholesomewave.org/program/.

50. A. Swanton, interview with B. Wengronowitz, June 8, 2011.


52. Another way Experimental Station has drawn these connections is by sponsoring summer “farm tour” trips to interact with the farmers who sell at the 6th Street Farmers’ Market.

53. C. Spreen, email communication, September 30, 2011.


55. Ibid., 5.


59. E. Cumminsford, interview with G. Van Horn, April 29, 2011.

60. E. Carlberg, interview with G. Van Horn, April 29, 2011.

IN SEARCH OF THE ETHICS OF PLACE
By Juliana DeVries

In *Grounding Knowledge: Environmental Philosophy, Epistemology, and Place*, Christopher Preston has two goals—one he accomplishes, and one he does not. I wish he had accomplished both, for both are important.

Preston’s first goal is to establish that physical places are both epistemologically and morally significant. In other words, where we *are* influences how we *think*, and what we should be and do. He begins his book with a thorough explanation of epistemological history, from Plato to post-modernism. He stresses the point that post-modernists are not content merely to locate our epistemologies within a general or abstract social and cultural context, but also insist upon “looking at the particular spaces and places in which we do our thinking” (p. 74).

His appreciation of this specificity and concreteness is convincing, and he then builds on it in interesting ways. For example, Preston differentiates between spaces and places: “Space is something abstract and undifferentiated that is simply moved through or mapped from the outside. Places are the result of people pausing for a while in a location and instilling some of their cultural values into the landscape” (p. 74). Places become places by the meaning we instill in them, and they influence us in return. He is also careful to say that we must avoid “biological determinism”—assuming that people are bound by the natural places they come from—as he sees this as a form of racism. He is equally skeptical of any form of cultural or historical determinism. He argues instead for what he calls “environmental possibilism”—by which he means that people and ideas should be seen as enriched and informed, but not determined, by their places of meaning.

Preston’s secondary (and, unfortunately, less convincing) point is that natural (ecological) places have a privileged status among all types of place—natural, cultural, historical—because natural places are inherently the most diverse. Diversity of place creates diversity of mind. And diversity of mind fosters creativity, which, for Preston, is the ultimate good.

I rooted for Preston all the way with this second point, as it seemed to be especially significant in a society where many people, perhaps most, are not inclined to value nature adequately. Preston sees a powerful link between humans and nature—the life around us and our humanity. Don’t we all know many people who do not inherently feel that nature is exceptional, but who do value diversity and creativity quite highly? I certainly do.

But before I stand to give Preston an ovation, I have second thoughts. Is it really the case that natural places should be seen as especially valuable in the place-hierarchy, should be given pride of place among places? Preston does not provide a solid argument for this conclusion, and the reader is left with too many unanswered questions. For example, how do we know that diversity of mind influences creativity in a positive way? A particularly complicated environment might actually make it more difficult to be creative because...
this form of diversity can be distracting. Conversely, the uniformity of a given landscape could spur creative thought through its intense non-diversity. In terms of writing, I am at my most creative on train rides, while Preston would not even consider trains to be “places” because his definition stresses dwelling and rest, whereas the place-being of a train is a state of being in motion. For other examples, think of Huck Finn in motion on the Mississippi, or Jack Kerouac on the road. Placeless selves, but hardly strangers to diversity or creativity. Furthermore, if a more diverse place is always more valuable than a less diverse one, we might value certain built environments over certain natural ones. And even if we are to accept that nature is always more diverse than cultural or social space, do we then have to draw a clear line between nature and culture, and isn’t that precisely the line that Preston ultimately wants to blur?

These questions arise because Preston unabashedly writes from a personal angle. He assumes that the reader shares his perspective of what constitutes “the good life.” He does not sufficiently define or defended contested concepts, such as nature or diversity. He also uses anecdotal evidence from his own travels, which are always voluntary and allow for the preconditions necessary to give one the capability to experience and appreciate the sense of natural place. One of his main examples of feeling dislocated, for instance, is a trip he chose to take for seemingly spiritual reasons to the Alaskan wilderness (pp. 89-93). If Preston’s study were to successfully have the universal scope he intends it to have, it would need to more adequately address those preconditions and how they can be made more equitably accessible in the world today. Millions of today’s travelers, after all, are not spiritual tourists. They are immigrants or prisoners whose encounters with natural places are the antithesis of what Preston is looking for.

Lorraine Code similarly criticizes Preston for speaking from a privileged, patriarchal perspective. Code advocates for an alternative theory of place, which she lays out in her book *Ecological Thinking: The Politics of Epistemic Location*. Like Preston, Code wants to uncover an epistemology that takes place into account, but she wants it to be more universally tolerant of the diversity of experience in today’s world.

Code begins by criticizing the authority that society gives to science in general and to all of those structures, such as courts, which hold the power of objectivity. She believes we over-value objectivity and therefore create a violently hierarchical system of knowledge. Code imagines an alternative system, where knowledge-production would be based on what she sees as an ecological model. Ecological thinking, according to Code, is about attention to detail, even (or especially) when a detail seems an isolated aberration from the normal type. Ecological thinking is decidedly self-reflexive, and it is analytical of interests, presuppositions, and place, as they combine within the knowledge-seeker. In this way, ecological thinking is supposed to be more understanding of true diversity, as well as inclusive of how places influence thought.

Although I, like Code, hope for a system that would be sensitive to true diversity, her study is difficult to translate into substantive changes. I found myself agreeing with everything she was saying, and yet not seeing how my agreement required me or anyone else to act any differently. Code’s idea of attention to detail also has potential, but it is almost impossible to understand how her theory would have practical application. In her attempt to avoid Preston’s pitfalls, Code falls into her own.

Martha Nussbaum’s latest book, *Creating Capabilities*, brings us back to the questions that plagued Preston’s study—such as the preconditions for creativity and what we mean by the good life. Unlike Preston and Code, Nussbaum does not work specifically on the topic of place, and her book *Creating Capabilities* is chiefly an attempt to find a new paradigm of what human and social “development” mean and a critique of the mainstream development model that measures development in terms of gross domestic product.
However, it can provide insight into why a just society should value places and nature more generally.

Nussbaum attacks the practice of measuring development by GDP for many reasons: because it does not take inequality into account; because it is not adjusted for foreign investment that makes no difference in local lives; and because it ignores whether individuals have access to economic gains. Nussbaum instead proposes her capabilities approach, an alternative method that would more accurately evaluate whether actual lives are improving in a particular place. Nussbaum argues that minimally just societies must give all their citizens the chance to live with dignity. She then makes a list of criteria for allowing humans to live dignified lives. She hopes to ask a given society not about its economic growth, but rather about what real opportunities it has provided for its people. At the same time, Nussbaum values freedom of choice highly, which is why she tries to focus on capabilities and opportunities rather than actual standards of living. For example, human beings flourish not because they have an abundance of economic resources—many very full, rich lives are lived under quite frugal circumstances—but because they live in the midst of social and ecological conditions that permit them to utilize resources to support the capability of living a full human life. Such a life is in fact made up of many different capabilities, and each person should be free to develop some more than others and to create the special set of capabilities that they value most. In her complex, plural conception of the human good or flourishing, none of the capabilities are valued more highly than others. But if people are not permitted access to a full array of these potential capabilities, they are not living in a just society, they are not truly free, and their human dignity is not being respected.

Nussbaum’s study raises all kinds of its own problems, chief among them how her approach could be implemented. However, the study does give an argument for place-protection that glimmers with hope for environmentalists. Toward the end of the book, Nussbaum emphasizes the importance of an assured future as a basic opportunity necessary for human dignity. This requirement of future security, she argues, necessitates environmentalism. It gives a strong theoretical framework for arguing against reckless development of non-renewable resources and lands of all kinds. At the same time, it is inclusive of diversity and disallows involuntary displacement.

The debates between these three authors show how complex and contested the concept of place truly is. Despite its difficulty, however, a deeper understanding of place is vital to the environmental project. Without investigating what places mean to us, we cannot hope to argue for their preservation.

For more information on contemporary debates about place, readers can consider Tim Cresswell’s *Place: A Short Introduction*, which explores various competing theories of place. Cresswell separates contemporary thought on place into three, at times overlapping, categories. The first category is the descriptive approach, the second the social constructivist approach, and the third the phenomenological approach. For example, we might locate Code and Preston in the second and third approaches, respectively. Cresswell also pushes beyond these theories of place, focusing instead on behavior that is seen as “out of place,” particularly homosexual behavior and the existence of the homeless. Through these explorations, Cresswell does not resolve the tensions between different definitions of place, but he explains these tensions in order to argue that place is an important and complex topic that academics from a variety of disciplines should pay attention to. Environmental thinkers should heed Cresswell’s call and continue to investigate how our connections to place affect the natural world and how we might come to better protect it.

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Juliana DeVries is an intern at the Center for Humans and Nature working in the New York office. She graduated from Columbia University, where she studied political theory, focusing on sustainability and minority rights issues. She has also worked on the editorial staff of *Dissent* magazine. She plans to begin law school next fall.
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P. R. Epstein and D. Ferber, *Changing Planet, Changing Health: How the Climate Crisis Threatens Our Health and What We Can Do about It.* (University of California Press, 2011).


P. Hubard and R. Kitchin, eds., *Key Thinkers on Space and Place,* 2nd. ed. (Sage, 2011).


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