

Minding Nature

expanding our natural & civic imagination

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expanding our natural & civic imagination

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April 2009 | Vol. 2 No. 1

FROM THE EDITOR

BRUCE JENNINGS 1 [Deep Down Things](#)

ARTICLES

STRACHAN DONNELLEY 3 [Minding Nature, Minding Ourselves](#)

This wide-ranging essay, which can be read as one of the founding statements of the philosophical agenda of the Center for Humans and Nature, explores the radical implications of the Darwinian conception of nature both for metaphysics and for ethics.

PETER G. BROWN & GEOFFREY GARVER 8 [Humans and Nature: The Right Relationship](#)

In an excerpt from their important new book, Brown and Garver articulate a guiding ethic for good living, where human beings can be “creative and integrated participants in human society and the commonwealth of life as a whole.”

J. RONALD ENGEL 17 [Civic Community in a Garden: Reflections on a Theology of Democratic Citizenship](#)

Using Chicago as its venue and a remarkable group of Chicago based thinkers as inspiration, this essay by Ron Engel reflects on the spiritual matrix of democracy and the connection between democratic citizenship and living responsibly in a natural community.

PAUL HELTNE 22 [Upheavals of Thought and the Path to Citizenship](#)

Paul Heltne here explores the work of Martha Nussbaum on stoicism to shed light on the question of what philosophical attitudes and process of psychological development are conducive to a compassionate humans-and-nature community.

BRUCE JENNINGS 25 [Gathering at the River: Toward Communities of Conservation in the Hudson River Valley](#)

Using the Hudson River Valley as its setting, this essay calls for a new way of framing community choices and policy decisions about the economic and ecological future of the region. This will require, and will grow out of, civic dialogue that questions current political and economic assumptions and redefines our sense of place by the river.

REVIEWS

BRANDON C. WHITNEY 29 [Rethinking the Politics of Possibility](#)

WILLIAM K. BAILEY 32 [A World on the Way](#)

33 [CHN Bookshelf](#)

THE LAST WORD

BROOKE HECHT 34 [The End of Philosophy?](#)

Deep Down Things

BRUCE JENNINGS

We call this electronic journal “Minding Nature” because its pages, and the work of the Center for Humans and Nature as a whole, exemplify the multiple dimensions of the enterprise that the phrase suggests. I like to think of these dimensions in a simple, old-fashioned (indeed classically antique) sense. They are the true, the good, and the beautiful.

The true. The phrase connotes knowledge. To mind nature is to think about, study, learn from, and try to understand nature. Beyond developing a body of knowledge, minding is also a formative process. To mind nature is critically to grasp the many ways the human imagination has fashioned and used concepts of nature, and how those concepts have influenced human history and culture. Nature reflected in the human mind transforms itself because these ideas of nature prompt human action that affects nature. Those who hold otherwise are fish who don’t recognize that they live in water.

The good. The phrase also suggests the ethical dimension of the humans and nature relationship—responsibility and care. To mind nature is to obey it; to conduct human living and doing in a way compatible with the health and flourishing of non-human nature. To mind nature is yet again to care for and to care about it. (This is perhaps more a British idiom than an American one.)

The beautiful. Finally, the phrase suggests the act of discerning the sublime, perhaps the sacred, at any rate the something that Charles Darwin saw in “endless forms,” and the poet Gerard Manley Hopkins captured in a remarkably evocative line: “There lives the dearest freshness deep down things.” To mind nature is to discover in it the essential characteristic of a meaning or significance beyond ourselves.

Credit and inspiration for the name, “Minding Nature,” goes back to Strachan Donnelley; in particular, to an essay he wrote in 2003, but never published. We present a portion of that essay here; the full version will be included in a volume of his collected writings that is now in preparation. Donnelley is seeking a new form of minding—fundamental and non-dogmatic philosophical thinking, indeed a new worldview—rooted in the understanding of nature given in Darwinian evolutionary biology. This will, above all, permit us to think and to act in new ways, to

“We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.”

— Aldo Leopold

create a different kind of relationship with dynamic, living nature and biotic communities.

The leitmotif of this entire issue of MN is thereby captured. Searching for the forms of thought and action that will transform our limited moral imagination from seeing the natural world as a “resource” to be used (and used up), to seeing it in the shape of relationships of care, non-violence, respect, common value, and systemically supported diversity of life.

Brown and Garver explore this moral transformation against the background of economic modes of thought and action; they continue the journey that Donnelley had called upon us to take. They place the concept of relating and relationship at the center of our attention.

“And for all this, nature is never spent;
 There lives the dearest freshness deep down things;
 And though the last lights off the black West went
 Oh, morning, at the brown brink eastward, springs—
 Because the Holy Ghost over the bent
 World broods with warm breast and with ah! bright wings.”

— Gerard Manley Hopkins

Engel and Heltne ask how this way of viewing nature redounds in our civic and communal lives; Engel reflecting on these matters through the work of important theologies of nature; Heltne through the lens of a neo-Stoic philosophy of eudaimonia and human flourishing.

In my piece, I pose the challenge of forming a new language of planning and politics in land use policy in the Hudson River Valley. While our planning processes today are protecting the river, they are not giving our communities a meaningful relationship to the river. We don’t have the conceptual vocabulary to talk about that, and so we don’t. The mainstream planning and political languages are idioms of conflicting interests over nature seen as a resource. This form of discourse and action, this practice of democratic citizenship, is falling short.

The articles contained in this issue of *Minding Nature* tell us why and suggest an alternative.



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 and Director of the Center for Humans and Nature in New York.*

Minding Nature, Minding Ourselves

STRACHAN DONNELLEY

An increasing number of citizens are becoming centrally concerned with long-term moral and civic responsibilities to both human communities and natural ecosystems and landscapes. Among several practitioners of this new and emerging ethics, a consensus is emerging. Determining and articulating the complex of new responsibilities to humans and nature will depend on a new fundamental worldview or worldviews that give us an

overall understanding of who we are, the world we live in, and the significance of both. Whether or not philosophic worldviews are in academic fashion, they are morally, civically, and practically imperative. We need substantive, well articulated and argued moral guide posts. Moreover, given that this new ethic concerns nature, as well as humans, it must be centrally informed by evolutionary and ecological biology, our present best understanding of nature and its processes. In short, this philosophic worldview, or worldviews, must be fundamentally Darwinian in character.

Among many others, Ernst Mayr, the eminent evolutionary biologist and historian, would agree. Mayr claims that Darwin inaugurated the most profound revolution in the history of western philosophy and science, challenging fundamental presuppositions of the Western tradition. Mayr explicitly points to the doctrines of cosmic teleology, Newtonian causal determinism, and essentialism, each of which we will presently discuss. Darwin ushers in the philosophic and scientific epoch of “population thinking,” which we will also discuss, and the recognition of the historical, dynamic, systemic interactions of biotic and abiotic entities. The whole landscape of philosophy,

science, and moral and civic responsibility changes. Our task is vividly to understand and prepare ourselves for the changing philosophic landscape.

In approaching this task, it is important to note an obvious feature of philosophy and philosophic worldviews easily overlooked. Conceptions of nature and the human self or human nature co-vary and mutually influence, if not determine, one another. The same can be said for the philosophic theories of being (ontology), the universe or cosmos (cosmology), knowledge (epistemology) and values (axiology) of the worldviews. No doubt this is in part motivated by an aim for conceptual or philosophic coherence, a single over-arching vision of ourselves and the world.

Mayr emphasizes that Darwinism denies cosmic teleology, Newtonian determinism, and essentialism. Gone is God or Nature as an infinite substance with infinite attributes, freely acting out of the necessity of its eternal nature, the ground of all ontological, cosmological and epistemological rationality and order. In Darwin’s universe, at least as concerns earthly life, all living individual entities and forms and capacities of life derive from a common natural and historical origin via

an evolutionary two-step: genetic and behavioral variation and natural and sexual selection. Historical dynamism and interaction replace eternal rational and ontological activity as the cosmological bottom line. Moreover, for Darwinism it is only because of the enormous expanse or immensity of geological, evolutionary time (3.8 billion years or more) that the arational, non-goal-directed processes of nature, individual and populational variation and selection, can engender the forms, capacities, and order of living nature (human and other) that in traditional cosmologies require the agency of a cosmic reason and designer.

Perhaps all individual organisms, including individual human selves, are “emergents” from nature’s historical, orchestral causation...

Actually something more or less radically new and unknown to prior thinkers must be added to the cosmic mix for Darwinian philosophy to make adequate sense. Order dynamically and historically engendered in the natural organic realm needs to be preserved, more or less permanently, in order for life to be and to overcome utter random, arational chaos or disorder. Order here requires historical inheritance, which moreover requires a natural or material mode of inheritance. Darwin knew that there must be such a mechanism or process if organic adaptations to changing environments, including new species of life, were to come into being via variation and selection. He was ignorant of the mode of inheriting organic order, which remained a “black box” that he was forced to assume in his arguments. We now know inheritance, at least in large part, to be genomic. The “information matter” of DNA, which when interacting with cellular, somatic, and ecosystemic environments, engenders phenotypical organisms and their life histories, that is, the individual organisms interacting among themselves that we encounter in everyday experience. This, of course, includes our individual human selves and our human communities.

Given this newly interpreted natural or cosmological setting, what can we say concerning old perennial philosophic concerns—philosophic and scientific method; knowledge (epistemology); human nature and selfhood; civic and moral responsibilities; and the humanly good life?

Let us first recall the fundamental philosophic shifts initiated by Darwin and carried forth by Mayr and others. Cosmic teleology or rational purposive design is denied.

However momentous, this philosophic move is relatively straight forward. Nature creates its own forms and order in passing, thanks to earthly, if not also other intracosmic, interactions.

Secondly, the strict casual determinism, the hegemony of efficient causes, that is so crucial to the philosophy and science of nature inaugurated by the conceptual revolutions of the 16th and 17th centuries is out. Rather, in nature there are multiple causes on multiple temporal and spatial scales in which chance and historical contingencies play a real role. Physicalist causation is replaced by what we may term “orchestral causation”: confluences of innumerable contributing factors leading to outcomes in principle unpredictable in traditional scientific, causal terms.

In particular, Mayr points to two modes of causation always at play in the life world: *ultimate causation* and *proximate causation*. Proximate causes are the physico-chemical causes or chains of reactions explored by Descartes and the Newtonians of traditional modern science. Ultimate causes are the contributions of the historically engendered genomes, with their informational instructions for bodily and behavioral capacities of individuals, the products of genotypical and phenotypical variation and natural selection. (Note Mayr’s new use of the term “ultimate,” formally reserved for cosmic rational agents or designers.) Between themselves, ultimate and proximate causation must foot the bill for whatever order is realized in the natural world, if not human communities as well.

Thirdly, essentialist or typological thinking is denied. This is a crucial blow to traditional modes of thinking, but an absolute requisite for evolutionary philosophy and science. There is no such thing as “dog,” “rose,” “human being,” conceived as a species essence or fundamental character, with only accidental differences among individual organisms of the same species. Rather, there are only individuals with their differences. Moreover, difference as a central feature of organic reality holds for all levels of life, from the genomic to the cellular to the individually organismic to the ecosystemic and beyond. Such individual differences are absolutely crucial to evolutionary, ecological life.

Without the variation provided by individual differences, natural selection would have nothing to select. There could be no evolutionary adaptations to new or changing environments. In fact, evolutionary life would not, and could not, have begun in the first place. All this is summed up in the crucial shift to “populational thinking.” There are only populations of differing individuals potentially interbreeding (the biological definition of a species) and/or living in wider communities of interacting lives, for example, ecosystems and “humans and nature”—

cultural and natural—bioregions.

Darwin and Darwinians can have no recourse to atemporal rational guarantees. Methodologically, they can only form tentative or speculative hypotheses, garnered from human experience and the evidence of the world, and then check their hypotheses against further worldly evidence and rival philosophic and scientific interpretations. Let the most powerful and adequate interpretation win. There are no apriori or certain guarantees of truth. This is the method of *The Origin of Species*. For example, *The Origin* is “one long argument” for evolution, the common descent of all species life, and natural selection. Darwin gives various plausible explanations to bolster his main thesis—whether explanations be about the progressive evolution of the mathematical order and efficiency of beehives; or the paucity of the fossil record with respect to “intermediate species forms;” or the migration of species and/or the dispersal of seeds thanks to the geological events, periods of glaciation, or the hitchhiking of seeds on other organisms. In each case, explicitly or implicitly, Darwin claims that his

that underlies the systems-wide interaction. What can be gathered from all this?

Mayr and other biologists speak of the pervasiveness of “emergent properties” in the natural world: that systemic interactions among entities on one scalar level of nature yield new and in principle unpredictable properties or entities on the next hierarchal level of nature. Again, this holds for internally complex genomes, cells, systems of cells, individual organisms, communities of organisms, and so on. Descartes’ definition of a human self or individual as a *res cogitans* or thinking thing is gone. Spinoza’s definition or explanation of a human individual or self as an internally complex, finite conative mode or modification of God or Nature’s infinite, eternal activity is also gone, along with all other forms of substance philosophy—again, substance defined as that which requires nothing else in order to be or exist. What alternatives are left to us? Perhaps all individual organisms, including individual human selves, are “emergents” from nature’s historical, orchestral causation and are ongoingly so until they die.

For the first time responsibility for the long-term future of humans and nature has moved to the center stage of morality and ethical concern.

theory can plausibly explain what “independent creation” or cosmic teleology cannot. One long argument indeed, and the stakes are very high. Darwin’s theoretical and scientific explanations reveal an earthly reality unknown to then contemporary natural theology. The doctrine of independent creation eclipses or hides the earth’s reality: the dynamic, historical, systemically complex evolution of earthly life from a temporally remote common origin.

How do conceptions of nature and human selves in Darwinian philosophy match or mirror one another? I want to be brief and only sketch speculative possibilities of a Darwinian conception of human individuality and selfhood. A fleshed out notion of human individuals and communities within Darwinian nature is a philosophic exploration and adventure yet to be fully realized. However, there are pregnant clues to be garnered from Mayr’s Darwinian conception of nature.

Recall the main elements of this conception: the central role of populational thinking (differing individuals within populations and communities); the central fact of dynamic, systemic, and historically contingent interactions among and within biological entities from genomes to cells, individual organisms, communities, ecosystems, and more; the orchestratal causation (causation on many spatial and temporal scales, including ultimate and proximate causes)

Let me briefly explain. A human individual inherits a historically engendered genome from its parents. (No clones allowed here). This genome includes the informational capacity for the development of all our humanly and individually characteristic traits. The genome, once naturally fashioned, enters the world’s historical, orchestral, interactive fray. Out of the fray emerges the phenotypical organism, the human individual or self at some stage or moment of its development and life cycle. This historically engendered human emergent thereupon becomes one causal strand (along with its inherited genome) in the orchestration of the next stage or moment of its individual self or being. Any form of identity or enduring individual character is at once a dynamic, active, organic achievement *and* an inheritance from a natural, cultural, and personal past. This conception of emergent selves or individuals fits with characteristics of all organisms, human or other. All alike are dynamically active. All alike are finite, mortal, and vulnerable to worldly, earthly vicissitudes. They fit will into Darwin’s nature: minding nature, minding ourselves.

I do not want to go much further here, but only point out what must be adequately explained by such a conception of the human self as an ongoing emergent individual. We must be able to explain or interpret what capacities, powers, and talents we in fact have—capacities for rational

thinking; circumscribed freedom and responsibility; artful creation; richly complex emotional and spiritual lives; physical, bodily dexterities; and the formation of diverse human communities and cultures. This list could go on. We are extraordinarily complex organic, social, cultural beings. But the question does come down to this. Can the advent of organic life and its natural evolutionary and ecological history suffice to undergird the reality of human life and history in all its glories and ignominy? Correlatively, can evolutionary biology and speculative philosophy, now or in the future, provide an adequate framework of thought for interpreting who we are, the nature of the world we live in, and the complex interactions and significances or worth of ourselves and the world?

Recall the historical, dynamic realm of interaction; the evolution of all organic forms and capacities via orchestral causation; variation, selection, and chance conspiring purposelessly and unconsciously to engender the history of life, including ourselves, and whatever directions that history might take. Correlatively, recall human individuals, communities, and cultures emerging out of and within the context of wider evolutionary and ecological nature. Whatever general natural capacities we humans have—mental, emotional, bodily—are woven into the fabric of our worldly, historically engendered genomes, hard-wired or soft-wired, that is, amenable to environmental, including humanly cultural, influences. Out of the interactions of earthly history and human cultural history have emerged we humans in all our individual and collective diversity, with capacities for circumscribed freedom of choice, action, and moral responsibility, among a wide array of other natively organic and cultural powers. Here is indeed something philosophically to ponder.

First note how Darwinian modes of thought transform not only our understanding of our human selves, but our moral lives and fundamental responsibilities. We can no longer be exclusively or centrally concerned with our human selves, communities, and their well-being or happiness. We have been woven out of, and remain inextricably within, a nature that has spawned an extraordinary array of interconnected life forms and capacities. Here we encounter the engendering of natural values and goodness, ontological and cosmological, if not strictly or directly moral. But, as noted, all life forms and capacities—genomic, individually organismic, ecosystemic, or biospheric—are also and alike finite, mortal, and vulnerable to harm.

We are the results of historical causes, evolutionary natural and humanly cultural. Natural evolution and human history go on unabated. But in the orchestration of the future, thanks mainly to historical cultural developments, we humans collectively have become a

major player, a major causal factor, in earth's history. We may remain only co-creators, along with nature, of the earth's and our future, but thanks to our new corporate heft (technological, economic, populational) we have saddled ourselves with responsibilities perhaps unimaginable in pre-Darwinian times. We have responsibilities to the whole realm of earthly life, not only to our individual selves and human communities. Moreover, we must recognize, face, and discharge these responsibilities amidst much ignorance about evolutionary, ecological nature, not to speak of ourselves. All worldly situations may be unprecedented, but some are more unprecedented than others. Ours is one.

We have already seen major shifts in philosophic thought concerning our new situation in the world. Among several others, there are the evolutionary biological, philosophic, and ethical reflections of Ernst Mayr. There is *A Sand County Almanac* and the Land Ethic of Aldo Leopold. There is *The Imperative of Responsibility* and other writings of Hans Jonas. With varying degrees of emphasis, all three would emphatically shift our moral gaze from an exclusive concern with human beings to wider historical nature and its evolutionary and ecological processes, both for our and nature's own sake. The protection and promotion of the valuable and the good must now go decidedly beyond the human to what has been worthy of serious moral attention all along, that is, that natural world within which we are interactively embedded.

In Darwin's universe, historical dynamism and interaction replace eternal rational and ontological activity as the cosmological bottom line.

With this Darwinian re-minding of nature, ourselves, and our moral responsibilities, what becomes of our understanding of the human good? In ways yet to be fully envisioned, it is decidedly transformed. Our particular human uniqueness, our powers of knowing, creativity, love, and responsibility, are refocused on the fact that we are the only natural beings who can know, understand, appreciate, and morally respond to life's evolution. So would claim Mayr, Leopold, and Jonas. Jonas would add that for the first time responsibility for the long-term future of humans and nature has moved to the center stage of morality and ethical concern. This weighty responsibility, with its many burdens, may add a new dignity and worth to human life and become a chief new ingredient of a newly conceived

humanly good life.

Faced with the knowledge, fate, and future fortunes of earth's evolutionary life, Leopold speaks of the keen sense of tragedy and loss, as well as natural exhilaration, love, and awe that accompanies the champions and practitioners of the Land Ethic, those who accept responsibility for the intertwined biotic and abiotic communities that engender and support life. Leopold thinks like a mountain. Peering into the fierce green fire of a dying she-wolf that his wildlife management team has just shot, he suddenly realizes that mountains know what he and his companions do not: the role of top predators—wolves, bears, mountain lions, and more—in maintaining the health, the long-term evolutionary and ecological integrity, of natural ecosystems. Parochial human concerns—managing for deer hunting, cattle ranching, and now development communities—recede into the background. Similarly, in “Marshland Elegy,” Leopold ponders the beauty and wildness of Sandhill cranes and their role, reaching back into the Eocene and Pleistocene in creating and building up, along with their ecosystem co-species, marshland reality. Here is Leopold experientially returning to natural, cosmological origins, including his own. But Leopold's reflections recognize the possibility, if not probability, of the demise of the cranes, and perhaps also of ourselves. Here would be the loss of time-deep wildness: denuded and less significant or meaning-laden marshlands and natural landscapes.

Leopold harbors analogous, authentic moments of “high blessedness,” but his conception of the humanly good life embodies richer, more complex, and darker hues. Again, this shift in understanding is perhaps a human gain rather than a loss. However that may be, it is the result of a much needed and morally imperative re-minding of nature and ourselves, in all their complex and subtle correlations and interconnections. This is a task that has only begun in the philosophic seriousness that it requires and deserves.



This article is taken from a lecture presented at the Center for Humans and Nature Minding Nature Conference at The New School, November 7-8, 2003.

Strachan Donnelley (1942-2008) was founding President and Chairman of the Center for Humans and Nature.

Humans and Nature: The Right Relationship

PETER G. BROWN & GEOFFREY GARVER

“**B**earing Witness” is the Quaker term for living life in a way that reflects fundamental truths. Bearing witness is about getting relationships right. The group of Quakers in the eighteenth century who built a movement to end slavery were bearing witness to the truth that slavery was wrong. Yet bearing witness to right relationships is not limited to Quakers. It is something done by inspired people of all faiths and

cultures when they live life according to cherished values built on caring for other people and being stewards of the earth’s gifts. The mass movement to end apartheid in South Africa, Rachel Carson’s triggering of the environmental movement in the 1960s, and the campaign of Mothers Against Drunk Driving to make roads safer are just a few examples of people coming together to bear witness to what they knew was right.

The global economy today is overwhelming the ability of the earth to maintain life’s abundance. We are getting something terribly wrong. At this critical time in history, we need to reorient ourselves in how we relate to each other and to the earth’s wonders through the economy. We need a new mass movement that bears witness to a right way of living on our finite, life-giving planet.

Right relationship

Over just the last two decades, science has radically altered its view of the arrangement both of life and of nonliving components of the earth. New understandings are emerging that place relationship at the center. Biology

and physics are moving away from a “reductionist” view of function, in which the activity of a living cell or an ecosystem, for example, is explained by being reduced to its parts, rather than including the relationship between those parts as essential to our understanding. Today scientists are admitting that this three-hundred-year-old scientific doctrine is far too simplistic, and are finding that physical substances work and exist in terms of highly complex, interdependent, and changeable *contexts* and *relationships*. So, for example, the relationships between genes in the human body, rather than only their individual functions, are the key to the countless ways that human genes can produce genetic traits and characteristics. We are now learning that relationship is the key to the survival of our species on the social and political level, as well. This essay is about relationship writ large, and about how to move to right relationship from wrong relationship in our individual and collective economic lives.

A quick story of one set of relationships operating on our planet helps illustrate this more sophisticated scientific understanding. In its natural state, oil, created over eons from organic matter by volcanic heat and compression, is found almost entirely within the earth’s crust; that is its

natural relationship with the planet. By the same token, most forms of life can only exist within the biosphere; the thin membrane of plants, animals, and microorganisms and their life support systems at or near the earth's surface constitutes habitat for virtually all life. Life on earth also exists in a *spatial relationship* to the atmosphere, which must contain gases also arranged in a particular relationship—not too much carbon dioxide, plenty of nitrogen and oxygen, only minute amounts of other gases. Finally, all life forms need access to a highly particular relationship between only two simple and very plentiful gases: hydrogen and oxygen. Water, so necessary to life, is in fact a relationship between those two gases. It is also found primarily on top of the earth's crust or only a short distance beneath it or in the atmosphere above it.

These relationships can equally easily be discerned to be “wrong” if the spatial configuration of each component is seriously disturbed, just as a gene sequence cannot express itself if it does not have the necessary position in the genome and the necessary relationship with certain proteins.

Right now, one of the largest industrial projects in the planet's history is located in western Canada. Development of the Alberta tar sands is a massive attempt to alter the relationships of the substances normally found below the earth with those on it. In this case, oil is brought from beneath the crust along with the sand it permeates and placed in relationship to the ecosystems found on the surface: forests, rivers, wetlands, and lakes. Once on the surface, the oil enters into a relatively permanent set of new relationships with air and water, both in Alberta where it is mined, and also when it is used in vehicles and heating plants in the chain of refineries and users that spread out from it, as far west as China and as far south as Texas. The immense Athabaska River, adapted over millennia and nourishing the boreal forest, enters into a long-term new set of relationships, too. To flush oil from the sands, the river is drained, boiled, forced through the oil-drenched sands, and then deposited in enormous tailing ponds, where the oil's poisonous hydrocarbons are supposed to “settle.” The life-giving water of the Athabaska is removed from any use by life forms ever again, barring the discovery of some new, extraordinary technology.

This alteration of relationships transforms the thousands of square miles devoted to tar sands development into a huge, toxic graveyard of former life, with a stench of sulfur and hot asphalt that can be smelled from far away. The surface of the earth is stripped of all animal or plant habitat. In the surrounding area, pus-filled boils, cancers, and other lethal diseases and birth defects in the fish, animal, and human population are now being documented.

But not only are ecological relationships affected. Tar sands development also affects social relationships among people. Tens of thousands of workers have migrated to the few towns and many work camps on the site. The crime rate in the towns and cities most affected, Fort McMurray and Fort Chipewyan, and Edmonton and Calgary, has risen, as have homelessness, the cost of living, and prostitution. Human casualties from drug use, alcohol, highway accidents, and the rigors of shift work on a frontier are also escalating.

Right relationship provides a guiding ethic for people wishing to lead fulfilling lives as creative and integrated participants in human society and the commonwealth of life as a whole.

And these are only the impacts at the beginning of the chain. Once shipped from Alberta, tar sands oil will power air conditioners in deserts, furnaces in the Arctic, and many cars, trucks, and jets. It will serve as the raw material for a vast array of synthetic chemicals and fertilizers. This single industrial project even affects Canada's international relationships, as it makes the nation's compliance with emissions reductions in the Kyoto Protocol virtually impossible. Demand for Alberta's oil will be driven by an international economy that is racing ahead in pursuit of endless growth and wealth accumulation.

Alberta tar sands development, along with many other modern industrial developments such as the Three Gorges dam in China or even the war in Iraq, are clear examples of “wrong relationship.”

In this essay we expand the term “right relationship” from its early Quaker use to give it a more universal meaning that includes contemporary science and has roots in diverse cultural and religious traditions. Right relationship provides a guiding ethic for people wishing to lead fulfilling lives as creative and integrated participants in human society and the commonwealth of life as a whole. It is akin to what some would call “sustainability,” though it goes much deeper. Right relationship offers a guidance system for functioning in harmony with scientific reality and enduring ethical traditions.

In the 1940s, conservation biologist Aldo Leopold, reflecting on what he had come to see as the next stage in human moral development, created a useful definition of right relationship. When working out what he called the land ethic, he explained that “A thing is right when it

tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.” Many volumes have since been written on the philosophy of ecology, but this simple statement has become the touchstone of the ecological worldview. Leopold’s ethic gains strength when enhanced with affirmations of the inherent value of human and other life, as exemplified in Albert Schweitzer’s powerful idea of “reverence for life.”

Replacing the term “stability” with “resilience” reflects the current scientific understanding of relationships. Leopold’s ethic applies, as well, to the integrity, resilience, and beauty of human communities. How the ethic is understood in practice depends, of course, on the type of community. Hence, with only one alteration, his ethic becomes a practical guide for differentiating between right and wrong relationship both in human society and in the entire community of life of which humans are a part: “A thing is right when it tends to preserve the integrity, resilience, and beauty of the commonwealth of life. It is wrong when it tends otherwise.”

It is quite possible to choose right relationships and the common good. Many individuals are already doing so, as are many communities and a few societies. The problem the world is currently facing, however, is that in most of our modern societies the majority of people are actively urged, even forced, to choose wrong relationships, such as those typified by the Alberta tar sands project. Greed and the constant stimulation of new desires that feed it, until quite recently regarded in most societies as sinful or at least unpleasant, have increasingly become acceptable, even glorified. Simultaneously, modern industrial activity has embraced a pathological gigantism, increasing corporate consolidations and ruthlessly crushing the small-business players, as well as the natural systems on which all economic activity depends. In short, a pursuit of wrong relationships is the prevailing trend of our times. The signs are now well known: climate change, overpopulation, loss of topsoil and fresh water, increasing rates of species extinction, deforestation, imperiled coral reefs, unstoppable invasive species, toxic chemicals that remain for eons in the environment, persistent human poverty and hunger, and an increasingly inflated, unstable world financial system and globalizing economy. And we only begin the list.

Right relationship with life and the world is both a personal and a collective choice, but it is a choice that we must make. It can support and inspire people struggling to find a foundational base for the development of productive societies and a healthy human–earth relationship. Opting for healthy human and ecological communities is a decision we can make that will require us to find new ways to live and to run our economies. Of course, “right relationship”

is simply another way of expressing similar precepts found in many of the world’s religious and spiritual traditions. The reductionist science of the eighteenth and nineteenth centuries transformed ethical ideas by removing, for many people, their theological foundations. Now, the relationship science of the late twentieth and twenty-first centuries is beginning to change human perceptions of reality, particularly in terms of human duties to the other life forms with which we share life’s prospect.

The commonwealth of life

To move from wrong to right relationship, we need to answer the question: related to what? To answer this question we have chosen a term that stresses interdependence—commonwealth. It is typically used to describe a political community established to promote the *common* good, rather than only the interests of individuals or a particular class of people. Political commonwealths derive from the roots of the word: “common” and “wealth”—that is, wealth is seen as something to be allocated equitably in society, to be shared in common.

The traditional idea of a commonwealth stresses the shared features of the community and interdependence of its members. For people, relationships with other humans or with natural communities bring in notions of mutual respect and fairness that are reflected, for example, in universally recognized moral principles like the Golden Rule. The commonwealth of life extends these notions of common features, fair sharing, and interdependence to the entire community of living beings on the earth. The “common wealth” in this community of life on the earth is now clearly the evolutionary heritage and destiny that people share with other life forms. A whole earth economy works for *all* of life’s commonwealth. Nearly all life on the earth has been made possible by the power of the sun, which over eons has fueled the creation of living structures of increasing complexity and interdependence. These range from single-cell organisms to elephant, honeybee, or human societies, as well as the intertwined communities of plants, animals, insects, and other biota that constitute a forest. In the commonwealth of all life, the actions of each individual member or species affect the entire commonwealth, however small the result might be. We human beings are now in a position to have far greater impact on the commonwealth of life than most of the other life forms with which we share the planet. Therefore we have the responsibility and privilege to consider other beings and ecosystems when we engage in any sort of social action, including an economy. Our actions must embody

an ethic of appreciating, husbanding, and sharing the earth's bounty.

An economy in right relationship

Our species has arrived at its present precarious condition through a history of development driven, in part, by economic relationships and interactions. But though it has facilitated convenience in material living over the centuries, building and maintaining human societies has often had disastrous effects on human and natural communities—the ruin of the Mayan, Roman, and Easter Island civilizations are examples. By objective measures, the kind of globalized economy that has seized the world since World War II is one of the most disastrous of all. Many of the earth's key life-support systems are in rapid decline. Far more catastrophic collapses are likely to hit human and ecological communities in the near future, and the long-run prospect is dire indeed unless a shift from wrong to right relationships becomes part of human culture.

The postwar financial success of a globalized economy has led to the continuing expansion of finance and consumption and to prosperity for hundreds of millions of people, but it has also trapped the nations of the world in a relentless pursuit of economic growth with no thermostat or shutoff valve. Especially since the end of the Cold War and the easing of any threat of a competing ideology, an increasingly unregulated global capitalistic economy, as developed most enthusiastically in the United States, has dismantled decades-old institutions and structures that had previously succeeded at more evenly distributing prosperity and reducing market abuses.

The current system operates on the assumption that the earth's environment is a subset of the human economy, and that the earth belongs to humans. If these are the assumptions, it makes sense to transfer as much

economy above the well-being of the natural world creates a lethal, poisonous wrong relationship. So how can people shift from an economy based on greed and unquestioned growth to a whole earth economy that is based on right relationship with the commonwealth of life?

Five questions in search of right relationship

Five key questions, and their answers, chart a path to putting the economy in right relationship with life's commonwealth:

What is the economy for?

How does it work?

How big is too big?

What is fair?

How should it be governed?

Question #1: What is the economy for?

What are people aiming for, individually and collectively, in the myriad interdependent transactions that make up the economy? Most leaders in finance, business, government, and think tanks say that the global economy's purpose is to enhance human well-being by constantly maintaining economic growth. They assume, despite having little or no serious argument or data, that more consumption and economic activity will result in greater well-being.

Yet this answer makes no sense. To begin with, in mainstream economic terms, growth is not measured in terms of benefits, but simply keeps track of overall economic activity in terms of exchanges of money. Many such exchanges create negative side effects, such as pollution, but money spent on cleaning up the resulting pollution is measured as positive growth—and hence adds to dominant measures like Gross Domestic Product (GDP). So, for example, the current economic model sees

Opting for healthy human and ecological communities is a decision we can make that will require us to find new ways to live and to run our economies.

of the earth's natural capital as possible into the engines of the industrial economy. These assumptions, though, are fantastically at odds with scientific reality; human culture and its economic goals are, in pure scientific fact, a subset of the earth's environment and resources, and humanity is only one of millions of species that depend on them. Like putting water into the tar sands, placing the human

the money spent cleaning up the Exxon Valdez oil spill as an increase in GDP and therefore beneficial. Similarly, when a person suffers a fatal car accident, the economic exchanges, in terms of ambulances, insurance agents, funeral homes, and so forth, increase GDP and are seen as positive.

The current purpose of the economy—providing ever-increasing wealth, with ever-increasing growth—

means that cash incomes can rise while actual wealth falls, as measured by natural capital such as soil, timber, oil reserves, and clean water. Making money often demands the one-time, windfall liquidation of centuries-old natural support systems such as forests or fisheries, or even older works of nature such as the Canadian tar sands.

In addition, GDP growth contains no measure of *distribution*, so inequity, poverty, and outright starvation often can, and do, rise at the same time that overall economic activity increases.

Lastly, many studies worldwide have demonstrated that after certain basic needs are met, it is one's relative wealth—how folks compare to others, not an absolute amount of wealth accumulation—that determines much of the self-perception of happiness. In “advanced” (or, perhaps, “overdeveloped”) societies, trying to improve well-being and happiness through growth is folly on a treadmill, since people cannot all be wealthier than each other.

These problems are symptoms of an economy in wrong relationship. Right relationship, by contrast, is built, in large part, on respect for all life—the kind of respect that is inherent in the Golden Rule, fair play, and other ethical principles that people from across the world's religions and cultures learn as children. Once the economy is understood as being embedded in the living, dynamic world that surrounds it, its purposes become clear: that is, to maintain the integrity, resilience, and beauty of life's commonwealth. The human economy is our way of provisioning ourselves. Hence for humans this means providing for the well-being of individual people, households, communities, and nations. It also means providing for the health and vitality of the finite ecological community in which we live—our diverse and finite earth. Moving away from an economy based on wrong relationships does not spell economic doom. Rather, it creates opportunities for truly rich and fulfilling lives for all.

Question #2: How does the economy work?

The prevailing way of thinking about how the economy works is to imagine that the economy is the box in which social interactions, ecosystems, and their resources are contained. The current economic order has a wrong relationship with how the real economy of this planet works. First, it assumes that the earth is subsidiary to the economy. Second, it mistakes a measure of wealth—money—for wealth itself. Third, it does not know how to think intelligently about the by-products of economic activity that are not the desired outputs—what we typically call waste.

How Does the Earth Work? In a typical mainstream

economics textbook, the economy is represented by a circular flow diagram. It depicts the production and consumption of goods and services without regard to the components of the earth or life's commonwealth needed to produce them. In fact, about a century ago economists stopped considering any concern for the adequacy of such resources as food and energy. Mainstream economics today proceeds, with rare exception, with no reference to the laws of physics, chemistry, or biology.

To understand how a human economy actually functions, it must be conceived of as being embedded in, and also a major determinant of, the complex systems whose relationships make up the earth's ecosphere. This requires a basic scientific understanding of how the planet works, which in turn requires some understanding of how the universe itself works. Kenneth Boulding, an economist and pioneer of complex systems, pointed out in the 1960s that the earth can be thought of as a spaceship: The material available for economic activity is limited to what is already on board the craft floating in the universe.

The fact that the earth is a system closed to matter has important implications. For all practical purposes, nothing ever enters or leaves. But the earth is open to energy. It receives a continuous flow of energy from outside the system in the form of sunlight, and it radiates roughly the same amount of heat back into space. This flow of heat from the sun is a key factor in making life on the earth not only possible, but abundant. The energy from past sunlight is stored in coal, oil, and natural gas. These are called *stocks*. Present and future sunlight is called *flows*. Both stocks and flows of sunlight are finite, and this inescapable fact places limits on the earth's life-support capacity. Understanding this fact forms an essential foundation for building an economy in right relationship with life and our earth.

What Is Wealth? Everything on the earth gives us our wealth. We typically treat wealth as solely a matter of money. In fact, money is a human tool exchanged for the real things that make up wealth: edible plants and animals, useful objects such as containers or furniture, the land and soil that can continue to produce real wealth in the future. Valuing the symbolic value (money) higher than the real one has led to the wholesale neglect of what makes this wealth possible.

The fundamental wealth on the earth, on which all else depends, is the ability to maintain life itself, which is made possible by the ability of green plants to convert sunlight into sugars. Plant-based sugars are wealth. They are used by the plants themselves and by virtually all other organisms to sustain themselves and to reproduce. Without this simple activity, all the manufactured capital, all the human capital, all the social capital, all the money, all the bank

deposits, and all the credit cards on the earth—the totality of these not only would be worthless, they would not exist. An economy in right relationship with real wealth is built on the simple fact that the integrity, resilience, and beauty of natural and social communities depends on the earth's vibrant but finite life-support capacity.

Placing the human economy above the well-being of the natural world creates a lethal, poisonous wrong relationship.

What Is Waste? Like symbolic wealth, waste does not exist in nature. All materials—from cow dung to lava flows—are reused or recycled for a huge variety of purposes. On the surface of the planet, nature's "wastes" support all life. Within conventional economics, the undesired products of an economic activity are viewed as useless "waste." If they are not priced, they are viewed as external to the market. This is what is called the "theory of externalities." The basic idea is that the prices paid in a transaction often do not include all the costs of production. For example, without some kind of correction, the \$50 paid for a tire will not reflect the damage done to the lungs and laundry of people who live downwind of the plant where the tire is made. Because this unintended by-product is considered "external" to the market, it is a cost that the tire manufacturer and the consumer never pay, in an unregulated market.

Making the tire manufacturer pay for the pollution and harm it causes is an example of the "polluter pays" principle, which is extremely appealing at first glance. If you are going to cause harms, then you should pay for them. Even so, the polluter-pays principle is not an adequate solution to the pollution, toxic substance, and "waste" stream problem.

First, it is often impossible to calculate the monetary costs of pollution. How much harm will any given amount of additional carbon dioxide in the atmosphere—which speeds up global warming—cause by changing monsoon patterns in India over the next century?

Second, while the polluter-pays principle, in theory, allows a business or institution to pollute as much as it wishes as long as it is willing to pay for the pollution, there are some things that should be prohibited, rather than tolerated as long as compensation is paid. No amount of compensation will make up for a child killed or deformed by toxic chemicals in her playground.

Third, the polluter-pays principle is almost always applied in an anthropocentric way, assuming that only costs to humans matter. A deformed and dying frog population is regarded as irrelevant unless people are also affected.

The theory of externalities also fails to consider that, strictly speaking, there is no such thing as a "by-product." All results of manufacturing and processing industries are direct products, whether they are useful or not. In a whole earth economy there is no such place as "away," as in "throw it away." All worn-out or castoff products remain within the ecosystem. All economic activity is internal to the biosphere.

To fashion an economy existing in right relationship with life's commonwealth, a big jump is needed to an entirely different conceptual framework and accounting system. Only an economy that completely outgrows the idea of "waste" can work on spaceship earth, where all products of manufacturing and other processes must be accounted for. In a whole earth economy, materials internalization would replace cost internalization: Manufacturers would be responsible for recycling as much energy and material as possible. Similarly, the notion of consumption, which implies an ending or discarding of the material consumed, must give way to a notion of *transformation* of the material into the beginning of something else. This is what is called the "waste is food" or "cradle to cradle" approach. In a whole earth economy, refusal to tolerate *any* waste has to become the goal for all economic activity.

The European Union is taking important steps in this direction. Today every car or washing machine coming off the assembly line in the EU must be recyclable. All the components must either be recycled by the earth (if benign) or reused in the industrial stream (if poisonous), thereby using the nonabsorbable heavy metals and petrochemicals again to make more machines. Legislation to this effect has been in effect for years in Germany, for example, though it still seems light-years away to North Americans. Of course, during the operation of an appliance like a washing machine, soap, bleach, and other by-products will be used and discarded—which also must be processed by the earth's systems.

Question #3: How big is too big?

How does the earth's finiteness affect how we think about the economy? Pondering this focuses attention on the issue of whether the economy could be too big, too fast, or too intense. The current economy has no measure of "enough." It has no means of saying when growth has become what economist Herman Daly has termed "uneconomic"—when the negative effects of growth outweigh the benefits. An economy in right relationship

with the planet has a thermostat, complete with a shutoff valve, that prevents economic growth from shutting down the very life-support systems on which the economy depends.

Understanding the question of scale starts with the fact that plants are the basic energy source from which all animals (including humans and their cultural projects) ultimately come. Plants get their energy from sunlight. The global growth economy is overly dependent on consuming sunlight from the past that is stored in fossil fuels. It shifts many of the ecological consequences of current economic activity to the future, building up carbon dioxide in the atmosphere and taking heavy metals from under the earth's surface and scattering them throughout the surface environment.

We humans can do the math; we *know* that renewable resources such as soil, forests, and fish are now being consumed at a rate faster than they can be replenished, and we know that greenhouse gases are increasing dangerously in the atmosphere. Most of us recognize that this simply does not work over the long term. An economy without a thermostat or shutoff valve—for example, having no way to make drastic cuts in greenhouse gas emissions despite an overwhelming scientific consensus that indicates not doing so will lead to catastrophic climate change—is in wrong relationship with the commonwealth of life. This means that we are still not effectively answering a simple question: How big should the economy be?

The economy's growth and size, as well as its intensity, velocity, and momentum, must be judged at every turn by its impact on the "integrity, resilience, and beauty" of human society and ecological communities. The *momentum* of the economy is especially important to keep in mind. For example, because so many impacts of human economic activity are growing on such a massive scale, even if greenhouse gas emissions were to start decreasing immediately, and even if emissions were to equal nature's withdrawals, it would still take decades, even centuries, for the climate to stabilize.

Measuring the scale of the economy and its impacts on social and ecological communities will require rigorous scientific inquiry and monitoring of indicators of both ecosystem and social-system health and resilience, on a global scale. In today's economy, scientific research tends to favor profit-making pursuits. Tracking the scale of the economy will take a much greater commitment to scientific research aimed at the common good—at developing a comprehensive understanding of how key life-support systems function. New measures of societal and ecological well-being, many of which already have been proposed, will need to be refined and then substituted for current

measures of economic growth—GDP, in particular.

A method of doing all these things is derived from the $I=f(PATE)$ framework, based on work by Paul Ehrlich and John Holdren. This framework says that the human impact on the global ecosystem (I) is a function (f) of the complex interplay among population (P), affluence (A), technology (T), and ethics (E). Understanding this set of relationships provides a means for figuring out how to keep the human economy within the earth's ecological limits.

Question #4: What's fair?

In laying out his "spaceship earth" metaphor, Boulding pointed out that "we have a two-deck spaceship": one deck for the haves and one for the have-nots. Yet the current economic order has no measure of fairness. Its main antidote to poverty is more growth—justified by the facile slogan that "a rising tide lifts all ships." In many countries and regions of the world, notably China and India, growth has indeed been a major factor in moving hundreds of millions out of poverty. But in the four decades since Boulding wrote, the human population has approximately doubled. It is a sad fact that those people in the world today who are desperately poor still number in the hundreds of millions. At this point in history, we can no longer afford to try to address poverty through aggregate growth. To do so is simply unfair to future generations of humans and other species.

Determining what is fair also must take into account the enormous current and future ecological harm ranging from soil erosion and species extinction to massive destabilization of climate through greenhouse gas emissions. Hence, Boulding's vision needs to be expanded. We tend to think only about how humans should be sharing the benefits and burdens of living with *other humans*. An economy in right relationship has to include the fair sharing of the earth's life-support capacities with all of life's commonwealth. In a whole earth economy, fairness requires that we seek a flourishing earth—a world that works for all.

Question #5: How should the economy be governed?

Throughout history, humans have cooperated to establish rules that all members of a community or society are expected to follow. Even the most fervent supporters of the free market would concede that some rules are necessary. The question, then, is: what rules? How are they established and enforced? Which rules characterize our institutions today?

Under the leadership of the thirty countries of the Organisation of Economic Co-operation and Development (OECD), money and its surrogates have become more

and more detached from government regulation and control. The world economic powers insist on “free trade,” minimally regulated by national or international authorities. They also work to ensure that capital investment and financial markets remain minimally regulated by any publicly responsible body. This global free-for-all puts mounting pressure on social and ecological communities, which are wrongly assumed to be adequately protected as long as global GDP continues to climb. Governments are increasingly answerable not to their electorates, but rather to the financial interests that help politicians attain positions of authority and spend vast resources to influence governance decisions.

Four steps to achieving a whole earth economy

Study after study has shown that reaching the goal for which we humans have placed our entire planet at risk—economic escalation and personal wealth—does not even make us happy. Above a certain amount needed to maintain a roof over their family and put food on the table each day, human beings in every country surveyed are not made happier by more material goods, even in significant amounts. What *does* make us happy are the ideals promoted by almost every ethical tradition known: belonging to a community; enjoying good health; sharing; loving and being loved; having access to nature; making

In a whole earth economy there is no such place as “away,” as in “throw it away.”

Unfortunately, many of the current piecemeal government solutions to the combination of problems threatening the global commons often exacerbate the problem. Examples such as genetically engineering crops to increase food yields, or using biofuels to provide a renewable source of fuel, will almost certainly increase ecological and social problems. Both require enormous monocultures, machinery driven by and fertilizers derived from fossil fuels, and the use of industrial patents, which affects land use and tenure and entails huge wealth-distribution problems, as well as genetic and chemical pollution. The fundamental reason the solutions are often even more dangerous than what they replace is that they grow out of and perpetuate the insane drive of industry and government for limitless growth. They often still serve wrong relationships.

What kind of governance is required for a whole earth economy? Current international institutions lack adequate mechanisms to understand, let alone manage, the ecological limits that place limits on the economy’s size; to protect global commons; to establish global ecological rules that all the world’s nations and citizens must live by; and to ensure that those rules are obeyed. For this reason, new and more effective governance is urgently needed at the global level. The missing global governance functions could be established in various ways. Four global institutions can be envisioned that would put them in place: an earth reserve; some form of global federalism; global environmental trusteeships; and a mandatory world court.

a meaningful contribution. When we envision the true limitations, responsibilities, and mystery of living on the earth, we will begin to experience far more fulfilling lives than the excessive acquisition of material possessions can ever provide.

What can be done, then, to start building a whole earth economy in right relationship with life’s commonwealth? The first step on this new path is *grounding and clarification*. Right relationship is based on feeling a sense of awe for the cosmos and embracing an ethic of humankind’s appropriate place in, and relationship to, the cosmos and the earth. Grounding and clarification begin with the recognition that it makes much more sense to be inspired to live within the ecological limits of the earth than to ignore the ecological consequences of relentless economic growth. People everywhere need to envision having fulfilling lives, and then start living them by walking more lightly on the earth. Plenty of books, Internet resources, and community-based organizations provide creative ways to do this. With first grounding and then clarification, a whole earth economy can start to take hold.

Second, building a whole earth economy will require *development of models, pilot programs, and techniques* based on right relationship, informed by history but tailored as best they can be to the future. Whatever institutions emerge must preserve local decision making, yet ensure respect for new, ecologically based rules that we all must live by to avoid the further unraveling of life’s commonwealth and the attendant decline in the human prospect. This is not something that should only be left to “experts.” What will daily life be like when a new kind of global governance

comes into play? The answer will depend not only on the details of how global governance functions, but also on how it makes sense in the daily lives of people in communities across the globe. The more people who participate in discussing new forms of global governance, the better it will serve people and the entire commonwealth of life fairly and effectively.

The third step is *bearing witness to a guidance system built on right relationship*. As a better future built on right relationship comes into sharper focus, a mass epiphany is bound to take place. Everyone who wants to preserve the integrity, resilience, and beauty of the commonwealth of life for future generations needs to commit to individual and collective changes that will lead to right relationship. It is impossible to predict how or when this epiphany will take place. But it *is* possible to hope for it and work for it by bearing active witness to the concept of right relationship and to the urgent need for change.

The last and catalytic step in this vision for building a whole earth economy is *the igniting of a social movement of nonviolent action* that changes hearts, minds, and policy toward right relationship. Quaker history contains many stirring examples of action leading to the advancement of significant social and economic reform, while the Quaker template for abolishing both the slave trade and slavery itself against powerful, entrenched interests is the most well known. The Quaker example can serve as an inspiring model for building a whole earth economy in right relationship with life's commonwealth. But bringing about the essential and urgent change to protect life's commonwealth must be the goal of people of all faiths and persuasions.




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Civic Community in a Garden: Reflections on a Theology of Democratic Citizenship

J. RONALD ENGEL

 The motto on the seal of the city of Chicago is *Urbs in Horto* (“City in a garden”). However, *Civitas in Horto* is the motto the city fathers should have chosen. It is of no small significance that they chose “urbs” over “civitas” for their ideal of the city in 1837, four years after they forced the Pottawatomie to concede their land around Lake Michigan. Urbs is Latin for the built environment of a city, its assemblage of walls, traffic arteries, and

physical infrastructure. Urbs is a good choice if one intends to build a great industrial and commercial civilization. Civitas, on the other hand, was the word the Romans used to refer to the rights and duties of the Roman “civis,” or citizen. But more than this, it also communicated what Peter Hawkins calls “the spiritual matrix of citizenship,” the vision of goodness that sustains and animates worthy action in the body politic, the mythos that is borne by “the deepest network of associations, memories, symbols, myths, narratives and ideals” in the civic culture.¹ I maintain that we need to lay claim to the spiritual matrix of our citizenship, and work to expand and deepen our understanding of it, if we are to find the commitment and wisdom necessary to practice the kind of citizenship our cities need today.

The spiritual matrix of citizenship is closely associated with democracy, the ideal of a community whose members are co-equal in their moral freedom, in their responsibility for the common good, and in their active engagement in the deliberative process that is at the heart of political self-government. But the ideal of “civitas in horto,” citizenship in the garden, is more than democratic citizenship in even this comprehensive sense, and certainly more than

citizenship as we customarily understand it: the exercise of our constitutional rights and duties as members of a liberal state. It points to the fact that citizenship today involves responsibility not only for the social commons, but for the natural commons as well. Because “ecology” has come to stand for the diverse values and interdependencies at stake in human activities impacting the biosphere, a number of persons such as myself have begun using the rather clumsy term “democratic ecological citizenship” to point to the kind of citizenship we need today. I doubt that when the city fathers chose “horto” for the city motto they had this kind of responsibility in mind, although they did have the foresight to set aside a tract of lake front as a “Common to Remain Forever Open, Clear, and Free.” And they had the imagination to choose an evocative word, *hortus*, garden, to symbolize the region within which the new city was to be built.

Like civitas, hortus suggests a vision of goodness that we also need to retrieve if we are to find the wisdom necessary to practice the full meaning of citizenship today. The garden is one of the richest poetic metaphors in the total matrix by which human cultures have historically understood their relationships to the natural world. Next

“It is worth noting that the relative simplicity and the interpersonal familiarity of rural existence was yearned for by the anti-urban Old Testament prophets, as they witnessed the complexities and the varieties of deception practiced in the money economy of the city. Their visions of salvation were rural visions: the lion would lie down with the lamb, and the desert would bloom like a flower. When I was growing up, these images were most familiar to me, and I cherished them, in part because of their literary beauty. It is possible that these rural images of the Old Testament and the New—for example, in the parables of Jesus—carry more appeal in the city today than the urban metaphors of St. Paul, precisely because they speak of an existence retaining a creaturely sense of awe before the Creator.”

— James Luther Adams, *Not Without Dust and Heat* (Chicago: Exploration Press, 1995), p. 274.

to the air we breathe, the water we drink, and the ground we stand on, there is no more elementary tie to nature than the food we gather from the cultivation of the Earth. The garden is intrinsic to the reality of the city. The capacity for agriculture provided the surplus food necessary for the building of the first cities. In the 1830s the American Midwest, with its fertile prairie soils, was widely believed to be the garden of the continent, a refound Eden, whose plenteous produce could feed the millions of immigrants pouring into Chicago.

Although the processes of commodification and market exchange that dominate the contemporary city tempt us to forget the source of our daily bread, most urban dwellers still want a garden. The garden—indeed, nature in its entirety—was always fundamental to those whose names have been passed down as the exemplars of the tradition of Chicago citizenship we are tracing, from Jane Addams, Eugene Debs, Jens Jensen, Harriet Monroe, Carl Sandburg, Louis Sullivan, and Frank Lloyd Wright to Paul Douglas, Stan Hallett, and Al Pitcher.²

The problem is that the imagery of the garden, and what it tells us about our dependence upon the rest of nature, is seldom recognized or explicitly attended to as an essential part of secular urban life, even by those for whom it is a source of great personal meaning. The fact that we live as “*urbs in horto*,” and have obligations as “*civitas in horto*,” is largely neglected in our public consciousness. The human/nature, city/countryside split in modern secular and urban culture goes deep, and is often confirmed by the segregations of our personal lives. The question is how might the wholeness of our reality—the interdependence between our cities and the gardens and ecosystems of the world—be revealed to contemporary urban citizens and become foundational to democratic politics and public culture? How might the associations

responsible for creatively transmitting the spiritual matrix of our cities celebrate this reality and nurture us in its moral responsibilities?

One way this might be done is by reclaiming as central to our life of democratic citizenship in the city the fullness of the imagery of the banquet of life that is deeply buried in our cultural memory and in the texts and liturgies of our religious associations—imagery that holds together in one vision our dependence upon one another and the rest of nature and the promise of their mutual fulfillment through free human communication and sharing for the common good. The act of eating together is the most basic of sacraments—binding us in friendship and mutual obligation to one another, to those whose labor provides the food, and to the ultimate sources of life.

In pursuing this path of recovery and reflection, there are no better guides than the work of two outstanding Chicago theologians, my own mentors and friends, James Luther Adams and Lowell Weldon Livezey. I believe that the experience of such “republican banquets”—in both their creative and redemptive aspects—was among the primary well-springs of Jim Adams’s and Lowell Livezey’s dedication to citizenship and their search for a democratic theology adequate to its promise.

Adams and Livezey shared the belief that the theory and practice of democratic citizenship through voluntary association must be grounded in empirical discernment of the “spiritual matrix” of citizenship. This was the “missing link” between democracy and religion that had so vexed earlier generations of liberals who tried to relate Christian beliefs and institutions to democratic ways of life. Livezey, in particular, recognized the importance of the transformations underway in the structure of the city for maintaining and enhancing a vital spiritual matrix, and to see that an adequate theology of democratic citizenship

must be one that empowers citizens to not only attend to the issues of justice in the social order but also to building more sustainable relationships with the natural environment.

The most fundamental conviction that Adams and Livezey shared was the faith in democratic citizenship itself, the faith that ordinary human beings are capable of government by reflection and choice. They were each passionately dedicated, as were many of their predecessors in Chicago progressivism, such as Jane Addams and John Dewey, to the ideal of a democratically self-governing community. There are other important meanings of democracy on which they also agreed—freedom of dissent, transparency, rule of law, human rights, separation of powers—but it was this vision of free and equal responsibility by citizens for the public good of the interdependent community in which they all belong which was most fundamental.

Adams and Livezey were also united in the belief that citizens working together in “public-regarding” voluntary associations were the primary agents of democratic social transformation. Adams is reputed to be the chief American religious ethicist of the twentieth century to argue the thesis that voluntary associations are the “key to history.” As he famously said, the biblical admonition “by their fruits you shall know them,” means in social ethics “by their groups you shall know them.” Livezey similarly advocated both the study of voluntary associations and the need for citizens to participate in them, and like Adams, modeled both. But it was not only their instrumental value in effecting more just social policy, but also their intrinsic value as a space for human fulfillment that attracted Adams and Livezey. They each experienced in public-regarding voluntary associations what Adams described as the “freedom of talk,” the “spirit of humanity that counts above life itself,” the place in which “the Spirit may blow where it listeth and where it may create community.”³

Livezey and Adams also agreed that religious organizations of all faiths, understood in democratic society as voluntary associations, had a foundational role to play in the nurture of the spiritual culture of democratic citizenship. Each was raised in a church whose polity involved strong lay participation (Plymouth Brethren for Adams, Methodist for Livezey) and each was active in similar congregations (Disciples of Christ, Quaker, Presbyterian, Unitarian) the rest of their lives. It was in such congregations, in practice and by tradition, that the full spiritual weight of the democratic ideal might be found.

But they also shared a quarrel with the churches. The churches were more concerned for nurturing the

church community than the public community, and more concerned for the salvation of their members than the formation of democratic citizens. Adams and Livezey searched for ways to nurture prophetic social engagements of the laity, and one way they did so was by forming public-regarding ecumenical associations such as Protestants for the Common Good.

It was in the great issues of justice and peace, what Adams referred to as “reading the signs of the times,” that the struggle for democracy was being lost or won. For Adams in the years he was in Chicago, the overarching issue was Fascism vs. Democracy which included the issues of Authoritarianism vs. Civil and Political Rights and Religious Freedom, War vs. Peace, Laissez-faire Capitalism vs. Social Democracy, Racism vs. Racial Justice. Livezey shared with Adams strong convictions regarding the importance of the issues of race, and war and peace, and through his work at Princeton expanded the issue of human rights to embrace the full range of rights claims being pursued by voluntary associations. Indeed, in 1990, as his contribution to a symposium at Meadville/ Lombard Theological School devoted to “James Luther Adams and the Democratic Prospect,” he proposed a paper that would make human rights a test of the adequacy of Adams’s thought.

But Livezey, following through on his long-standing concern for urban ministry, took a further step in reading the signs of the times which set a new agenda for responsible democratic citizenship. This was to identify the shape of the urban social order itself as an issue for critical ethical assessment and response by public-regarding voluntary association, and this in two respects: the “restructuring of the metropolis” that was in full swing in the 1990s due to the replacement of the industrial urban economy by new forms of global market relationships and which was posing problems of community fragmentation, the basis for his “Religion in Urban America” project; and the growing awareness of the ecological dysfunctions of urban sprawl and poorly managed land use. This was an issue that was clearly fraying the fragile cords that sustained the democratic life of Chicago.

What they most sought was a way to empirically access and critically evaluate the mythos at the core of democratic citizenship, and publically verifiable knowledge regarding how it was being transmitted through the activities of voluntary associations, especially religious associations. Adams’s long-range theological aim was to turn the Chicago liberal tradition of empirical theology away from its longstanding association with the methods of the natural sciences and move it toward direct encounter with the phenomena of history and therefore into awareness of

the “role of the body, history, and institutions in religion” in mediating the divine powers in history. He learned from Anglo-Catholic church theologies that cultures “live not only by means of universally valid ideas, but also through the warmer, more concrete, historical tradition which possesses its sense of community, its prophets and its ‘acts’ of the apostles, its liturgy and literature, its peculiar language and disciplines.”⁴ At the center of his mature theology was a concern for the “root metaphors” generated by religious traditions, and especially those metaphors such as covenant or kingdom of God, which had potential to shape the direction of history toward greater democracy.

Adams and Livezey also agreed that an outstanding and unresolved problem for democracy lay in humanity’s relationship with the rest of the natural world and that an ethically justified response to that problem must be part of any viable theology of democratic society. Adams, however, was aware from his first hand acquaintance with “blood and soil” propaganda in Germany in the 1930s, and from his study of the history of natural law, how easily appeals to alleged “natural norms” could be used to rationalize denials of universal human rights. Moreover, in spite of his indebtedness to the naturalistic metaphysics of Whitehead, which found the divine “community-forming and transforming” powers of existence in nature and society alike, so that both “nature and history vindicate decision and action for community,” he had early incorporated the history/nature, voluntary/involuntary dualisms of the reigning schools of Christian theology and biblical scholarship into his ontological perspective. In consequence, although he acknowledged the importance of the issue in principle, and felt a deep personal attachment to nature, he was never able to come to grips with it himself.

The republican banquet

Livezey once observed that most of the songs, stories and pictures in the churches communicated a rich agrarian symbolism, for example, parables about vines and mustard seeds, but the parishioner did not have any contact with the world that had generated them, just as the congregants in the Jewish temple still used a lunar calendar but could not see the moon! Here lies the great ambiguity of tradition and modernity. Then, anticipating his analysis in *Public Religion and Urban Transformation*, he said that in his view, the explicit environmental concerns of liberal churches, such as recycling, were not the most fundamental thing. The most fundamental thing was what the religions of the city were going to do with their treasure of agrarian symbols as they set about trying to reestablish the cultural glue of

the metropolis. He proposed that food was likely the most promising way to bring home to the urban population the fundamental necessity of ecological responsibility, and asked: Given the need for a sustainable and affordable source of healthy food for the whole population under both local and global economic conditions, how do we think ethically about the competition between our inherited ideals of the agricultural landscape, the emerging images of sustainable urban agriculture, and the present agribusiness industry that dominates Chicago and the Midwest?

How might the wholeness of our reality—the interdependence between our cities and the gardens and ecosystems of the world—be revealed to contemporary urban citizens and become foundational to democratic politics and public culture?

William James once asked: “Why may not the world be a sort of republican banquet... where all the qualities of being respect one another’s personal sacredness, yet sit at the common table of space and time?”⁵

The dinner tables of the settlements in Chicago were famous as places where everyone was treated as equal and the most animated exchanges were held about the quality of civic life. Dorothea Moore described the dinner hour at Hull House with its combination of guests and residents as “the meeting ground of the day.” “The exchange is the vital thing,” she said, “this is the reason of the settlement; the rest is pure facade.”⁶ According to Jane Addams the only persons who lost their temper in such exchanges were college professors who were not accustomed to being talked back to! Likely the idea of the first urban playgrounds, attributed to Jane Addams, came up at such a republican banquet. We know that it was in the course of regular Sunday evening dinners at the home of architect Dwight Perkins that he and Jens Jensen and Jane Addams declared themselves a “Committee on the Universe” and came up with the idea of the Cook County Forest Preserves.

The faith that the reliable powers of life are those that thrive when we choose to engage in “free, cooperative effort for the common good”—that is, when we choose to live an active life of committed democratic citizenship—does not appear out of nowhere. It arises out of our encounter with the transcending visions of goodness that are carried by our religious and secular cultures of citizenship and as we

discover those visions realized, if only very partially, in our own most intimate experience. These are visions of a life worth living for its own sake, of an existence so good, so overwhelmingly, lovingly, lastingly good, that our wills are transformed, and we are stirred to be citizens.



Notes


1. Peter S. Hawkins, *Civitas: Religious Interpretations of the City* (Atlanta: Scholar's Press, 1986), p. vii.
2. J. Ronald Engel, *Sacred Sands: The Struggle for Community in the Indiana Dunes* (Middletown: Wesleyan University Press, 1983).
3. J. Ronald Engel, "The Religious Authority of Democracy: James Luther Adams's Agenda for Empirical Theology." *American Journal of Theology and Philosophy* 17:1 (January 1996), p. 18.
4. Ibid. p. 9.
5. William James, *The Will to Believe* (New York: Dover Publications 1956), p. 270.
6. Dorothea Moore, "A Day at Hull-House," in *100 Years at Hull-House*, ed. Mary Lynn McCrett Bryan and Allen F. Davis (Bloomington: Indiana University Press), p. 49.

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Upheavals of Thought and the Path to Citizenship

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ne of the central concerns of the Center for Humans and Nature is the concept of “ecological democratic citizenship.” In our work we attempt to define, clarify, and critically assess this notion, both by examining its philosophical underpinnings in ethics and political theory and by exploring its practical and political implications in America and the world today.

Many thinkers from numerous disciplines are doing work pertinent to the constellation of knowledge and sensibility implied by this notion, which lies at the intersection of ecological science, civic responsibility, and democratic governance. One of the most interesting and important of such thinkers is the widely read philosopher, Martha Nussbaum. Among her prolific writings, *Upheavals of Thought: The Intelligence of Emotions* (2001), is particularly noteworthy for this purpose. In it Nussbaum seeks to outline the philosophical and psychological components that would contribute to the healthy functioning of a pluralistic, democratic society. *Upheavals* is a spellbinding exploration of emotions across the history of Western thought beginning with Plato and ending with Joyce. Nussbaum’s reading of philosophy and literature draws the reader on page after page until you simply must step back from the feast.

Nussbaum begins by rehabilitating the role of emotions as important cognitive forces in our lives. Part of the exploration is an exposition of the course of her intense grief at the death of her mother. Indeed, grief generates the title of the book. She tells us that her grief for her mother heaves itself up unexpectedly, not only into

her dreams, but also into her conscious thought where, even though unbidden, it is fully cognitive. She compares her experience with the huge literature on emotions and interestingly includes a discussion of emotions in animals. She reviews the benefits and problems of the various scientific approaches to the study of emotion and compares emotion in various cultures. A particularly moving chapter deals with the fact that music cannot be put into words and yet is profoundly cognitive and often intrudes itself into other thoughts. Nussbaum compellingly demonstrates that emotions play a central role in our cognitive world.

Nussbaum characterizes her philosophy as neo-Stoic. Traditional Stoics recognize the emotions as part of our cognitive world but find these upheavals of thought profoundly disruptive to their quest for a strict focus on a rational ascent toward higher meanings. Thus, the Stoics work hard to suppress their emotions whether those of anger, hate, or disgust or those of infatuation, love, or generosity. Stoics reason that generosity, whether by an individual or institution, demeans both giver and recipient. It does so because it suggests that they are not truly focused on the realm of contemplative thought and thus have failed fully to recognize worldly things as transient and without

real importance (cf. pp. 355; 406-7, on Justice Clarence Thomas as a contemporary example of classical Stoicism).

By contrast, Nussbaum's brand of neo-Stoic philosophy is concerned with an earthly version of eudaimonia, the good life for individual and community. Emotions, in her neo-Stoicism, can lead toward (love, compassion) or away from (disgust, shame) eudaimonia. At the heart of the citizenship question for Nussbaum is the development of our emotional palette from infancy through childhood and into adulthood. Here once again she employs vivid experiences from her own life as well as from the psychiatric literature. Her conclusions are two. The wrong kind of upbringing is one in which the child is always in

In the final part of the book, Nussbaum takes us on a delightful, but very purposeful ramble through philosophical and literary works in search of the definition of eudaimonia, implied or explicit in each. This is a study of the ascent of love as illustrated by many authors, i.e., the pathways of concern and attention held highest and best by a given worldview. In this study, Nussbaum continually imagines two main characters of Marcel Proust's *In Search of Lost Time*, Marcel and Albertine, as the experiencers or questioners of the proposed ascent to eudaimonia. We see their pathways, what they gain, and what they have left behind or outside of consideration as Nussbaum describes the ascent of love in not only in Proust's work, but also in

How are we aided or hindered by a particular philosophy or psychology in our attempts to understand what a compassionate humans-and-nature community entails?

error, has no way of making reparation, and thus is never secure in love; this leads to a person whose pre-eminent adult emotions become disgust and shame and the need to control oneself and one's environment as strictly as possible. Citizens of this sort are not likely to produce a democratic, pluralistic, egalitarian society. By contrast, a child who learns to trust that separation can end in reunion, that errors can be rectified or repaired and can lead to instruction and reparation—this child can learn to love herself and others and not be overcome by disgust. Children so raised and educated can be compassionate and tolerant members of a democratic society.

Next Nussbaum turns to a careful review of the idea of compassion, using a dialogue form of exposition. She concludes that compassion is the appropriate, perhaps the only, foundation for the life of the community. But compassion requires a moral and civic education; that is to say, it doesn't just happen. For instance, compassion involves imagination and narrative in relating to victims and agents. Going further, Nussbaum proposes a list of "The Central Human Capabilities" which might arise from and be nurtured by an education for compassion. These include Life; Bodily Health; Bodily Integrity; Senses, Imagination and Thought; Emotions; Practical Reason; Affiliation; Other Species; Play; and Control over One's Environment (political and material). According to her theory of compassionate development at the societal level, "every society ought to guarantee its citizens a threshold level" of these capacities (p. 416-418). For Nussbaum, compassion provides a rationale and basis for personal judgements, welfare, child development, and criminal justice.

Plato, Spinoza, Augustine, Dante, and others. All of the above accounts of the ascent of love are hampered by their concentration on another world or world-to-come. This direction of attention is all important as it mandates that the proponents are drawn away from compassionate action in the here-and-now and may even be taught to ignore this-worldly obligations as obstacles to attending to the most elevated (proper) concerns.

Nussbaum turns next to *Wuthering Heights* by Emily Brontë as an example of the Romantic ascent of love. Here we see that the destructive properties of shame and rejection mixed with towering erotic desire leave no room for compassion of any sort even between the lovers, let alone anyone else. But Nussbaum puts forth another version of the romantic ascent of love, that found in the music and poetry of Mahler's symphonies. These, together with Whitman's poetry and Joyce's *Ulysses*, provide for Nussbaum a glimpse of the possibilities of a compassion focused on the messiness, complexities, ambiguities, struggles, and joys of the here-and-now. Individuals showing compassion for other individuals, their strengths and foibles, is where a compassionate society can begin and where it has its best chance to become rooted. But a compassionate society is a complex goal and compassion for individuals does not yet guarantee success for the community.

Nussbaum presents a major theme of philosophy in a way that keeps you at the edge of your chair. What additionally draws my interest is that Nussbaum's approach and many of her examples might be conscripted to explore the descents and ascents of our human relationships with nature. For example, we could take the sources cited and ask of them the question "While love ascended (according


to a particular author), did caring for nature play a part in that, or was love for nature diminished or entirely denied either by intent or omission?” Put another way, how are we aided or hindered by a particular philosophy or psychology in our attempts to understand what a compassionate humans-and-nature community entails? We might also perform the same sorts of analysis on the great ecologists and natural history writers including, for example, Darwin, Mayr, Gould, Jackson, and Berry. Can we use such analyses to envision a lively, compassionate, complex humans-and-nature community in which love, work, and mutual service come together?



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Gathering at the River: Toward Communities of Conservation in the Hudson River Valley

BRUCE JENNINGS

 Human history and natural history are inextricably and inescapably intertwined. “Nature alive” is the context and precondition for culture, society, humanity.¹ And healthy, diverse nature, which supports life well and abundantly, is the basis for justice and the human good. It is no less true that culture is also a precondition for nature, since the health and function of natural systems are so powerfully shaped by human activity, for

better or worse. If the biotic community is to flourish, it is not enough for the human community to just “leave it alone”; humans must actively and intentionally sustain its integrity, diversity, and health. Supporting life well and living well are inseparable. Nature alive and culture responsible go hand-in-hand.

Redefining our relationship to the river

Nowhere has this confluence of humanity, culture and nature been more striking than along the mighty Hudson River and in its valley. Here the rhythms of ecological adaptation and historical change are syncopated. Consider the Adirondack Park; the Catskills and its reservoirs; the island of Manhattan with its surrounding rivers and estuary; the industrial development of the Hudson River Valley from the 17th century on; the art, architecture, and literature spawned by the interactions of the Hudson region’s nature and its human inhabitants. In this the four hundredth anniversary of Henry Hudson’s exploration, we do well to take a broad and long view. A major industrial corridor for the better part of two centuries, the Hudson

still bears the marks of that bygone era, and communities along the river struggle with toxic residue and with abandoned commercial waterfronts awaiting redefinition. These river towns hold within them the potential for a new way of defining communities in relationship to the river, its watershed, and its landscapes.

What will become of these Hudson River human and biotic communities? This is a pressing question and providing answers to it will require us to rise to a new level of regional civic responsibility. Finding a resilient and sustainable—life affirming and dynamically active—relationship between worthwhile human activities and the integrity of natural systems on the Hudson River is a moral and civic challenge for which we are ill-prepared.

Many gains have been made by environmentalists over the years in protecting the river; and recreational and some commercial uses thrive, with scenic vistas nearly as rich today as they were when Jasper Cropsey painted them or Washington Irving wrote about them. Looking down at the river while hiking in the Hudson Highlands, or kayaking in the marsh waters across from West Point, is a rich personal experience. Nonetheless, while our planning processes are *protecting* the river, they are not giving our

communities a meaningful *relationship* to the river. We don't have the conceptual vocabulary to talk about that, and so we don't. The mainstream planning and political languages are idioms of conflicting interests over nature seen as a resource. This form of discourse and action, this practice of democratic citizenship is falling short. It is failing us and failing that mighty river and its region.

Moreover, at the present time, we do not adequately know how to think and act regionally. We do not know how to think local and regional together. We grope in the face of numerous human and natural crises: suburban sprawl; languishing brownfields and downtowns; and now severe global recession and a mounting fiscal crisis for state and local government. We flounder in the face of equally pressing imperatives: protecting land, water, and air; mitigating and adapting to global and regional climate change; pursuing social justice and human rights in the face of continuing poverty, discrimination, and massive inequalities in the distribution of wealth and power.

There is much talk at the river about "sustainability." Bryan Norton, a noted environmental philosopher, has said: "...sustainability stands for taking responsibility for the future impacts of today's activities, including impacts on natural, physical systems and also on the values and ideals of the community in the future."² What kind of towns, villages, and regions do we want to be? How should we prepare for a just, healthy, biologically and culturally

Local communities need to step back and reexamine the fundamental underlying concepts and assumptions at work in environmental and land use planning and decisionmaking.

diverse future? How much can we borrow from future generations—our children—and what should we bequeath to them? How can we exercise ecological democratic citizenship and become resilient, sustainable "communities of conservation and civic responsibility"?

Many thoughtful individuals and groups are now grappling with these questions in the region, from a variety of different perspectives and in diverse ways. The Hudson Valley is not a remote or a forgotten area, by any means. But the salience and high degree of environmental concern resident in the region, and the juxtaposition there of extremes of global wealth and severe economic hardship, do not always make the problems of the region easier to solve,

for these conditions do not generate ready cooperation or consensus. Decisionmaking is difficult because it is so visible and the stakes are very high.

What can one contribute under these circumstances? What can one do that will be new and useful?

Changing the subject

I believe that the planning process in the Hudson Valley requires a new intellectual paradigm. In too many towns and villages along the river, the civic conversation is stalled, perspectives have become too limited and entrenched. Local conflict and disagreement is often intense; options are too often pedestrian and unimaginative. State and local officials, local office holders, stakeholder groups and others are often caught up in the details of a local proposal and the State Environmental Quality Review Act (SEQR) process. Brownfield sites often present enormously complex remediation and development choices, that are partly scientific and technical but also social and value-laden.

In this context, Hudson Valley officials, planners, environmentalists, developers, and ordinary citizens in local communities need to step back and reexamine the fundamental underlying concepts and assumptions at work in environmental and land use planning and decisionmaking. We need to reimagine our possibilities and enrich our vision. We need to create new vocabularies of value for ethics, economics, and politics. We need to break out of dead end debates that lead nowhere. We need to change the subject from humans versus nature to humans with and in nature. We need to learn how to shift from a form of planning and politics that sees the river, watershed, and landscape as "resources" to be developed or consumed to a kind of planning and politics that sees the question not as one of "resources," but as one of "relationships"—sustainable, careful, and mutually health-giving and life affirming relationships between the biotic systems of river, watershed, and landscape and the human beings and communities that live by, with, and through the river.

Toward communities of conservation: a strategy

The mission of the Center for Humans and Nature is to critically examine fundamental concepts and assumptions and to craft new vocabularies of value. It is our intention to bring these skills to bear in the Hudson River Valley region by initiating a two-year Communities of Conservation project, working in collaboration with the Environmental

Consortium of Hudson Valley Colleges and Universities, the American Museum of Natural History, and many other groups. By critically considering the Hudson region's natural and cultural history, we will explore a regional civic vision for the future. We will educate ourselves on how most effectively to think humans and nature together, how most productively to consider human and natural interactions with the aim of building up the region's biological and cultural diversity, multiple values, and resilience.

Such exploration and research by necessity must be multidisciplinary and multi-sectoral (including, academic institutions, museums, civic NGO's, businesses, religious communities, among others). The aim finally will be to help build *civic cultures of conservation*. In this effort, the Environmental Consortium of Hudson Valley colleges and universities can play an important role, not only by strengthening environmental programs and awareness among their faculty and students (who will surely be the region's environmental and political leaders of the next generation), but also by fostering civic conservation efforts in their surrounding towns and villages. As Norton has argued: "Movement toward sustainability ... must begin with a commitment to work together to find cooperative solutions to shared problems. ... we must work from the bottom up to build new and more inclusive vocabularies that will further improve communication, especially communication around the practical nexus of what to do, given what we know and what we want as a community."³

The Hudson Valley Communities of Conservation project fills a unique niche that complements and adds value to—but does not duplicate or compete with—programs and initiatives that are recent or are currently ongoing in the Hudson Valley. The focus of many of these programs tends to be on creating change and broadening stakeholder education within existing policy frameworks and processes. They do not, for the most part, make a concerted effort to critically examine or to make more transparent the cultural, political and value assumptions that underlie current mechanisms of environmental, economic development, and land use policy. Working within existing institutional frameworks and cultural assumptions, without at the same time questioning them, is precisely an important part of what is wrong with regional policy making today, in our view.

In a pragmatic, manageable, and compelling way, the Communities of Conservation project will demonstrate that a new way of framing community choices and policy decisions—upon which the future of the Hudson River ecosystem depends—can grow out of dialogue that questions the assumptions of land use as usual, politics as usual, and planning as usual. Our aim is to rethink the underlying

principles that influence our collective relationship with Nature, not only in a theoretical, but also in a practical sense; to rethink these principles not only *in thought*, but also *through action*.⁴

More specifically, our project challenges the basic assumption that permeates public policy and practice, namely, that nature (i.e., ecosystemic diversity, integrity,

Implicit in the Communities of Conservation project is an underlying model of deliberative planning and of the relationship between well functioning representational governance and robust participatory involvement in local affairs.

and healthy functioning) is a competing interest that must be balanced against other interests (such as property rights, tax revenues for local municipalities, and economic growth) by officials and policymakers making environmental and land use planning decisions. Through seminars, symposia, dialogues, and vision planning at the local and regional levels, the Communities of Conservation project will challenge this underlying conception of nature as a competing interest. It will explore and promote instead an alternative planning paradigm in which nature is understood as the foundation of all human and societal endeavors. This re-alignment has profound effects upon how we as a society make decisions and set priorities. This is the cornerstone of democratic ecological citizenship. Our programmatic goals, in the broadest sense, are to foster a new kind of discourse about land use and environmental planning.

Implicit in the Communities of Conservation project is an underlying model of deliberative planning and of the relationship between well functioning representational governance and robust participatory involvement in local affairs. A few words should be said to explain and clarify this model.⁵

Clearly many environmental issues transcend any one locality or even region and require governance on the state or national (even international) levels. However, it is also true that in New York State local communities have substantial zoning, planning, and environmental regulatory authority that has been delegated to them under state law. Therefore, the political and planning discourse that takes place in local

communities substantially effects the interaction between local government and large developers and other corporate interests. Localism and regionalism need not be in conflict, although they often are made to conflict by certain attitudes and behaviors. It is at the local level that deliberative planning and democratic ecological citizen participation can most readily occur in a substantive way. But the aim of local deliberation need not be—and should not be—local myopia or narrow geographic or jurisdictional interests. The fruits of deliberation by responsible civic communities and democratic citizens must fit the facts and scale of real world problems. Local deliberations must ultimately give birth to a sense of regional responsibility and action.

Environmental values and economic interests cannot be well-integrated and balanced in policy unless they are properly defined and assessed in the first instance. Ecological, scientific literacy and a discourse of civic values are essential to that task. Robust grassroots debate and mutual engagement can create the basis for an entirely new way of thinking and talking about these issues in a given community. The terms of old political animosities and stalemates can be loosened, rethought, and broken down. Pragmatic compromises and adequately protective, resilient and sustainable modes of development can be discerned. Elected officials in our system of political representation can actually function as true brokers of consensus and as trustees of the public good once more.



Notes

1. The concept of “nature alive” (as opposed to “nature lifeless”) was introduced by Alfred North Whitehead, *Modes of Thought* (1938: 150), who maintained: that “...neither physical nature nor life can be understood unless we fuse them together as essential factors in the composition of ‘really real’ things whose interconnections and individual characters constitute the universe.”

2. Brian G. Norton, *Sustainability: A Philosophy of Adaptive Ecosystem Management* (2005: 359).

3. Norton, (2005: 358).

4. Rethinking through action was a central tenet of philosophical pragmatism in America, and it from that tradition (from philosophers such as John Dewey, and from planners such as Louis Mumford) that our own orientation is drawn. See Ben A. Minteer, *The Landscape of Reform: Civic Pragmatism and Environmental Thought in America* (2006).

5. This vision underlying the project is political theory, to be sure, but it is also increasingly political practice—concrete and tangible—that is making a difference around the country. See John Forrester, *The Deliberative Practitioner: Encouraging Participatory Planning Processes* (2001); Matt Leighninger, *The Next Form of Democracy: How Expert Rule is giving Way to Shared Governance...and Why Politics Will Never Be the Same* (2006); Ted Nordhaus and Michael Shellenberger, *Break Through: From the Death of Environmentalism to the Politics of Possibility* (2007); and J. G. Speth, *The Bridge at the Edge of the World: Capitalism, Crisis, and Crossing from Crisis to Sustainability* (2008).

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Still Searching for a Vision

BRANDON C. WHITNEY

In the shadow of economic collapse and the recent collection of more austere climate change scenarios, many are anxious for the markets to rebound, and some are worried about the lack of political will needed to effectively confront climate change, but only a few are trumpeting the call to rethink in a fundamental way the nexus of economy, society and ecology at the crux of these manifold challenges. It now seems abundantly clear—if it had not before—that the pursuit solely of an economic bottom line is a socially and ecologically unsustainable path (particularly within the moral vacuum in which several sectors of our nation's economy appear to have been operating). These voices argue that we need, with unsurpassed urgency, to rethink and revamp our economic system writ large. To do this well, we will surely need a new politics.

What Ted Nordhaus and Michael Shellenberger began in their provocative 2004 essay “The Death of Environmentalism,” they continue and expand in the book-length treatment *Break Through: From the Death of Environmentalism to the Politics of*

Possibility. While originally published in 2007, theirs may be an even more salient question to ask now than when the book was published: Is it time for a new brand of environmental politics?

In the book, Nordhaus and Shellenberger rely heavily on the image of Dr. Martin Luther King's “I have a dream” speech and the evocative story of how it might have instead been “I have a nightmare.” Their thesis is that the environmental movement has been going down the wrong track for the last four decades, preaching the equivalent of a nightmare rather than a dream. The overarching argument is for the movement to shed its history of pollution-based, limits-focused “conceptual models, policy frameworks, and institutions” (p. 10), born during the height of the regulatory era, and to craft instead a new politics based on creativity, human potential and the imagining

Ted Nordhaus and
Michael Shellenberger.
*Break Through:
From the Death of
Environmentalism to the
Politics of Possibility.*

Houghton Mifflin, 2007, 344
pages. \$25 hardcover.

of new possibilities. They indict the environmental movement's public message for its negative content and

emotional character: restricting, constraining, punishing, preventing, guilt, fear, doom and gloom, etc. The solution to our current predicament, Nordhaus and Shellenberger suggest, is the “unleashing rather than restricting [of] human activity” (p. 127). In addition, the authors suggest that we not only reorient ourselves away from this past approach, negative in its imagery and tactics, but that we essentially disassemble the environmental movement as one of many (competing) special interests and diffuse it throughout our politics. As they put it, “if we are to overcome ecological crises, we must no longer put concepts like nature or “the environment” at the center of our politics” (p. 17).

The “politics of possibility” are, for Nordhaus and Shellenberger, a politics of growth: “we argue for an explicitly pro-growth agenda” (p. 15). However, their prescription for growth and investment is tempered by a focus on general human well-being rather than on the endless accumulation of wealth. They explain that the “new vision of prosperity will not be the vision of economic growth held by those that worship at the altar of the market...it will define growth not in gross economic terms but as overall well-being” (p. 270).

In *Break Through* Nordhaus and Shellenberger create a rollercoaster of an argument, which by turns soars to honorific praise one moment and crashes to almost brutish mudslinging the next—enough to induce airsickness in even the most patient

reader. They disparage important parts of the new environmentalism they describe (particularly environmental justice activists and international social configurations), many of which have been calling for an end to the mainstream establishment of environmentalism for some time. The authors too often write with what appears to be the intention of picking a fight.

It is perhaps easiest to understand the authors' intentions in writing the book if we realize that in many ways *Break Through* is propaganda. Further, it is important that we realize the intended audience is the environmental movement itself, not necessarily the general public. Nordhaus and Shellenberger have written as insiders for insiders. In this regard, the authors' professional acumen is evident. The book is a rather exhaustive form of message analysis and public relations strategy written by two strategists. To use marketing terms: it is a plan for the discontinuation of a longstanding brand name product and a branding/marketing plan for the rollout of a new product. Branding and marketing go hand in hand, and Nordhaus and Shellenberger are, in my view, quite correct in their recognition that the environmental movement could stand to be re-branded. However, whether or not their new product endorsement is actually as different from its predecessor as their marketing suggests, is another matter.

One point that the authors might have spent more time connecting to their central thesis is the notion that in order to speed along positive environmental change, we will need to decouple our understanding of environmental politics and special interest politics. Decentralizing "the environment" as a category of thought is a profound suggestion. Surely a conceptual approach which considers environmental implications of myriad

What we need now as we face economic collapse and accelerating climate change is a politics that reconsiders what is possible and what is needed and what is desirable in concert with one another.

decisions, processes and policies is a requisite part of the oft touted, but seldom explained, orientation toward "sustainability." It would have been helpful to see Nordhaus and Shellenberger expand more on how their vision for unleashing human potential would facilitate this shift in perspective and practice.

By far the most serious shortcoming of *Break Through*, in my view, is that Nordhaus and Shellenberger seem to misrepresent the degree of change implied in their vision. Let us take President Obama as a practical example of the sort of propaganda strategy that the authors are proposing. His campaign rhetoric, which has cautiously carried into the early days of his presidency, probably created as powerful a re-branding of politics (in this case, with a capital P) as the country has seen in decades. His message of "change" was intimately bound up with the notion of the possible. But, despite an enormous public affinity for his message, Obama's brand of change wasn't necessarily new—it was just not "more of the same." The lesson the weary electorate may stand to learn, especially younger voters with whom the rhetoric resonated strongly, is that change comes in different forms.

There is change for the sake of

change—which is motivated primarily by the notion that the status quo is not working, is not desirable, or does not have broad public support. Then there is change that is needed, change that questions the appropriate course of action, which reconsiders fundamental assumptions as a basis for action. What we need now as we face economic collapse and accelerating climate change is a politics that reconsiders what is possible and what is needed and what is desirable in concert with one another. This is true vision-based change—the kind of agenda that articulates shared goals, a strong values-based rationale, and connects deeply with the necessary cultural reserves of political will. The beauty and elegance of Dr. King's "dream" derive from such qualities as these, and thus it has resonated through the decades as a powerful vision for change. Nordhaus and Shellenberger appear to understand the power of vision and of the possible, but they miss these crucial elements of change.

To move away from doom and gloom, crisis and catastrophe, in our messages about the environmental future is certainly well warranted. As is a new focus on possibilities for our politics rather than focusing only on restrictions—an approach that is creative rather than critical, "vision-based" rather than "nightmare-based." But the authors fail to give significant content to their vision, instead they merely set up its parameters (a creative rather than limiting focus and a diffusion of environmentalism into all arenas of our politics). By failing to reconsider the old paradigm completely they suggest a potentially dangerous course of action.

One could argue that the focus in *Break Through* on the power of human potential, especially when coupled with a focus on growth, is tantamount to a reinvigoration of the technocratic, anthropocentric, worldview that is in

large part responsible for the ecological, social and economic predicament in which we find ourselves, namely that human technology and ingenuity will be able to overcome any challenge presented by the natural world. Further, and perhaps the most glaring danger, their pro-growth prescription is deeply problematic in its rejection of limits. There is an empirical issue with denouncing limits altogether. Science (including ecology, evolutionary biology, climatology and many other fields) does—and should—imbue our view of the world with limits. But science doesn't tell us how we must constrain, restrict, etc. human activity—our politics do, our policy does, our environmental movement does. Instead of creating a scientifically untenable worldview which rejects limits (while paradoxically placing full faith in science as a source of technological innovation) society needs to better understand limits and how to distinguish between a vision of limitless human creativity and a vision of a healthy ecosphere, one that surely must be defined by some natural boundaries for healthy, resilient systems (including humanity's economic system). Surely these two visions cannot be mutually exclusive.

To return in closing to the new presidential administration, unfortunately it seems that Obama has unquestionably absorbed the very brand of growth-oriented, investment-based environmentalism that Nordhaus and Shellenberger propose. In a recent editorial in the *San Francisco Chronicle*, the pair even write that Obama has effectively ended the debate that they tried to start about the future of environmentalism by announcing the “most far-reaching program ever proposed by an American president to remake America's energy economy—with hardly a mention of the environment” (“Investment trumps environmental regulation.”

San Francisco Chronicle. Thursday, March 19, 2009, p. A-15). In the long view, this may not be entirely bad. The degree to which environmental concerns have permeated energy policy, national security, and job creation in Obama's response to this economic uncertainty—and thus have become part of a national discourse far broader than a focus only on climate change—may represent the important beginning of a breakdown of the category “the environment” as a special interest for which Nordhaus and Shellenberger argue. However, although the change toward a politics of the possible within the environmental movement may have already begun, the vision toward which we are moving is both incoherent and a continuously moving target.

Break Through succeeds most strongly in suggesting not a particular vision, but in showing the power of a vision to motivate change. The environmental movement desperately needs a vision as powerful as Martin Luther King's dream. We need a dream that positions humanity within the realities (limits, or whatever we choose to call them) of the planet—one that envisions the mutual flourishing of humans and nature.



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Simple Gifts

WILLIAM K. BAILEY

Until his death in August 2006, Father Francis Kline, the third Abbot of Mepkin Abbey, a Trappist Monastery near Moncks Corner, South Carolina, illuminated the lives of the brothers he led in the ancient tradition of work and prayer, *Ora et labora*, set forth in the Rule of St. Benedict. Francis' pastoral crozier, however, reached far beyond Mepkin's grounds through his concern for the spiritual, social, and environmental well being of the Lowcountry's citizens; his insightful talks to ecclesial and secular audiences; his renown as an artist at an organ's console; and his capacity for understanding, guidance, compassion, and laughter that defined his relationships. His ever-broadening circle of friends included Strachan Donnelley, the late founder and president of the Center for Humans and Nature, who met Francis ten years ago and, until his own death in 2008, held the Abbot as close to his heart and intellect as Francis held him. Though they certainly differed on theological matters, these men held common passions, among them an abiding love of nature's biological,

aesthetic and spiritual richness and a commitment to the ethical imperative that humans—themselves a part of nature—care for this world.

Four Ways of Holiness shifts the focus away from the brilliant monk whose public self was defined by a powerful personality and generous heart toward the Francis who was foremost and always a monk, a contemplative member of a rigorous order that calls its members to pray without ceasing, to strip away worldly veneer, and to pursue a lifelong yearning for union with God. In four essays—meditations on conversion, suffering, desire, and unity—Francis focuses on Christian life, especially as it is lived by monks and nuns, and presents his insights as monasticism's gift to the Church.

Francis Kline, OCSO.
Four Ways of Holiness for the Universal Church: Drawn from the Monastic Tradition. "Foreword" by Ladislav Orsy, SJ. "Afterword" by Michael Downey.

Cistercian Publications, 2006, 159 pages. \$19.95 paperback.

"Conversion" builds upon Christians' continual struggle to live into their baptismal vows, realizing that is the beginning of "a dynamic

process in the individual that . . . is consummated in death" (p. 7). Cistercians are blessed, Francis writes, by the asceticism of their calling, whereby monks "begin to peel back accumulated layers of a false identity ...which we show to the world..." (p. 11) so that, defenseless and afraid, they may move into the fullness of the Gospel.

"Suffering" is the detailed, engaging, poignant story of his extended battle with cancer, much of the struggle taking place at Sloan-Kettering in New York. An honest autobiographical account of the physical effects of the disease and the harshness of the treatments, Father Kline's story is at its core a meditation on the inevitability of suffering. Pain, fear, and uncertainty are constants, he writes, but so too are the bountiful gifts of kindness and love. Loss of control and enforced absence from his communal home in South Carolina leave him, at times, in emotional twilight where, in the midst of impending hopelessness, he continues to find spiritual sustenance. After almost continual shuttling between New York and Mepkin Abbey, Father Francis concludes "that in the mystery of suffering one comes against one's limits on many fronts. But one can also open the door to a communion with as many divine dimensions or more than the experience" (p. 61) where God's faithfulness keeps darkness at bay.

The Christian's desire for God requires a further stripping away, the purging of selfishness, ambition, and envy. And again, in its most

basic manifestation of the Church at prayer, the monastic tradition offers its example: “The contemplative monastic tradition is by far the oldest and richest in experience and attendant literature for the expression of pure prayer stemming from the deep desire for God” (p. 70).

The concluding meditation on unity is not limited to the author’s critique of ecclesial fragmentation among Roman Catholics and other Christian bodies, but is a sorrowful indictment of the pride, arrogance, and self-serving that fractures the self, creating fissures that separate people from one another, from nature, and from God. And, again, the monastic tradition stands in humble efficacy: “In that ecstatic movement of God toward us and back to him is forged a new unity of all persons and things” (p. 145).

Four Ways of Holiness is Francis’ *apologia* for monasticism and for his own intense engagement in its demanding austerity as the path toward spiritual plenty. Francis’ orthodox Christianity and focus on Scripture may seem outmoded or even irrelevant in a secular world. Yet Francis, in his celebration of monasticism’s intellectual tradition, offers thoughtful readers a gift: an understanding that the chaff of life, blown away by sacrifice and simplicity, reveals the means of living in harmonious concert with life’s creative unfolding.



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CHN BOOKSHELF

In this issue, Minding Nature begins a regular feature calling attention to important books and articles that CHN staff, board, and collaborating scholars are reading and recommend. Quot libros, quam breve tempus.—BJ

Eric Chivian and Aaron Bernstein, eds. *Sustaining Life: How Human Health Depends on Biodiversity* (Oxford University Press 2008).

Lorraine Daston and Fernando Vidal, eds. *The Moral Authority of Nature* (University of Chicago Press, 2004).

Rob Ferguson, *The Devil and the Disappearing Sea: Or, How I Tried to Stop the World’s Worst Ecological Catastrophe* (Raincoast Books, 2003).

Howard Frumkin, Lawrence Frank, and Richard Jackson, *Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities* (Island Press, 2004).

Gary Paul Nabhan, *Where Our Food Comes From: Retracing Nikolay Vavilov’s Quest to End Famine* (Island Press, 2009).

Linda Nash, *Inescapable Ecologies: A History of Environment, Disease, and Knowledge* (University of California Press, 2006).

Kristin Shrader-Frechette, *Taking Action, Saving Lives: Our Duties to Protect Environmental and Public Health* (Oxford University Press, 2007).

Terry Tempest Williams, *Finding Beauty in a Broken World* (Pantheon, 2008).

William C. Wimsatt, *Re-Engineering Philosophy for Limited Beings: Piecewise Approximations to Reality* (Harvard University Press, 2007).

Donald Worster, *A Passion for Nature: The Life of John Muir* (Oxford University Press, 2008).

The End of Philosophy?

BROOKE HECHT

What disciplines or frameworks of thought are most relevant to our current humans and nature sustainability crises? Perhaps scientific knowledge alone, without any emotional wrappings, enables us to take a more objective, longer-term view of issues such as climate change, landscape degradation, and waves of species extinctions. If we do turn to disciplines such as ethics and philosophy, will they be reliable guides or will they lead us to exaggerated, emotional reactions? I have heard these kinds of questions a number of times—from people in many different walks of life, from distinguished scientists to interested citizens.

An alternative perspective argues that reason and philosophical deliberation have little to do with our choices because our emotions largely dictate our decisions and actions. As David Brooks argues, in his April 6, 2009 *New York Times* column, “The End of Philosophy,” moral thinking is “more like aesthetics...You don’t have to decide if a landscape is beautiful. You just know. Moral judgments are like that. They are rapid intuitive decisions and involve the emotion-processing parts of the brain. Most of us make snap moral judgments about what feels fair or not, or what feels good or not. We start doing this when we are babies, before we have language. And even as adults, we often can’t explain to ourselves why something feels wrong. In other words, reasoning comes later and is often guided by the emotions that preceded it.”

The case for the importance of ethics, emotion, science and/or philosophy in approaching difficult choices about how we ought to live on earth should not be a case for exclusive jurisdiction. All of the disciplines bring insights into challenging dilemmas. Ethics, emotion, science, and other forms of knowledge should not be set in opposition to each other as an either/or choice for rational, thoughtful people.

One problem with David Brooks’ approach of giving primacy to emotional response is that he fails to acknowledge the concurrent development of emotion and knowledge, both of which work together to create meaning and intuitive decisions. In other words, the emotional development of human beings does not occur in a vacuum. A baby feels angry when the sharp knife she was holding is taken away. It feels unjust to her, but as she grows older and her knowledge expands, she recognizes that taking a knife away from a baby is not unfair, but in fact the very opposite; it is the right thing to do. The child’s growing understanding of the world around her is the key to this diametric shift in emotional response.

Interestingly, Brooks relies (as do others) on the evolutionary paradigm to justify his position of emotional primacy. “What shapes moral emotions in the first place?” he asks. “The answer has long since been evolution...” Brooks acknowledges that the evolutionary process has brewed up morality, so to speak, including the development of noble emotions such as cooperation, loyalty, and respect. However, he then uses this as a jumping off point for discarding philosophy and informed choice, giving emotion central (though not absolute) primacy in how we choose to live our lives.

Like many others, Brooks has failed to consider some of the most important insights of the evolutionary paradigm, which if taken seriously, would preclude him from discarding the importance of philosophic thinking. Most importantly, acceptance of an evolutionary world view includes the knowledge that we are members and kin to all life within an interdependent community. Aldo Leopold's Land Ethic captures the revolutionary nature of this idea, which "changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it."

One might still argue, haven't species emerged and gone extinct countless times over the course of the earth's history? And hasn't our climate fluctuated dramatically during this same time? Why should it matter if we humans are the cause of these changes? Who is to say that this is not our evolutionary role? And why should we care? These questions follow the line of thinking that we should put morality aside altogether because evolution, driving the fundamental processes resulting in the emergence of life and extinction of species, should be allowed to "take its course."

However, we humans are currently not doing that at all. We are dramatically shifting the evolutionary process, from a process of elimination of the most unfit species to survival of the few. Are we comfortable shaping the evolutionary process itself, having just held it up as one of the most fundamental of life's processes?

Knowledge is central to our emotional responses and the subsequent choices we make about how we should live on earth. Evolution may shape emotion, but what happens when the organisms shaped by evolution have insight into the process itself? How might the knowledge of our origins and interdependencies affect our responses to species extinctions, landscape degradation, and destabilizing climatic changes? Do we recognize ourselves, *Homo sapiens*, as the baby with the sharp knife? Furthermore, do we acknowledge our ability to grow?

Evolution has given us the capacity to be both destructive and responsible animals. Ethically right conduct is as "natural" to our species as ethically wrong conduct. We are not doomed to wrong conduct, nor are we doomed to ignorance about basic earthly realities about the origins of life and our place within it. It is now up to us to embrace this knowledge and put down the knife.

"Scientists have failed to help us to face human ignorance with respect to the effects of large scale corporate, economic, and public policy initiatives. In the main, the scientific community has fed our economic and technological boosterism and left us bulls in the China shop of nature. Here evolutionary biologists and ecologists should particularly feel the moral sting. They have failed effectively to grab us citizens by the throat and forcibly make us understand and take to heart that human communities and their activities, economic and otherwise, are nestled within wider and vulnerable living systems."

— Strachan Donnelley
Scientists' Public Responsibilities



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The Center for Humans and Nature

Our Mission: To explore and promote moral and civic responsibilities to human communities and to natural ecosystems and landscapes.

