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Please address letters to the Editor, inquiries and comments to our editorial office:

CENTER FOR HUMANS AND NATURE

152 BROADWAY, OFFICE #3

DOBBS FERRY, NY 10522

914-231-7200 TELEPHONE

914-231-7201 FACSIMILE

BRUCEJENNINGS@HUMANSANDNATURE.ORG

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Friedrich Eduard Bilz, de Phrenologie (1894). Wikimedia Commons.

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BRUCE JENNINGS

MINE AND OURS

THE CONCEPT OF PROPERTY IS FUNDAMENTAL to an understanding of the relationship between humans and nature. Moreover, land use, or land management and governance, is a significant factor determining the human impact on natural systems, including agriculture, biodiversity and habitat loss, deforestation, and overall climate change. Aldo Leopold made the connection between property and land use explicit: “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.”¹

The note Leopold sounds here has been an enduring one in social philosophy. Here are three of my favorite examples.

Writing in 1755, Jean-Jacques Rousseau maintained that a decisive turning point in the story leading from the state of nature to human political and social being was the invention of property, especially as it manifested itself in the enclosure of land:

The first person who, having fenced off a plot of ground, took it into his head to say this is mine and found people simple enough to believe him, was the true founder of civil society. What crimes, wars, murders, what miseries and horrors would the human Race have been spared by someone who, uprooting the stakes or filling in the ditch, had shouted to his fellows: Beware of listening to this impostor; you are lost if you forget that the fruits belong to all and the Earth to no one!²

A century later, writing shortly before his death in 1884, Karl Marx described the next step in human social evolution as involving a change in our attitude toward ownership and the land:

From the standpoint of a higher socio-economic formation, the private property of particular individuals in the earth will appear just as absurd as the private property of one man in other men. Even an entire society, a nation, or all simultaneously existing societies taken together, are not the owners of the earth. They

are simply its possessors, its beneficiaries, and have to bequeath it in an improved state to succeeding generations as *boni patres familias*.³

Finally in 1944, economic historian and anthropologist Karl Polanyi traced the changes that led in the late medieval and early modern period to viewing land, human labor, and capital as commodities that could be bought and sold in an impersonal market. He regarded this way of looking at land and labor as artificial and pernicious, but recognized how historically and politically powerful this alteration of perception had been in history. It changed the ways in which the relationship between human beings and the material world was understood and the ethical rules governing it. And it fractured the way that economic production and consumption had been embedded in a larger cultural structure of meaning and norms, thereby setting the economy apart as a semi-autonomous sphere of life and activity, with rules and a logic of its own.

Polanyi argued that this commodification of material life and separation of economic activity from a more seamless cultural web of meanings, despite its material benefits, was in other ways impoverishing and diminishing to humanity. He expresses the point this way:

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The economic function is but one of many vital functions of land. It [land] invests man's life with stability; it is the site of his habitation; it is a condition of his physical safety; it is the landscape and the seasons. We might as well imagine his being born without hands and feet as carrying on his life without land. And yet to separate land from man and organize society in such a way as to satisfy the requirements of a real-estate market was a vital part of the utopian concept of a market economy.⁴

At the beginning of the twenty-first century, "This is mine" increasingly looks like a bad deal. Where is Rousseau's "someone," that shadowy figure who pulls up the stakes and fills in the ditch? Where are Marx's good householders and good ancestors?

The answer is, everywhere. But they operate on local scales mainly, and they are only slowly gaining ground.⁵ They are the new commons movement that is redefining property and the management and governance of common-pool resources. It is a diverse movement, full of intellectual inspirations that are often conflicting. Recovering and re-governing the commons in a practical sense must go hand in hand with rediscovering the concept of the commons.

The concept, ethics, and politics of the commons are vibrant topics in many disciplines. This is especially the case in economics. A starting point for discussion in that discipline was Garrett Hardin's essay "The Tragedy of the Commons," which focused attention on the vulnerability of common-pool resources to overexploitation or neglect. This is a situation in which individuals following the logic of rational self-interest produce suboptimal collective results. Many, including Hardin himself, have drawn the lesson that privatization of the common resource is the best solution to this collective action problem. However, Elinor Ostrom's work challenged this. Rather than embracing privatization as a solution to the degradation of the commons, she found in many parts of the world that localized, culturally informed partici-

patory management of common-pool resources results in sustainable governance. And it avoids the conventional approaches of competitive market privatization on the one hand, and of central government regulatory and legal control on the other.⁶

Moreover, since the concept of the commons tends to reintegrate economic activity within a broader cultural and value network as a counterpoint to the fragmentation that Polanyi decried, it has also led to lively discussions between economists and anthropologists, who find that much more is involved than rationality and efficiency, which are often the overriding concerns of economists.⁷ For example, a study of the aboriginal commons in Queensland, Australia, found that the land is not understood as an economic resource primarily, but as a being with its own agency of "listening, watching, nurturing, disciplining and balancing human and natural resources."⁸

One lesson to be drawn from these debates is that the relationship between humans and the natural world in principle has many dimensions and facets. Commodification in a separate sphere of market exchange and merely instrumental economic use flattens the meaning of nature and perhaps removes some of the reasons for, and inhibitions against, in-

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appropriate and ultimately self-defeating exploitation of the land. Exactly as Leopold envisioned.

Property is not a thing, although we often use the word that way in common parlance. It is more accurate to say that property is a relationship between and among objects and people. As such it has consequences—it affects individual and group motivation and action, it determines access to and control over resources, and it is value-laden, not value-neutral, from both an economic and an ethical point of view. In the Western tradition, at any rate, property has been linked to the concept of rights going back to ancient Roman law. In modern times a privatized and individuated understanding of property is predominant, and it links property closely with commoditization and market exchange. But that conception of property is not the only possible one. Most generally understood, property concerns access to resources, differentiating those who have free access to something from those who do not, and setting the conditions under which various individuals and groups may obtain access and a right to use. Often, the right of access and use brings corresponding duties and obligations.

It is important to distinguish between private property and collective or common property. Today the term “property” is often taken to be synonymous with private property or individual ownership, but this closes off creative possibilities, especially in connection with sustainable land use and ecological trusteeship. Private property puts one person in control of how a resource is used; common property involves shared control and shared use. Indeed, there are forms of property rights in which the private owner does not have complete and exclusive control over access and use of a resource. Usufruct (*usus et fructus*, “use and enjoyment of fruits”) arrangements cover a situation in which individuals have rights of access to property owned by someone else, as long as the property is maintained appropriately. Use and enjoyment rights to someone else’s property historically have come in many forms and varieties,

but one important notion that was developed over time is the idea of *estover* (*est opus*, “it is necessary”) rights under which owners could not deny non-owning occupiers access to resources needed to sustain themselves and to perform their services on the land. Such resources could include access to grazing land, firewood, wild fruits, game, and the like. Hence it is important to note that while common property involves shared ownership and shared power to determine resource use, and thus, the normative dimensions of participatory decision making are readily apparent, even private property ownership can also be limited by normative notions, such as the appropriate maintenance and usage necessary to sustain people or ecosystems. Common-pool resources are those for which open access is difficult to restrain, either for physical or traditional cultural reasons. Neither private ownership nor state ownership always provide the best governance and trusteeship for the commons.

The ontological separation of human life and well-being from natural living systems on local, regional, and planetary scales is now the ideological default setting. And so is private control of the land in the service of the personal and material interests of the owner. These presumptions—and they

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are indeed presumptuous—go hand in hand. They both must be challenged and, in certain circumstances, rebutted. Last year, new legislation in California to limit the virtually free-for-all drilling of deep water wells and the depletion of aquifers in the face of the current severe drought in the Central Valley is a noteworthy example, but such governmental regulation of common-pool resources is only one solution. Weaving an infrastructure of more participatory common governance solutions, through the law and through building alternative institutional arrangements in civil society—mutual associations, cooperatives, sustainably oriented covenants and contracts, and the like—is an important alternative and an opportunity for the conservation movement. When one is pleading the case for the planet, commons-inspired efforts to reintegrate the property system with the fabric of other cultural and natural systems is a worthy goal and an ethical imperative.

Today the vision of ecological trusteeship through democratic governance is not a self-evident truth by any means. It requires hard work to make a case for its ethical justification that can persuasively garner popular support. But nature is chiming in and pressing its own case against the continued abuse of the land in the name of private property rights. In the past, the notion of estover was applied as a basis for claiming certain rights to common access and land use for people. How about the estover claims of nature itself? To the human cultural claim, It is mine, the answering response is the natural claim, It is necessary.

In other words, the current psychological and economic defaults of individualistic strategic thinking must be reset to a mode of relational ethical thinking that is mindful of human interdependence, sustaining the natural commons, and promoting the social common good. From mine to ours, from “What’s in it for me?” to “What’s in it for diverse, abundant, and resilient life?”

The articles in this issue of Minding Nature,

while not addressing the commons movement directly, do touch on this transition from mine to ours in various ways. This month features the Center Senior Scholars who led the resilient question on “Mind and Morality,” Arthur Zajonc and Michael McCullough.

Zajonc argues that relationship and suffering are at the root of morality. He stresses as well how important it is for us to understand the nature and potential of other beings. “We are at greatest peril if our ontology is impoverished or wrong,” he says. In a critical discussion of thinkers such as Descartes and Peter Singer, he reminds us of the significance of assumptions we make about the kinds of minds others possess—their cognitive and affective capabilities. Horrible things have been done to those who were thought to have no minds or inadequate minds. In the end, he turns Descartes on his head and also rejects the position of ontological materialism. Subjectivity, perspective, and relationship are the keys to understanding reality in space and time. In his apt phrase, “We live in a world of eros and insight, not oxytocin and neural circuits.”

McCullough also focuses on the experience of relationships in school settings to assess the ways in which education develops a moral sense and character. Today the shortcomings of the educational system receive much media attention, and policy ap-

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proaches like standardized testing are controversial. Yet these and similar worries about character development and the social functioning of the next generation are perennial concerns. Focusing on the United States, McCullough argues that our schools are succeeding in this regard. In many different areas, educational level is associated with more socially responsible and ethical behavior. He discusses, for example, law abiding behavior, volunteerism and generosity, civic responsibilities, and tolerance and respect, which are all enhanced by more education. Turning to how these correlations may be explained, he reviews various theories of environmental and genetic influence and discusses the role of rational incentives standing behind moral behavior. In the end, however, other fundamental factors may be at work, such as literacy, the development of explicit rules that can be rationally scrutinized and justified, numeracy that aids in the understanding of causal and relational connections between the actions of one person and another, and other critical reasoning skills. These more general capabilities, not specific and didactic character or moral education efforts per se, hold the key to the education of the mind and the development of morality.

In his essay on the work of Thomas Berry, David Schenck also pursues the activity of teaching but in the sense of re-orienting one's cosmological understanding of the human place in reality. He is alert to the radicalism and subtlety of Berry's work and his critique of the shortcomings of various wisdom traditions, which finally are flawed in the fundamental way in which they locate human being. Schenck finds the new cosmology that Berry has in mind to be dynamic rather than static; meaning and connection are always in process, and in this regard the form of Berry's own writing is an exemplar of that re-interpretation.

Australian legal scholar Ben Mylius addresses legal positivism and the failure of jurisprudence to take environmental and ecological sustainability seriously as a factor internal to legal reasoning, not simply an external side-constraint. The perennial debate in the philosophy of law has been between anthropocentric—man-made or positive—theories of law and legal authority on the one hand, and natural law views

on the other. Is the law right because it is made, or is it made because it is right? Mylius places this question creatively in the context of global warming and the current state of environmental law. After examining closely some of the modern versions of legal positivism, he argues that ecological considerations should be taken into jurisprudence as internal pre-conditions of the viability and validity of the law. He also argues that a new kind of contextualized and relational understanding of human agency, power, and authority is necessary if the field of jurisprudence is to rise to meet the challenges now facing it in the world.

Also in this issue, John Farnsworth explores complicated questions and experiences that arise when wildness and captivity intersect in attempts to conserve endangered species. Piro Ishizaka writes on the relationship between grief and our ability to do work in the world; grief over ecological damage, for example, and how it affects our ability to make up for it. Drawing from traditional cultures, she also appreciates how grief is not simply an inner matter for individuals but has a communal presence and purpose as well. Finally, Stephen Dunsky provides a summary report on the proceedings of the 2015 Geography of Hope Conference held in the coastal village of Point Reyes Station, California.

The Last Word gives us a poem by Julianne Warren, set in

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the context of the 2014 Climate Action March and observed from many angles, altitudes, and facets.

I would call the unifying theme of this issue the problem of “ontological misprision.” Misprision is not only mistaken understanding, but as a legal term it also refers to the negligible failure to take proper action in response to foreseeable harm. Our authors call attention to the ways in which various activities or policies are predicated on a mistaken understanding of human and natural being—mind and brain, educable moral conscience, rules rooted in something other than human decision, and in the broadest sense the wisdom of dreaming where culture and inheritance meet.

NOTES

1. A. Leopold, *A Sand County Almanac and Sketches Here and There*, rev. ed. (1949; repr., New York: Oxford University Press, 1989), vii.
2. J.-J. Rousseau, *Discourse on the Origins and Foundations of Inequality among Men*, in *The Collected Writings of Rousseau*, vol. 3, ed. R.D. Masers and C. Kelly (Hanover, NH: University Press of New England, 1992), 43.
3. K. Marx, *Capital*, vol. III, rev. ed. (1894; repr., New York: Penguin Books, 1981), 911.
4. K. Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 1957), 178.
5. An excellent overview is provided by D. Wall, *The Commons in History: Culture, Conflict, and Ecology* (Cambridge, MA: MIT Press, 2014). Also of interest is a study in intellectual history, P. Garnsey, *Thinking about Property: From Antiquity to the Age of Revolution* (Cambridge: Cambridge University Press, 2007).
6. G. Hardin, “The Tragedy of the Commons,” *Science* 162 (December 13, 1968): 1243-48; E. Ostrom, C. Chang, M. Pennington, and V. Tarko, *The Future of the Commons* (London Institute of Economic Affairs, 2012).
7. P. Bardhan and I. Ray, eds. *Contested Commons: Conversations between Economists and Anthropologists* (Oxford: Blackwell, 2008).
8. V. Strang, *Uncommon Ground: Cultural Landscapes and Environmental Values* (Oxford: Berg, 1997), 261.

Mind and Morality: Where Do They Meet?

By ARTHUR ZAJONC

Where do mind and morality meet? My quick reply is, they meet in suffering. Every person on the planet knows the difference between pleasure and pain, joy and suffering, from direct experience. Causing pain and suffering in another is bad; aiding or caring for another mitigates suffering and is good. It seems simple, but my assertions rest on the two notions of *experience* and *relationship*. Ethics simply would not exist in the absence of real relationships that either reduce or increase real suffering in others. Therefore, we need to understand both the nature of experience and our connections to others.

Although nothing is so immediate as our own direct experience, few things have plagued scientists and philosophers as much as the nature of experience. For example, while I may be certain about my personal world of experience, what gives me the right to infer that other minds exist? Even if they exist, do they have the same character or range of thoughts, feelings, and experiences as my own? If other minds are unlike mine, exactly how do they differ, and what are the ethical implications of such differences?

To give a feeling for how important these questions are, allow me to begin our considerations by drawing from the annals of science circa 1637. Much of the error that has crept into our consideration of these issues is rooted in an unresolved residue of an-

tiquated thinking from the seventeenth century that still pervades the twenty-first century treatment of the mind.

ETHICS AND OTHER MINDS

The origins of modern science have been traced to the thought of several seventeenth century figures, prominent among them being René Descartes (1596–1650), and particularly to his *Discourse on the Method for Rightly Directing One's Reason and for Searching for Truth in the Sciences*. Descartes famously distinguished between two types of substance or aspects of reality, one material and the other mental. He called them *res extensa* (extended things) and *res cogitans* (mental things). According to Descartes, only human beings possessed *res cogitans*, while animals, plants, and the physical world generally were composed of only extended material substance. Animals did not have souls or minds, and so logically, they were machines. The movements of his pet dog were, according to Descartes, nothing more than the dance of complex, intricate material mechanisms. Toss a ball in the air and the movements that propel the dog across the grass after it—its leaping, running, panting, and barking, as well as the dog's response to his master's commands—are *res extensa* in action. No mind, only behavior.

The logical inference drawn by Descartes was that while his pet might howl if he stepped on his paw, this sound was produced entirely by a material mechanism no different from a teapot whistling or a clock chiming. From first principles, Descartes reasoned, animals could not experience pain since, lacking a mind, they were mere machines. This proved a reassuring inference because seventeenth century anatomists routinely practiced vivisection on unanesthetized dogs whose whimpers and

howls were behaviors but, on this view, need not be interpreted as expressions of genuine pain. Ethically speaking, dissecting a live animal was no different than disassembling a car engine: no suffering, so no moral issue. In this instance, the question of “other minds” was answered clearly; only humans have minds (understood as the locus of experience and thought), and therefore, ethics pertains to human relationships alone.

ETHICS AND DIFFERENCE

Some version of this argument stands behind many of the moral horrors of the last several centuries. Even presuming that others do have minds, the moral rights of people and animals have often depended on the kind of mind we ascribed to them. Race science, for instance, has been used to justify the mistreatment of those different from us. From 1933 to 1945, Nazi scientists and doctors at the preeminent German research institutes of the Kaiser Wilhelm Society (forerunner of the Max Planck Society)—especially investigators at the Kaiser Wilhelm Institute for Anthropology, Genetics and Eugenics—researched diligently before determining, for example, that Roma or gypsies were indeed sub-human. The implications were ghastly. Like all kinds of vermin, they should be eradicated or could be used, like Descartes’ dogs, for experimentation, along with Jews and other lesser beings with lesser minds.

Whether cries of pain issued from Jewish children or dissected dogs, the scientific and philosophical arguments were taken to be conclusive. In this way, contrary to the experience of any feeling person, the evident suffering of people and animals was deemed either illusory or at least justified by science and eugenics. The kind of mind we see in the person across from us powerfully affects the moral stance we take toward him or her.

The U.S. record on this is not good either. Ethical abuses by U.S. scientists led to regulations on human subject experimentation only in the 1960s and 1970s. Institutional Review Boards (IRBs) are necessary because history has repeatedly demonstrated that scientists cannot be trusted to act ethically in all instances, especially when fame or grant money is at stake.

What does it take to be a person? Where does suffering fit into our understanding of reality? We are at greatest peril if our ontology is impoverished

or wrong. We may too quickly judge the nature and humanity of others by a shallow and limited set of criteria that do not allow for multiple dimensions of the human being. In this way we distort not only our

“Ethics simply would not exist in the absence of real relationships that either reduce or increase real suffering in others.

understanding of the precious beings before us but also may act inappropriately and unethically toward them as a consequence. Perhaps nowhere is this more dramatically demonstrated than in the advocacy of infanticide of babies born with mental handicaps. In such cases we witness the legacy of seventeenth century Cartesian logic. Abstract philosophical arguments and cost benefit analysis take the place of the lived human experience of caring for and living with handicapped individuals.

We are morally outraged by practices such as vivisection and human experimentation, by the mistreatment of those who are different from us, of those who are handicapped, and rightly so. But why? Every moral fiber of our being protests against the ethical implications of Descartes’ logic. But what’s wrong with it? If the creature before us is merely mechanism without mind or possessing only a lesser mind, if we ourselves lack a mind, does this not entail a very different moral responsibility toward life? Without true suffering and joy, what becomes of altruism and morality?

WHAT IS A PERSON?

The philosophy of persons espoused by the utilitarian ethicist Peter Singer is an instance where a truncated worldview leads to a deeply troubling ethics. Singer distinguishes between human beings (the species) and persons. In particular Singer argues that we should only grant a full right to life to “persons” and lesser rights to those human beings who, because of mental or physical deficits, are not—according to him—persons. “If we want to put this in the language of rights, then it is reasonable to say that only a person has a right to life.”¹ Ending the lives of diminished human beings against their will, writes Singer, is not an act of the same order as ending the life of a person.

Among others, Singer treats the case of the baby

John Pearson, who was born to English parents with no other problems than Down's syndrome. The parents did not want the child, and the attending physician instructed the nursing staff to allow the child to die by starvation. In his book with Helga Kuhse, *Should Baby Live?* Singer and Kuhse state, "We think that some infants with severe disabilities [such as Down's syndrome, spina bifida and hemophilia] should be killed."² This determination is the conclusion of a logical argument, not unlike that of Descartes, based on what constitutes persons, on the maximization of the "quality of

“the moral rights of people and animals have often depended on the kind of mind we ascribed to them.

life,” and on whether “prospects” for the “abnormal” infant are sufficiently good. If not, then killing them is morally acceptable, even advantageous, to allow for a net increase in the general quality

of life in society as a whole. There are many reasons to object to the eugenics such an analysis entails, but for our purposes it demonstrates the truly appalling power of reason when disconnected from direct experiential modes of understanding that involve the whole person.

For every such example one can name counter-examples. As a young graduate student in physics I found a summer job in a private school for severely handicapped children in South Chicago, then the poorest area of the city. Aptly named the Esperanza School (School of Hope), it was headed by the physician and educator Traute Lafrenz Page. Prior to her emigration from Germany to the United States in 1947, Traute had narrowly escaped execution as a courageous member of the White Rose, the anti Nazi student group in Munich that worked to awaken docile German citizens to Hitler's intentions. From 1977–1994, Dr. Page led the Esperanza School specifically for the benefit of those who, in the judgment of Singer and Kuhse, were not persons.

I remember my first day of work at the Esperanza School very well. From her small office Dr. Page took me downstairs to introduce me to the class where I would be assisting. As we stepped into the room a dark haired girl—perhaps twelve or thirteen years old—turned to me and stretched out her arms in greeting. I noticed how horribly disfigured her face was, how inchoate her speech, how hobbled her gait as she

walked towards me. I had never met or even seen a more physically damaged or mentally handicapped child in my short life. After gently hugging her, I looked around to see that the entire class was comprised of children similarly handicapped. These were my charges for the summer. My work with them and Traute Page taught me much about what it meant to be a person. What I learned bore little resemblance to the learned arguments of Singer and Kuhse.

Many years later a colleague and I would take Amherst College students to Camphill Village in Copake, New York, a residential community for adults who were much like the children I had cared for in South Chicago. Camphill Village communities around the world have, for sixty years, integrated those with Down's syndrome or other mental deficits into families and meaningful work. The Amherst students who went on these visits were enrolled in a special upper level class. We would share a day with the “villagers,” as the handicapped residents are called. The experience was transformative. What began among our students as nervousness and even fear at the prospect of meeting handicapped people became a heartwarming and uplifting experience. On the bus ride back my students, America's best and brightest, would ask: why can't Amherst College be more like Camphill? Which was to say, why can't we accept each other as we are and treat each person with greater respect and care regardless of his or her unique challenges?

DOES ANYONE HAVE A MIND?

We have seen how important our view of others can be for ethics, and in particular how important our view of their minds is to how we treat them. Ironically, as the neurosciences have progressed, mind and brain have increasingly become conflated. The majority of practicing scientists subscribe to some kind of mind-brain reduction. Mind is brain. If one takes this materialistic view fully seriously, then there is no place for subjective experience at all! Even my own experience becomes an inexplicable epiphenomenon.

Today's debate concerning ethics—at least insofar as it includes brain science—is thereby constrained by the so called “explanatory gap.” While the neural correlates of pleasure and pain are reasonably well understood, how one transitions from synapses, action potentials, and ion channels of the brain to the subjective experiences, such as pain, remains a mystery. Indeed, the philosopher

David Chalmers has termed it the “hard problem.” Neuroscience is the “easy” part, but the qualitative, lived experience, which is all we know directly, is the “hard” part. The explanatory gap divides the world in two: direct experience on the one side, and an inferred “real” world that is beyond experience on the other. If reality is not and cannot be experienced, but only inferred, then my real nature as a human being is to be understood entirely as a material machine (*res extensa*). I am no different from Descartes’ dog. My actions and speech are behaviors, partly given by genetics and partly programmed by environmental factors. I do not have a mind in any meaningful sense.

Lacking an experiencing subjective mind, the business of ethics becomes an abstract endeavor stripped of genuine pleasure and pain. Social caring would be reduced entirely to behaviors well suited to survival and understood entirely in terms of Darwinian evolution, neuroscience, and biochemistry.

It seems to me that contemporary science often shows a profound confusion or ambivalence before the question of mind and morality. On the one hand most materialistically oriented scientists would dismiss Descartes’ dualism as outmoded and assert that

“We are at greatest peril if our ontology is impoverished or wrong.

the human mind is also purely material, that we are indeed amazing machines. Descartes did not go far enough. There

are no minds anywhere and subjective lived human experience is epiphenomenal only. If my experience is dismissed as unreal, what is the foundation of morality? Is an ethics without true suffering possible? If the subjective experience of pain is “actually” neurological networks kicking into action, what is the basis for morality? How do we escape the logic of Descartes, extended to humans? Is morality, as some argue, an adaptive evolutionary strategy that merely privileges social genes? Is it a social contract among mutually deluded beings without minds? Or have materialist scientists and philosophers made a terrible fundamental error?

In an effort to understand everything in terms of matter and mechanism, I believe that we have indeed made a tragic error in discounting the qualitative experience of life. Subjective experience is all we have, and science itself is built upon it. Instead of

fearing the subjective, we need to befriend it, and physics since the early twentieth century has done exactly this.

THE TURN TOWARD EXPERIENCE

For those who know a little modern physics, the flaw is not hard to find. It is already hidden in the word “*extensa*,” or length/extension. Arguments for reductive materialism are based in a seventeenth century mechanical philosophy even today. It is nearly four hundred years since Descartes and his contemporaries sought out the truth through reason and mechanism, but surprisingly little has changed in the style of explanation offered by neuroscientists and neuro philosophers. The revolution in thinking required by relativity and quantum mechanics has simply not penetrated these domains. The excuse is usually given that the new physics is not pertinent to the processes of biochemistry and the nervous system. This is largely true, although the field of quantum biology is developing apace. But this claim misses the point entirely. It is like the old saw: one cannot be a little bit pregnant. Likewise here, materialist accounts are not accounts of the real world but only a model, a conceptual schema that neglects the new physics. The world is pregnant with lived experience, and it is time to turn to that experience and to the essentially subjective character of reality, to accept the infant child some would deny.

Even if the effects of relativity theory and quantum mechanics are small for our daily life, the implications of these two advances for our world picture are profound. In my view, they invalidate Descartes’ logic and also the logic of scientific materialism. These recent physical theories open a new view on the relationship between mind and morality. I see relativity and quantum mechanics as flipping the argument around 180 degrees. The measurable effects may be small, but the implications are huge and surprisingly relevant to the question of mind and morality.

These theories shift us from a false objectivism to a view in which subjectivity is real, and real at every level of analysis. Subjectivity never disappears. It is our friend, not the enemy science has made it out to be. It is our friend because if subjective experience does not need to be turned into something else (neurons firing), then the experience of color, sound, and even pain have standing. They are real, as real as anything else. The love you feel for your children is not merely oxytocin. Indeed, oxytocin, neurons, action potentials, and so on exist, but they are only

another part of our phenomenal lived world of experience; real but not privileged. Their ontological standing is no greater or more fundamental than the warm glow of love you feel.

THE FLAW

The scientific understanding of the world from 1600 until 1900 sought to account for reality in terms of a few so called primary qualities, foremost among them being extension or length. Length was taken to be an invariant attribute of the things that comprise the world. Everything had a size, and that size was independent of the observer and so “objective.” By contrast qualities like color or smell (or pain and suffering) were not to be trusted because they were tied to the observer and so were “subjective.” Length, mass, and a few other “primary qualities” could be trusted as observer independent properties of the things themselves. Reality, as depicted by science prior to 1900, was to be explained in terms of these few objective properties.

With the relative theory of Einstein we now know this view is simply wrong. Length is relational. Objects do not have sizes “in themselves,” but only relative to a frame of reference or an observer. That is, different observers in relative motion will disagree about the length of an object. Moreover, no privileged frame exists where the “real” length can be ascertained. All frames have equal standing. The same can be said about mass. Inertial mass is the resistance a body shows to being accelerated by an applied force. As a body speeds up, its measured inertial mass increases. The mass of a thing is not a fixed value but depends on the state of motion relative to an observer.

Likewise, time intervals and even the concept of “now” become fluid in relativity as they are tied to the observer. The idea of an observer-independent reality with its own set of objective properties is a fiction. All attributes are ultimately tied to observers, real or imagined.

You may protest asking, what was the universe like before all life or observers? Imagine CNN sends a news team with a physicist as “color commentator” to find out. They have to set up somewhere. All descriptions are from some vantage point, even if in our imagination. There is no view from nowhere.

The relativity of length, mass, simultaneity, and so on is not a problem, but rather the solution to the problems presented by experiments in nineteenth

century physics. Length, time, and other similar properties are always relationally given—that is to say, subjective!

THE ELUSIVE NOW

I snap my fingers, and so mark an instant in the stream of time: now! I imagine events all across the universe emerging out of an unreal future, existing for an instant simultaneous with my finger snap (the present), and then quickly slipping into the past. At each moment in time, we naively suppose there is a unique state of affairs throughout the universe. Descartes, Newton,

“There is no observer-independent vantage point from which to view the universe.

you, and everyone have held this view. But the hinge point and central insight of Einstein in 1905 was that this view is in fact wrong. Time

is not as we previously imagined it to be. In particular, he discovered that simultaneity is subjective (called the “relativity of simultaneity”).

You walk toward me and I toward you, and we give each other a “high five.” Our hands touch; an instant of time is marked. But each of us is moving relative to the other, and relativity tells us that observers in motion relative to one another will legitimately assert a different set of events as simultaneous with the high five. To be concrete: in my frame of reference, simultaneous with the high five, a rock tumbles down a hillside on the surface of Mars and a supernova lights up in the galaxy of Andromeda. In your frame of reference these two distant events are not simultaneous with the high five. You judge them to be in your past or future depending on your direction of motion relative to me.

Indeed, according to relativity the size of the time difference between my set of events and yours gets bigger with distance, as well as the speed of relative motion. To be specific, the difference in time will be more than three days for the supernova event in the Andromeda galaxy. What I legitimately assert as an event that is simultaneous with the high five, you will assert with equal legitimacy as having occurred three days ago.

ABANDON OBJECTS

Yes, yes, you say. But surely there must be a single unambiguous objective state of affairs at each

moment in time. But this is exactly what is not the case. There is no observer-independent vantage point from which to view the universe. There is no single state of affairs at each moment of time. The cosmic order, in fact, depends on the relativity of simultaneity, which implies that the precise account of events is always situational, contextual, or relative to a particular observer. The observer's subjective, situated vantage point cannot be eliminated. This fact cannot and should not be denied like an unwanted pregnancy, but welcomed like a newborn infant.

Science can make observation more and more reliable, and in that sense it can become objective, but science cannot banish observation or experience. Inert objects with their own properties no longer have a place in physics. As the eminent physicist David Bohm wrote in his classic book on special relativity, "the analysis of the world into constituent objects has been replaced by its analysis in terms of events and processes." Events are the observations made by particular subjective agents like you and me, and processes are the relationships that connect those events.

EMBRACE THE SUBJECTIVE

So abandon the false objectivism of the seventeenth century and embrace the subjective. Phenomena have standing. Welcome your unique present, your experience. Subjectivity is an ally, not the enemy. And with this radical reorientation, which is a turn toward life, we also regain the foundations for a true moral life. Our gut was right. Suffering and love and the mind are as real as anything in the universe, certainly more real than the idolatry we practice to the models advanced by a materialistic and mechanical interpretation of science. In place of mechanism we have a science of principles like Einstein's own "principle of relativity."

With this reorientation the "hard problem" also disappears. It was an artifact of a false view. If we accept subjectivity, experience, and the interconnectedness of things, we not only find our worldview supported by contemporary physics, but we open the door to a morality that is likewise grounded in experience—that is, in real suffering and joy. Every part of our lives is relational.

Every experience—from color to dreams—is open for investigation. We live in a world of eros and insight, not oxytocin and neural circuits. This view takes absolutely nothing away from the

rigors of science, except its metaphysical hubris and its old, misguided relationship to morality. Science is grounded in experience (events) and the relationships between them (processes). Objects are only constructs, approximations that can be useful as long as we do not reify them, granting them more standing than they deserve. If we do this, then we practice a form of idolatry that imbues them with more reality than they merit.

The universe is far more interesting than materialism makes it out to be. The mystery of consciousness becomes an open field for research in which the phenomena themselves have ontological standing and are not to be explained away in terms of mechanism. Experience itself beckons, not only urging us to develop more and more powerful instruments, but also to deepen and expand our experience by schooling our attention and meditative awareness. The inner and outer worlds both can contribute to a non-reductive science of mind, where the "taboo of subjectivity" disappears, and the awakened mind embraces its irreducible subjective nature.

For too long we have privileged brain over mind. In Europe 2014 was the Year of the Brain; let's make 2015 the Year of the Mind. Only on this basis will the mind as the locus of lived experience and reflection find its right relationship to morality.

Arthur Zajonc, Ph.D., is President of the Mind & Life Institute and Emeritus Professor of Physics at Amherst College. He is also a Senior Scholar at the Center for Humans and Nature.

NOTES

1. P. Singer, *Rethinking Life and Death* (New York: Macmillan, 1996), 198.
2. H. Kuhse and P. Singer, *Should Baby Live?* (New York: Oxford University Press, 1985), v.

High School Made You a Better Person

By MICHAEL MCCULLOUGH

What has not cankering Time made worse?

Viler than grandsires, sires beget

Ourselves, yet baser, soon to curse

The world with offspring baser yet.

—Horace

Since the days of the poet Horace, adults have always fretted about the moral decay of the younger generation. Ninety years ago, for example, the New York City Board of Education issued a report in which they decried the decline of character among New York City's school-aged children. Their tone was eerily similar to Horace's. To the authors of that report, the remedy for the sorry moral state of our school-aged children was clear: They needed character education, the aim of which "should be to develop clear-cut conceptions of positive virtues, to present the principles of right living that will govern boys and girls in making moral decisions." They described their charges' lack of such principles in the following terms:

The shock comes when we learn their code of morals. These same delightful young people believe that it is all right if they can "get away with it." They lack respect for parents and for authority. To copy home-work is entirely honorable if they are not caught. Forging a signature is a simple way of saving a lot of trouble. "Cutting" is to be commended if they can "get by." Thieving is a matter of almost daily occurrence. Cheating is no disgrace if the offender

is not detected... When called to account they are seldom sorry that they have offended, but they are extremely sorry they "got caught"... They have adopted the code of the street because they have never learned a higher code of morals.

Today, parents, teachers, and political leaders seem no less worried about the sorry moral state of our children, and the schools still get the lion's share of the blame. According to a recent survey, 93 percent of American parents of K-12 students view "the development of strong morals and ethics" as a "critical" or "very important" responsibility of our schools, but only half of the parents surveyed believed the schools were doing an acceptable job at it. Reinforcing the sentiment that the country needs a boost to its character quotient, Presidents have proclaimed a "National Character Counts Week" every year since 1994, and, not to be outdone, the Senate has passed similar resolutions virtually every year since 1996. In that first presidential proclamation, President Bill Clinton issued this rallying cry:

As we seek to instill important values in a new generation of Americans, we must redouble our efforts to improve student learning, responsibility, and sense of belonging. We must revitalize the American ideal of community if our schools are to achieve their full potential. Adults, children, teachers—all of us must set an example. All of us can make a new beginning. Schools need to emphasize the fundamentals: building character and creating a stronger sense of self-worth.

Over the past two decades, private foundations, non-profit organizations, and individual school systems have responded to the call, designing and implementing programs designed to boost and fortify char-

acter. There are some encouraging report cards. One review of eighty-seven evaluative studies of forty-five different character education programs indicated that, in general, these programs do appear to be effective. How effective, and for how long, remains open to debate. But are we asking the wrong questions and looking in the wrong place? Under the hot light that has been trained onto “character education” in the schools over the past two decades, we’ve lost sight of a more fundamental fact about education for character. Character-building has always been one of the central goals of this nation’s educational philosophy, and by many measures, our educational system continues to succeed splendidly—even without any explicit programs of “character education” added on. Is character something that can be explicitly designed and targeted, or should it be seen as an offshoot of other kinds of learning experience?

WHAT IS SCHOOL FOR?

Let’s take a step back and consider this question in a broader perspective. Thomas Jefferson’s educational philosophy exerted a profound effect on how the American system of public education would grow and develop. In his “Report of the Commissioners Appointed to Fix the Site of the University of Virginia,” Jefferson defined six fundamental goals of a basic public education:

- “To give to every citizen the information he needs for the transaction of his own business;
- To enable him to calculate for himself, and to express and preserve his ideas, his contracts and accounts, in writing;
- To improve, by reading, his morals and faculties;
- To understand his duties to his neighbors and country, and to discharge with competence the functions confided to him by either;
- To know his rights; to exercise with order and justice those he retains; to choose with discretion the fiduciary of those he delegates; and to notice their conduct with diligence, with candor, and judgment;
- And, in general, to observe with intelligence and faithfulness all the social relations under which he shall be placed.”

Contracts. Morals. Duties. Rights. Order. Justice. Faithfulness. Diligence. The education Jefferson wanted the American system to dispense was, among other things, a moral education.

In Jefferson’s time, of course, significant limits

were imposed on the education of women, people of color, and even white men who were not part of the property-owning class. Nonetheless, Jefferson’s view of education as a force for shaping character was highly influential in his own day, and it has remained so as educational access has increased and as membership in the civic community has been granted to many of those previously excluded. Indeed, for as long as we have been sending children to school on the American taxpayer’s dime, we have understood, as Jefferson did, that character education is a critical step in preparing young people to contribute to the republic as citizens and to take proper responsibility for their own destinies.

If we don’t appreciate the intrinsically character-building nature of our educational system, it is because we take it for granted. The moral dividends of education are hiding in plain sight, like water to the fish. This is because few of us are old enough to remember a time in American life when most children didn’t get at least a high school education. Think about it: today, high school graduation rates are higher than at any other time in history: In 1900 only one quarter of our children graduated from high school, but today more than eighty percent do. (For high-income families, the rate is even higher; for low-income families, it’s conspicuously lower.)

We can bring the hidden moral benefits of school to light so that we can better understand how a basic education improves the morality and character of young people—even at a time when the great majority of children complete high school. Social scientists have developed some ingenious methods for uncovering those hidden moral benefits. They mine historical data, they conduct longitudinal studies, and—most importantly—they examine the results of “natural experiments” that societies unwittingly conduct when policy changes randomly cause some groups of students to receive more education (or better education) than other groups of students. These natural experiments might occur, for instance, because of state-by-state differences in the passage of laws that raise the minimum ages at which people can enter the work force, or because of policy changes that abolish school enrollment fees or other barriers to entry. And these experiments tell a consistent story: The more education children receive—the earlier in life they start school, the later in life they finish, and the higher the quality of that education overall—the better the effects on character and conduct seem to be.

EDUCATION REDUCES CRIME

First, let's consider the effects of education on crime. For decades, criminologists have known that educational attainment—the number of years of schooling people receive—is one of the best predictors of people's likelihood of getting into trouble with the law: the more schooling, the less trouble. However,

“Character-building has always been one of the central goals of this nation's educational philosophy.

Character-building has always been one of the central goals of this nation's educational philosophy. However, this association does not necessarily imply that education reduces crime. It is possible that involvement in crime reduces young people's likelihood of staying in school (which would imply that causality runs in the opposite direction). Moreover it's possible that there are various environmental and genetic factors involved that both reduce education and increase crime, thereby creating a spurious association between them. To draw firmer cause-and-effect conclusions, we need more information.

This is why the natural experiments to which I hinted above are so valuable. The story these natural experiments tell, according to the economist Lance Lochner, support the hypothesis that schooling makes crime go down. In the United States, for example, a one-year increase in a state's average level of schooling (which might be precipitated by a state's passage of a law that raises the minimum age at which children can enter the work force from, say, age fifteen to age sixteen) reduces the crime rate by more than 10 percent, and the likelihood that an individual will ever be incarcerated falls precipitously if that person has received about ten years of schooling or more. Similar results have been obtained in similar natural experiments from Great Britain and Italy. Overall, the research suggests that a one percentage point increase in the U.S. high school graduation rate would reduce the economic costs of crime by two billion dollars each year.

We are in a good position to conclude that education really does reduce people's likelihood of being involved in property crimes and violent crimes. However, refraining from crime is merely one element of character. What about the other aspects of character that we look to education to shape? Here, too, we find evidence that education makes a positive contribution.

GENEROSITY WITH TIME AND MONEY

More than forty studies indicate that education is associated with higher rates of charitable giving and community volunteering, even after taking into account potential confounding factors such as age and income. We shouldn't get too excited about these studies, though, because few of them permit firm conclusions about cause and effect. However, two fascinating natural experiments do suggest that education might be the cause and generosity might be the effect.

In the first of these experiments, researchers found that students who had won a random lottery that enabled them to attend a private school for a reduced fee were subsequently more generous in their donations to several non-profit charities than were students who had not won the lottery. In another experiment conducted in Kenya, girls who received scholarships that provided them with cash grants and coverage of their school fees for two years were slightly more fair and generous in sharing money with an anonymous partner than were girls who applied for scholarships but did not receive them.

CITIZENSHIP

Civic engagement has long been known to be correlated with educational attainment, but only recently have natural experiments been conducted that enable us to determine whether the effects of education on civic engagement are of the cause-and-effect variety. According to natural experiments by Thomas Dee, a one-year increase in the minimum age at which U.S. children can leave school and enter the workforce increases their likelihood of registering to vote. It also increases people's likelihood of actually voting by about forty percent. Likewise, schooling increases people's newspaper readership, interest in elections, and interest in public affairs in general. An educated electorate apparently makes for a politically engaged electorate.

TRUST, TOLERANCE, AND RESPECT FOR OTHERS

Finally, education appears to promote trust, respect, and tolerance for differing points of view. For nearly eight decades, in fact, psychologists have known that the most prejudiced people in any society tend to be the least educated. Also, both within and across societies, there is a strong positive correlation between the average number of years of schooling people obtain and the extent to which they trust others in general. What's more, people who are surrounded by highly educated people within their own communities and states are more trusting and tolerant in gen-

eral than those who are surrounded by less educated people. Thus, education can apparently build trust in two ways: by making you more trusting of your neighbors, and by making your neighbors seem more trustworthy to you.

Here too, the natural experiments just aren't as plentiful as one might like, so it's hard to make ironclad cause-and-effect conclusions. However, there are a couple of notable exceptions. For instance, the economist Kevin Denny took advantage of some major educational reforms that occurred in Ireland in 1968 (expensive fees required to obtain a secondary education were abolished) in order to estimate the causal effects of secondary education on attitudes toward homosexuals. His work shows that every year of additional education a student received as a result of this policy change led to a 5 percent increase in someone's likelihood of agreeing strongly with the statement that "gays and lesbians should be free to live life as they wish." Denny then went further and showed that one-year increases in the minimum legal age for leaving school—changes that occurred in different years for Ireland, England, Wales, and Scotland—also raised people's tolerance of gays and lesbians. Using similar natural experiments from the United States, Thomas Dee found that increases in education strengthened people's convictions in one of the bedrock foundations of liberal democracies—namely, the belief that minority groups and politically unpopular groups (including not only "homosexuals," but also "anti-religionists," and "communists," as well) deserve to have their rights to free speech protected.

HOW EDUCATION BUILDS CHARACTER

Just how does modern school-based education by itself—independently of any add-on character education initiatives—exert these salutary effects on people's character? How is it that we do not seem to need explicit ideological content in order to make the next generation more law-abiding, generous, politically engaged, trusting, and tolerant?

NURTURE AND NATURE

First off, as I mentioned above, it's possible that much of the relationship between education and virtue is due not to the causal effects of education on virtue, but rather, to other factors that raise people's educational levels while at the same time influencing their character. For example, some of the environmental factors (such as, characteristics of one's family

or neighborhood) that make people more likely to stay in school might also be involved in keeping them out of trouble with the law, or in motivating them to be more generous with their time and money.

Similarly, to the extent that there are genetic factors responsible for both educational attainment and character, the appearance that education causes character may be due features of the human genome rather than of our schools. In 2013, a consortium of researchers identified three genes with single nucleotide polymorphisms, or SNPs (variations in DNA sequences that cause some people to have, say, a molecule of

“The moral dividends of education are hiding in plain sight

guanine at the same location within a single gene where other people have a molecule of cytosine) that were linked to educational attainment. Each

of the three SNPs accounted for about one month of additional educational attainment; jointly, they explained about 2 percent of the individual differences in educational attainment. Even more fascinating is the fact that these three SNPs also accounted for about 2 percent of the variability in people's IQs. This pattern of findings suggests that some of the relationship between education and IQ itself can be attributed to common genetic factors rather than to the effect of IQ on educational attainment (or the effect of educational attainment on IQ). If these SNPs (or others that have yet to be identified) are likewise involved in creating individual differences in, say, charitable giving or trust, then we'd be right to credit the relationship between educational attainment and virtue to our genes rather than to our schools.

ECONOMISTS' DARLINGS

In addition, there are two explanations that many economists like. The first is called incapacitation, and it is based on one of the fundamental facts of our universe: you can't be in two places at once. Every hour or day spent inside a school is an hour or a day that is not spent selling drugs, stealing cars, or breaking into other people's homes. According to the incapacitation explanation, education doesn't encourage character. It prevents crime in the same way that house arrest does.

The incapacitation explanation holds some water. An experiment by Brian Jacob and Lars Lefgren and a separate natural experiment by Jeremy Lualien indicate that property crimes by juvenile offenders are more common on days when school is out of session

(for example, due to teacher in-services or teacher strikes). This pattern is consistent with the incapacitation explanation. You can't commit property crimes out in your community if you are locked inside the school. However, there's a wrinkle: on the same days when the rates of juvenile property crimes are lowered by school attendance, rates of juvenile violent crimes are raised—probably because peer interactions while at school create opportunities for students to fight each other. There's more to school's salutary effects on character than incapacitation can explain on its own.

Another idea that economists like is that education provides people with skills (reading and arithmetic, for instance) that increase their value as workers. This basic truth applies across all occupational levels. All workers, no matter how menial their labor, are more valuable to their employers (and thus obtain higher wages) if they can read, write, and do basic figuring. As a result of the wage premium that comes from possessing even these basic skills, an educated worker encounters higher opportunity costs for an hour of crime than does an uneducated one. The greater your value to a legitimate employer, in other words, the more you stand to lose in the legitimate labor market by diverting your time and effort into criminal activity. The wage premium from education therefore very likely presents a major disincentive to pursuing a life of crime.

A CURRICULUM FOR CHARACTER

Explanations based on common genetic causes, common environmental causes, incapacitation, and the wage premium all have their uses, but they're just the tip of the explanatory iceberg. Education itself—the skills, knowledge, and other cognitive tools that people learn through a formal education—almost certainly prepares our minds for character and virtue in more substantive ways as well.

Literacy, for instance, makes all sorts of moral miracles possible. In a community of readers and writers, it becomes possible to specify a set of rules that will govern the community's behavior, and then to record those behaviors on an external memory device (papyrus, stone tablets, or a hard drive in a server farm somewhere). It's also easier to follow a rule you can see with your mind's eye and not just hear with your mind's ear.

There's more to literacy. Once rules are written down, they more readily become objects of scrutiny. Once the rules are externalized, objectified, and made

public, community members can more readily turn those rules into objects of study. A rule that is externalized into print form—a rule that exists outside of our private mental representations of it—becomes a thing. Things can be studied, interrogated, and disputed. Moreover, because of the sophisticated moral discourse that writing and reading make possible, rules and laws might ultimately be revised, altered in scope, or chucked altogether. Protesting or seeking to modify unjust rules that are blindly observed but not formally codified is a bit like hunting the ever-elusive snipe. Once rules are codified, however, the odds of changing an arbitrary or bigoted rule may tilt slightly in the reformer's favor.

Literacy, of course, has other beneficial effects on the development of character as well. Once we can read and write, we can keep external records of our debts, credits, and promises to others (and theirs to us). With external records of this nature in place, it becomes easier to enforce our contracts without conflict, and it becomes harder to shirk our obligations without dishonor. Writing then, becomes a commitment device that reduces the gap between the ideals we held for our behavior six months ago and what we actually feel like doing today.

What about numeracy? When you've mastered the basic arithmetic and then moved on to understand the calculation of percentages and the effects of compounding over time, your understanding of how numbers work affects your capacity to understand how the world works. This understanding informed by numeracy can be extraordinarily powerful goads to particular kinds of virtue. For example, some experience with the concept of interest rates allows one to appreciate the long-term benefits of saving and of patience.

In one important survey-based study, more than forty-two thousand British adults were asked to indicate which of two hypothetical rewards they preferred. The two rewards differed not only in their amounts (£45 vs. £75), but also in the amount of time participants would have to wait to obtain them (three days if they chose the £45 reward, but three months if they chose the £75 reward). If you preferred the smaller reward, you could get it more or less right away, but if you preferred the larger reward, you'd have to wait a while.

Education made a big difference in the choices people made. Participants who completed eleven or fewer years of education were substantially more likely to choose the smaller-but-sooner reward than were

participants who completed additional years of education. The less education you had, more likely you were to prefer to take the money and run, even though turning down the larger-but-later reward implied walking away from an investment that would grow with an interest rate in excess of 700 percent per year. (At the time of this writing, many banks in the United States are trying to lure people into opening savings accounts by tempting them with interest rates of 1 percent per year.) The association between education and patience wasn't spuriously caused by the effects of education on adult income, either: better-educated people were more patient even after statistical controls were put in place to control for any causality-muddling effects of age, gender, and income.

Of course, what makes patience a virtue is not only its financial benefits, and we aspire to have education be associated with patience understood and practiced in a broader way. Patience is a virtue because of the crucial role it plays in honesty, fidelity, responsibility, trust, regard for others, and healthy living. To take just one example of the broader character dividends that come from patience, consider cooperation. Building and maintaining successful cooperative relationships requires us to resist the temptation to have a

“Education provides general-purpose reasoning skills that cannot help but improve our character.

cut-throat, take-no-prisoners attitude toward our interactions. To the extent that we take our neighbors' inter-

ests into account when trying to obtain good outcomes for ourselves (rather than pursuing a scorched-earth policy by which we always try to maximize our short-term gain, no matter how costly it is to our partners), those partners will seek us out in the future for more interaction. Working repeatedly with partners who trust you can be much more productive than seeking out new partners for every new venture because of the bridges you burned with your previous partners.

Education also provides people with a set of general-purpose reasoning skills that cannot help but improve our character. If they have already stipulated that Socrates is a man and that all men are mortal, then all reasonable people must necessarily agree that Socrates is mortal. By application of this same syllogistic reasoning, we can derive some moral conclusions. For example, if we all agree that (a) John is a human and (b) all humans are entitled to a set of basic human

rights, then all reasonable people must conclude that John is entitled to that same set of basic human rights. The fact that, by virtue of his race, religion, sexuality, or politics, John is a member of a group that we dislike is irrelevant. No amount of special pleading can undo this iron logic (although it is possible through self-deception to shield oneself from its implications).

But the link of education and character is even deeper than that. Indeed, the secondary-school curriculum itself is shot through with character-relevant implications. The basic biology and neuroscience to which every high school student should have access before graduating sets the stage for many startling intellectual discoveries, such as the fact that humans are not the only sentient and social beings in world; there are many creatures that feel pain, suffer, and prefer certain fates over others. These facts are morally relevant—how could they not be?—and with proper guidance, learning them can be the occasion for students to thoughtfully contemplate how they wish to treat the other animals with whom we share this planet.

Psychology and history are morally relevant, too. The basic lessons of group dynamics that normally get covered in a twelfth-grade psychology course, when paired with the miserable lessons to be learned about the costs of war from a study of history, are available to help people resist the saber-rattling of sincere-sounding, smooth-talking leaders who would rush our nations into war in the wake of terror or the heat of vengeance. The literacy, numeracy, tools for reasoning, and cold hard facts about nature and history that make up a basic education don't just make us smarter; they can make us better, too.

THE KIDS WILL BE ALRIGHT

There is a joke about a recovering alcoholic, ten years of sobriety under his belt, who is always inviting a friend with a drinking problem to come with him to an Alcoholics Anonymous meeting. “I know the people who go to that meeting,” the not-yet-bottomed-out friend replies in a moment of candor, “they're all just a bunch of hypocrites.”

“Well, if you think they're hypocrites now,” the friend-in-recovery responds, “you should have seen them before they started coming to AA.”

We suffer from the same shortsightedness when we fail to appreciate the powerful role that education plays in shaping the character of our young people. Education on its own—without any fillers or additives, and without any specific ideological agenda—is

character education, and it always has been. Sensible programs of deliberate character education should be developed and actively encouraged to supplement our children's development of the virtues we all care about. But as we take advantage of opportunities for these sorts of character-education experiments, let's all take a deep breath and admit for once and for all that Horace was wrong. Our offspring are not destined to be worse than we are. In the main, our kids are doing well, and we're doing well by them. After all, 80 percent of the kids in this country are already receiving a full dose of the best character-education program we have to offer them—a comprehensive K-12 education. In the interest of character building, as we continue to look for meaningful ways to add character-specific content to our schools, let's also keep trying to get a full dose to that final 20 percent who are still having to make do without.

Michael McCullough is a Professor of Psychology and Director of the Evolution and Human Behavior Laboratory at the University of Miami. He is Senior Scholar at the Center for Humans and Nature. His most recent book is *Beyond Revenge: The Evolution of the Forgiveness Instinct* (Jossey-Bass, 2008). He is currently working on a book about the evolutionary and cultural foundations of human generosity. Follow him on Twitter @McCullough_Mike.

The Great Teaching Work of Thomas Berry

By DAVID SCHENCK

Throughout his life and writings Thomas Berry was involved in a great work of teaching, one aspect of which was his well-known book, *Great Work: Our Way into the Future*. In an effort to situate himself in terms both of contemporary cultural life, and in the lineage of cultural historians, he came to speak of himself as a “geologist.” He was quite careful not to speak of himself as a philosopher or as a theologian.

Why is this important? I would argue that the coining of the term “geologist” had to do with acknowledging the primordial power and significance of

“We need new means of cultivating ourselves if we are to live differently on the earth.

thinking the earth and of the earth dreaming. No existing term could indicate the radical departure from our contemporary ways of

thinking and understanding that taking the earth and that dreaming with ultimate seriousness would entail. For Berry cosmology is at once science and poetry, and most fundamentally, a matter of vision and myth and epic. A geologist might then fairly be considered a visionary for the earth.

In addition to being our contemporary, Berry is both behind us and ahead—a historian preserving the living core of wisdom traditions of human cultivation—and a visionary listening towards the future cul-

tivation of human presence on and to the earth. There is no point in pretending that we know who might be counted as a geologist or what being one might mean. We will learn most if we keep the oddness of that notion at the forefront of our minds. We have the cosmologist, a seeming holdover from the past, and the geologist coming to us out of some unknown future.

As modern thinkers, we are trained with the methods and categories regnant in contemporary pedagogy and disciplines—the very habits of thought and perception that are, in fact, animating and justifying the devastation of the biosphere. But their logic, the logic of exclusion, “either/or” thinking, precludes the very possibility of any cosmology that is not simply a matter of mathematics or physics. Cosmology, as Berry understood it, is closer to poetry than it is to either philosophy or science. Poetic thinking, mythic method and figurative language provide alternatives to the linear logic of scientists, philosophers, and theologians. What would be considered a contradiction in the latter disciplines is an indicator of what we may call *fecund recursion* in cosmology.

We need new means of cultivating ourselves if we are to live differently on the earth. Developing and telling the new story is one component of establishing such cultivation. But the grand sweep of the longed-for cultivation is found only in cosmology. The universe contains a mystery of presence. Cosmology presents this mystery in myth, ritual, and dream; in liturgy, poetry, and music; in wisdom literature and renewed philosophies and theologies; in the plastic arts of all kinds—painting, sculpture, architecture. Cosmology as liturgy; cosmology as celebration.

THE GREAT RESPONSIBILITY

There is an immense question at the core of Berry's great work of teaching: "How can humans enter the future with some responsible use of their creative freedom?" As if anticipating the very argument being made here, Berry notes that "there is a tendency to revert back to the traditional disciplines of past cultural developments."¹ But, he says, "the difficulty with this solution is that these humanistic and religious traditions themselves are largely responsible for the situation that has evolved." He lists three critical inadequacies of these traditions: (1) "the placing of the divine as transcendent to the natural world"; (2) "the establishment of the human also as transcendent to the natural world"; (3) "the doctrine of an infrahistorical millennial age" (ET 67).

None of these criticisms of the classical traditions are especially novel, and their applicability to developments in Indo-European cultures is not easily disputed. When the divine is not only understood but *lived* as transcendent, the natural order, its laws and its beauties, inevitably are subordinated—Berry's word here is "diminished." And then, modeled on the divine transcendent, the humans, with their special relationship to the transcendent divine, are understood as transcending all the rest of the natural world. And, in particular, when this transcendence entails "sovereignty over," the *lived* consequences are beyond comprehension. All nature is at the disposal of human beings, without regard to the intrinsic right to being of the nature things humans use. Finally, there is the sense that some future moment in history—the dynamics of which may be understood in terms of either a theology of history or a philosophy of history—will bring to fulfillment human being human and the natural order. All meaning, order, and beauty in the present time are then to be discounted when seen in the light of this privileged time to come.

But then, in one of those characteristic turns that mark his essays, Berry transforms this relatively academic-sounding list into deeply piercing insight into the inadequacy not just of our moral thinking, but of our very moral perception:

The inadequacy of the humanistic and religious past can be seen quite clearly from the ethical issue in its traditional context, where we perceive the evil of suicide and homicide, and especially the horror of genocide. Yet we have little objection to biocide or geocide. The very magnitude of such activities escapes us

(ET 67-68).

We do not have enough imagination to even begin to grasp how dire our situation is—and just *that* is how dire it is. And only the new universe story, Berry is arguing, can offer the breadth of vision and the sense of the enormity of time necessary for re-imagining the moral life.

Berry next goes on to indicate that these failures of imagination and vision are to be found not only in the "humanistic-religious traditions," but also in the practices and policies of our major institutions and professions.

All four—the political, religious, intellectual, and economic establishments—are failing in their basic purposes for the same reason. They all presume a radical discontinuity between the nonhuman and the human modes of being, with all the rights and all inherent values given to the human (GW 72).

Laid out here is the fundamental link Berry sees between our current political and economic situation and the major failures of our received wisdom traditions. The partitioning of the universe, the structures of transcendence and hierarchy that Berry sees as characteristic of the "humanistic-religious traditions," unfold in this reading of the history of the modern world, into a lived order that prizes the human above all else, to the point of being willing to sacrifice all else for the sake of the human.



Thomas Berry

He summarizes his critique of our past and present resources and practices by speaking to the "demonic aspect" of and the "cunning" behind all our furious effort to re-make the earth for ourselves (ET 69). The dramatic term "demonic" urges us to recognize

that the human is just now in the thrall of enormous powers well beyond ready comprehension, and well beyond the scope of any moral, social, or imaginative resources we have readily at hand. Or, in other words, it is because this distorted vision of the human in the world is *the root dream of our modern culture* that it has such overweening power. Which, in turn, means that the only commensurate power will be that of a vision rooted in, nourished by, dream. Not analysis, not policy, not wisdom literature—but dream (ET 68-69; see also DE 202-211).

Take it as given that human beings stand now as the major threat to the balance and order and survival of many dimensions of life and beauty on the earth. How and where, then, can we see the earth moving to

“only the new universe story... can offer the breadth of vision and the sense of the enormity of time necessary for re-imagining the moral life.

heal itself in relation to human beings, and to heal human being as well? Or, put differently, what are the processes, agents,

“mechanisms” involved in human efforts to heal the human community and to heal the community that is the earth? Another way of asking this question may be useful: If the new story, the new cosmology, is itself one creative manifestation of the human, how is the new story itself related to the earth’s creativity? That is, in very short form: How is cosmology renewed?

Given that ours is a time that human cultures stand in desperate need of renewal, we would expect to find that a critical component in the Great Work would be “constant reinterpretation” of such wisdom as we received, reinterpretation “in the light of new historical experiences.” My argument here is that Berry’s essays are themselves exemplars of such reinterpretations, as well as a call for massive efforts of reinterpretation on the part of communities all over the planet.

Yet the stark truth remains: We have as yet no living tradition cultivating people who can live on the earth. And unfortunately, tragically, in large part because of this, we are now rapidly approaching one of those decisive, pivotal moments, not just of history but *in geology*, as Berry argues. And that pivot is the moment beyond which nothing enormous enough can be done to reconcile human beings as a dominant species with the earth, nothing done to prevent the crashing culmination of the great extinction already well in motion all around us.

With this in mind one might then say that Berry’s *own* “Great Work” was the effort to found a new wisdom tradition drawing on the “Four Wisdoms” he expects to guide humanity in the twenty-first century: “the wisdom of indigenous peoples, the wisdom of women, the wisdom of the classical traditions, and the wisdom of science” (GW 176).² Every piece of wisdom literature defines anew the tradition in which it lies. Thus, we may see that Berry’s essays at once identify—and *call into being*—the tradition into which they (will) fall. This sounds paradoxical but is actually the situation of all wisdom literature. It is just far more difficult to grasp in Berry’s case.

THE EARTH, DREAMING

There is tremendous emphasis on the importance of story in the presentation of the emergent cosmology in much of Berry’s writing. But story, cosmology as story, indeed, any and all forms of cosmology are cultural products that themselves result from the fantastic explosiveness at the point where culture meets gene, where gene spawns culture. As we have seen, Berry steadily insisted that all received wisdoms stand in need of a total renewal that can come about only by re-immersion in our genetic coding, the coding that lies under our cultural coding and brings it into being. We need something even deeper than cultural renewal—we need a renewal at the species level. This is the radical Berry, the wild Berry.

But there is one more decisive point lurking here: *Human dream-space is where the gene talks to the brain.* Human dream-space ought to be considered the crossover point from DNA to culture—from genetic coding to cultural coding. “We need to remember,” he writes, “that this process whereby we invent ourselves in these cultural modes is guided by visionary experiences that come to us in some trans-rational process

“all forms of cosmology...result from the fantastic explosiveness at the point where culture meets gene, where gene spawns culture.

from the inner shaping tendencies that we carry within us, often in revelatory dream experience” (DE 201).

Consider then that the process of assimilating the Dream, of fully receiving it into human being, will certainly include telling stories about the universe. Once the Dream is moving into culture, it is birthing cosmology—story, dance, ritual, poetry, pottery, painting.

Cultural coding is rooted in genetic coding; culture is rooted in dream. And the latter is so because it is in dream that genetic coding is shown to the conscious mind. It is the body that presents the earth to the mind in dreams.

Whales are the dream of the earth; maggots are; molten lava, coral reefs. We are but one part of the Dream, and our cultural coding but a very small part of that Dreaming. But we receive as best we can, we open as much as we can—and we respond as best we can. This is what we do—like cheetahs run and bees buzz. And so, yes, Dream and be Dreamt. Referring to his essay entitled "Dream of the Earth," Berry wrote:

In it I am concerned with the earth not as the object of some human dream, but with the earth itself and its inherent powers in bringing forth this marvelous display of beauty in such unending profusion, a display so overwhelming to human consciousness that we might very well speak of it as *being dreamed into existence* (DE xiv-v; my emphasis).

We are ourselves part of what the earth dreams—along with all else that lives and moves and stands and is. And next we have the human dreaming:

Our own dreams of a more viable mode of being for ourselves and for the planet Earth can only be distant expressions of this primordial source of the universe itself in its full extent in space and in the long sequence of its transformations in time (DE xv).

Our dreams are the dreams of a species, of individuals being themselves dreamt well on back, time-into-time, space-into-space. We then access and receive and are part of earth, dreaming.

Dreams, it is worth emphasizing, are received. They are not written or created. They can be invited; we can learn to take on stances or postures or practices that human experience through millennia have shown will open us—communities or individuals—to large dreams. Ultimately, though, it is a matter of receiving—which is to say, a gifting.

What, then, is the universe but a Dreaming infused with poetry? And a dreaming infinitely deeper than the human. And we bow to that. We must. And if we are true students of Thomas Berry it is this above all that we must learn.

David Schenck, Ph.D., is Director of the Ethics Center at the Medical University of South Carolina. A longer version of this essay is available by contacting the author directly at: schenckd7@gmail.com

NOTES

1. T. Berry, *Evening Thoughts* (San Francisco, CA: Sierra Club Books, 2006), 66. Subsequent reference to this and other work by Berry will be noted by initials in the text as follows: *Dream of the Earth* (San Francisco, CA: Sierra Club Books, 1988), DE; *Evening Thoughts*, ET; *Great Work: Our Way into the Future* (New York: Bell Tower, 1999), GW; and *Sacred Universe: Earth, Spirituality, and Religion in the Twenty-First Century* (New York: Columbia University Press, 2009), SU.
2. The entire essay entitled "The Fourfold Wisdom" (GW, 176-95) is of utmost importance for the argument I am making here.

Ecological Indifference: Thinking about Agency in the Face of Ecological Crisis

By BEN MYLIUS

Naomi Klein contends that “climate change has become an existential crisis for the human species.”¹ She is not alone in this view. A growing literature from many disciplines now views our ecological crisis not just as an “environmental issue,” but as a symptom of deep failures in our ways of thinking and being.² The philosopher Timothy Morton calls it “a crisis for our philosophical habits of thought, [which confronts] us with a problem that seems to defy not only our control but also our understanding.”³

This failure of thought, and the crisis it has caused, poses grave risks to our capacity to continue in negotiated co-existence with each other and with other species. How grave? Kevin Anderson, of the United Kingdom’s Tyndall Centre for Climate Change Research, asserts that the levels of global warming predicted are “incompatible with any reasonable characterization of an organized, equitable and civilized global community.” The Intergovernmental Panel on Climate Change—an organization not known for its sensationalist language—is now warning us about climate change’s “severe and irreversible effects.” Graham Alexander and Cathy Turner, tracking the Club of Rome’s predictions in 1972’s *Limits to Growth*, advise us to “expect the early stages of global collapse to start appearing soon.”⁴

These claims are undeniably significant. Many people and communities are already responding to

their implications. Given the stakes of the game, we should expect nothing less. Continued indifference, from any quarter, is deeply problematic.

In this article, I propose that the majority of jurisprudence—the academic discipline that gives us our theory of what law is, of where it’s from, and how it works—is currently crippled by exactly such “ecological indifference.” Our dominant doctrine, legal positivism, claims that ecological crisis *makes no difference* to how we understand the content and validity of laws. It assumes that there is a sharp division between matters that are internal to our law (as a system of rules) and matters that are external to it. As a consequence, when the time comes to ask what makes our laws valid and what determines their content, ecological crisis can simply be dismissed.

This approach ignores the fact that ecological crisis is not “system-external.” It is system-*determinative*, and it requires us to re-evaluate the founding assumptions of our thought. More specifically, we need to reconsider our guiding notions of human agency and selfhood, which are unrealistic and outdated.

“Our ecological crisis is a symptom of deep failures in our ways of thinking and being”

They are deeply anthropocentric: they assume that our agency and selfhood exist in an ideal realm, transcendent and independent of the ecological context that in fact sustains them.⁵ These guiding notions facilitate the assumption that our agency is infinite, and our power unilateral—that we can act in the world without affecting, or undermining, the conditions that sustain them. If human agency

has no context, neither must human law. If this is so, then law can be valid even when it ignores, facilitates, or worsens the threats to the agency that creates it in the first place.

Ecological crisis has profound consequences for both law and jurisprudence. We need a new paradigm—an Earth Jurisprudence—to do this insight justice.

ACONTEXTUAL AGENCY AND “NORMATIVE INERTIA”

Positivist theories have dominated jurisprudence for many years. They have been ascendant at least since the work of John Austin, and certainly since H.L.A. Hart’s *The Concept of Law* was published in 1961. There are many positions within legal positivism, each with a slightly different view of how law functions from a system-internal perspective. They are all “positivist,” however, because of the thought that underlies them: their agreement on what gives laws validity, a statement known as the “sources thesis.” John Gardner summarizes this thesis as follows: “In any legal system, a norm is valid as a norm of that system solely in virtue of the fact that at some relevant time and place some relevant agent or agents announced it, practiced it, invoked it, enforced it, endorsed it, or otherwise engaged with it.”⁶ (Hence “legal positivism” because human law is *posited* by humans.)



On the face of it, this seems like a bland proposition. This is part of its appeal: it allows us (it would

seem) to bracket moral and ethical questions and to be content with “neutral” description. It is designed to eliminate the notion that human law relates in any way to something more fundamental than itself.⁷ It does so on the grounds that entertaining such ideas creates too many messy complications.⁸

But things can’t be as simple as all this. These “relevant agents” that Gardner refers to, and from whose actions legal validity arises, seem suspiciously opaque. Who are they? Where do they live? What is their relation to the context in which they exist? The so-called sources thesis is quietist and creates ecological indifference. It implies that that our law *is* capable of responding to ecological crisis, but with the caveat that any such response will only ever happen if our law-making agents decide that it should. If the social, ethical, or political will is absent, by contrast, nothing will happen. As Gardner points out, legal positivism offers no solace or assistance. It stays agnostic, “normatively inert,” and so does “not provide any guidance at all on what *anyone* should do *about anything* on *any* occasion.”⁹

I contend that jurisprudence currently understands this “relevant agent” in ideal, unrealistic terms. These terms propose that it is meaningful to think of human selfhood as divorced from ecological reality, and to think of human agency—the ability to wield power in the world—as infinite and unconstrained. This understanding of power sounds like what Bernard Loomer calls “unilateral power”: the power to act in the world without oneself being affected, to “stand outside” the world and act at arm’s length from its concerns.

Such an understanding has little basis in reality. One of the most resounding achievements of natural science has been its elaboration of the many ways that we, as human beings, are embedded in and dependent upon the natural world. Our species exists as part of ecosystems and patterns of relation that constitute the living world. As such, the selfhood and agency we have necessarily exists within the context of such systems. Our power is “relational”: it functions to affect others, *but can only do so in ways that implicate and affect us as agents ourselves*. Relationality in this sense is inherent to the concept of action; it constitutes agency itself.

A relational understanding of power, in turn, implies certain inherent constraints on human power that we must understand if we are to exercise that power in a way that remains self-sustaining. This is

not an ethical claim, but a factual observation. The idea of relational power does not imply that we *must* recognize such constraints, it simply proposes that if we do not do so, clear consequences will follow. The current ecological crisis, indeed, is evidence of the fact that it is entirely possible for us to act in ways that are *ultra vires*, or “beyond power,” from a relational or ecological perspective. Assuming that our agency depends upon nothing—that our power is unilateral—we have built our theories as if this is true, even as the consequences of doing so become unsustainable in the long term. But our dreams of unilateral power can never make such power real. They simply facilitate the use of our relational power in ways that are becoming self-destructive.

We might ask: Do we really accept that a system-internal norm, which tends to destroy the conditions of possibility for the system in which it exists, can be considered “valid as a norm of that system”? Are we willing to accept that “normative inertia” can become proxy for ethical quietism? To be clear, I am not proposing that we should do away with legal positivism completely—although I do think we must be careful that it doesn’t fail us in its limited imagination. Rather, I am suggesting that we should see it in its context as a tool that is useful within very clear limits (to define the system-internal relationship of laws to each other) but that must be used in conjunction with others. This is an argument for re-imagining or reinterpreting the parameters of legal positivism in accordance with a relational understanding of power. Might there be a way to frame our inquiries so that we understand ecological facts as *grounds* of our law, in some sense, if we see that they are the conditions of possibility for the social facts upon which we currently conceive of law as being grounded? One important question moving forward is how we might best understand and explain such parameters for the purpose of our thinking about

“legal positivism claims that ecological crisis makes no difference to how we understand the content and validity of laws.

ecological facts as part of the *sources*, not merely the *merits*, of human law?¹⁰ One approach could be to consider information about the regenerative capacities of ecosystems overall. These ecological facts could

include things like ecological integrity and biodiversity, as well as atmospheric, chemical, and physical parameters, which—taken together—represent the planetary boundaries or conditions of possibility for human agency and human law. It is by starting to ask questions like these that we can recalibrate jurisprudence to help us face the crisis we have caused.

ECOLOGICAL SELVES, ACTION, AND POWER

It is dangerous for us to think and act as if ecological crisis makes no difference because to do so is to assume that our existence, and that of our laws, has no context that matters. But in reality, we do have contexts that matter. A farmer who ignores the context of his farm—its climate, its landscape, its water supply—will not be a farmer very long. The same is also true for our jurisprudence and law. We must take account of this as we think about what law is and ask how it works in the world.

The positivistic view of law does not do justice to the size of the crisis we face, nor to the creative potential of our thought. Legal positivism has certainly helped us develop a detailed account of how our laws relate to each other, if we consider them as a closed human system, in acontextual terms. But the price of this has been a bracketing of our law’s relation to its ecological context. This has led to a scrupulous failure to face up to the stakes of ecological crisis, and a stubborn reluctance—even incapacity—to ask the urgent question of how our laws could help us gain resilience and could work so that we, and other life, might thrive and flourish.

Developing an alternative, ecological conception of human selfhood, agency, and power is a profoundly important task for jurisprudence moving forward. Work has already begun in other disciplines to articulate a different conception of human selfhood—one according to which our place in the world, and the power we have in it, is appropriately re-imagined. We might draw upon this work to develop a similar understanding for the purpose of jurisprudence also: one that understands humans and their capacities in more realistic terms. Some of this work goes by the name of anthropology “beyond the human.”¹¹ Other examples appear in environmental philosophy, the natural sci-

“Ecological crisis has profound consequences for jurisprudence. We need a new paradigm—an Earth Jurisprudence.

ences, cosmology, history, the post-humanities, and ethics. In their diverse disciplinary languages, this work grapples with variations of the questions I raise here and inquires into how we and our systems are in some sense constituted, informed, and constrained by our ecological context. Some of the most fascinating work, in my view, involves questions about how the natural world (both as context and as *bios*, or system of life) can itself be agential, and how human agency might emerge from, or be a subset of, this larger range of agential capacities and selfhoods that lie beyond the human altogether.

Jurisprudence provides a particularly charged environment for such questioning precisely because of its engagement with questions of agency, freedom, and power. I began my explorations here with the echoes of Naomi Klein's assertion that ecological crisis "changes everything." There is ample scope for conversation and debate about whether our ecological context should be conceived of as a source, or as a set of parameters, or as a horizon of legitimacy for our law, or even as something else entirely. In any case, it seems to me, at some point in the not-too-distant future it will be clear that human law in some sense owes its shape—and, in the long term, its survival—to its own ecosystemic context. Explaining how this is so, and what it means, is the task of the earth jurisprudence to come.

Ben Mylius is currently completing his Master's degree at Yale Law School. He is a founding member of the Australian Earth Laws Alliance, Australia's national Earth Jurisprudence community, and the winner of that country's most prestigious post-graduate scholarship, the General Sir John Monash Award.

NOTES

1. N. Klein, *This Changes Everything: Capitalism versus the Climate* (New York: Simon and Schuster, 2014), 42.
2. I use "ecological crisis" in this article as shorthand for the litany of disasters caused or intensified by human activity on earth—deforestation, ocean acidification, biodiversity loss, global warming, polar ice melts, drought, extreme weather events, and so forth.
3. See T. Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013).
4. See G.M. Turner, "A Comparison of The Limits to Growth with 30 Years of Reality," *Global Environmental Change* 18 (2008): 397-411; and G.M. Turner, "Is Global Collapse Imminent? An Updated Comparison of The Limits to Growth with Historical Data," Working Paper No 4, Melbourne Sustainable Society Institute, 2014, at sustainable-dev.unimelb.edu.au/sites/default/files/docs/MSSI-ResearchPaper-4_Turner_2014.pdf.
5. See T. Berry, "The Viable Human," in G. Sessions, ed., *Deep Ecology for the Twenty-First Century* (Boston, MA: Shambhala Publications, 1995), 37-46; T. Berry, *The Great Work: Our Way into the Future* (New York: Three Rivers Press, 1999).
6. J. Gardner, "Legal Positivism: 5 1/2 Myths," *American Journal of Jurisprudence* 46, no. 1 (2001): 199-200.
7. By which is traditionally meant "morality," although the questions I am exploring here raise the question whether this is the only possibility. Earth jurisprudence, for its part, is often framed as an offshoot of the natural law tradition in jurisprudence. See, for example, P. Burdon, *Earth Jurisprudence: Private Property and the Environment* (New York: Routledge, 2015), 79, 81-82. On my view, the fundamental difference between earth jurisprudence and past natural law theory is that earth jurisprudence looks to ecological science, rather than (or at least, rather than exclusively) to "morality." The various discursive possibilities within the law-morality dichotomy seem to me to have been effectively exhausted. I also have concerns that the notion of "morality" is at least as anthropocentric as the notion of "law" that it is supposed to inform.
8. Of course, this is not the only approach. The alternative position, which holds that human law does depend on, emerge from, or relate to something beyond itself, leads to "natural law" jurisprudence.
9. Gardner, "Legal Positivism," 202 (emphasis added).
10. J. Austin, *The Province of Jurisprudence Determined* (Cambridge, UK: Cambridge University Press, 1832), 157.
11. Cf. E. Kohn, *How Forests Think: Towards an Anthropology Beyond the Human* (Berkeley: University of California Press, 2013).

REVIEWS & REFLECTIONS

THE CONDOR QUESTION REVISITED

By John Seibert Farnsworth

Condors went extinct here in the Sierra San Pedro Martir in the 1930s when a rancher's bullet dropped the final bird. Locally extinct. The towering sugar pines in these northern Baja mountains remember those vultures, as do white firs and the gnarled lodgepoles that roosted relict ghosts for eight lonely decades.

The condors have returned now, with considerable help from the San Diego Zoo, but the ghosts of condors past still haunt this sierra. I'm haunted these days as well, troubled by a book written six years prior to the momentous Easter Sunday when the last free condor was captured up north in California. That was the true condor moment, when the species went extinct in the wild. The book was called *The Condor Question* and was published by a group with a spooky acronym, F.O.E.

One should always be careful bringing books to a field station, mindful of Louis Agassiz's admonition, "Study nature, not books."

The Condor Question was published in a different era, 1981, when the \$6.95 paperback version was considered pricey. In 1981 Edward Abbey had not yet married his fifth wife. The most notable gunshot victims that year were Ronald Reagan, John Paul II, and Anwar el-Sadat. The first space shuttle, Columbia, launched in 1981; it would fly twenty-seven missions before disintegrating on re-entry twenty-two years later.

By the early 1980s the California Condor had become an icon of wilderness preservation, the centerpiece of a campaign orchestrated by Friends of the Earth to thwart a proposed recovery program co-sponsored by the U.S. Fish and Wildlife Service and

the National Audubon Society. Activists were against every element of the program, be it capturing wild condors in cannon nets, radio-tagging them, or, most especially, implementing a captive cage-breeding program at the San Diego Zoo. F.O.E. founder David Brower was adamant that condors had rights, insisting that all they needed for their recovery was habitat where they could fly wild and free, "unmolested by biologists," as he put it.

The Condor Question is begged by its subtitle, *Captive or Forever Free?* When I first perused this polemic I was entirely persuaded by it, convinced that the proposed capture program was a reckless gamble. The scheme relied on technological manipulations of a species that, according to the book, was extremely sensitive to human disturbance. The argument was simple: leave the condor alone and focus on protecting its habitat.

I like simple arguments. Like many environmentalists of the time, I used to think of habitat preservation as the one-size-fits-all solution to each and every conservation problem. For many of us, this was an article of faith—we believed in nature. But we should have realized, even back then, that the extinction of bird species isn't always related to habitat loss.

Consider the extensive experience we'd already had with the extinction of American avifauna. In 1888, the Smithsonian Institution's annual report contained this notice:

The curator of birds has called special attention to the fact that several species of North American birds are fast becoming extinct, and has emphasized the desirability of obtaining additional specimens before it is too late. These species are: Great Auk, *Plautus impinnis*; Laborador Duck, *Camptolainus cupido*; Passenger Pigeon, *Ectopistes migretorius*; California Vulture, *Pseudogrphus californianus*; Carolina Paroquet, *Cornurus cardinensis*; and Ivory-billed Woodpecker, *Campephilus principalis*.

REVIEWS & REFLECTIONS

Even if you want to argue that one or two Ivory-billed Woodpeckers still populate an unknown refugium on this continent, you must grant that the only bird on the curator's wish list that people like us will ever see alive is the California Condor, which is now designated *Gymnogyps californianus*.

Last summer, by the good graces of the San Diego Zoo Global Institute for Conservation Research, I made a pilgrimage the California Condor Field Station in Baja California, Mexico. My original intent was to assist with the expatriation of a few worthy scavengers, but I ended up spending my south-of-the-border sojourn searching for a historic bird that had gone missing. She is one of thirty-three free-flying condors who currently call Baja home.

Free-flying. Notice that I didn't say "wild condors." No offense to the charismatic avifauna in question: they were certainly statuesque, unexpectedly dignified, and magnificent in almost every regard. But these semi-wild birds made active use of a feeding station where their food was vetted to make certain it did not contain bullet fragments.

At the same time they all wore patagial tags to which solar-powered radio transmitters were attached, one to each wing, each bird broadcasting in stereo on its assigned frequency.

Wild birds tend not to wear that much jewelry, and it took me a while to get used to it. For the first few days, every time I saw one, I recalled Kenneth Brower's proclamation in *The Condor Question*, "What the world does not need is a flying Pleistocene radio station."

The radio stations were glorious. The first thing you notice about free-flying condors is the noise they make. Stealth is not part of the skill set for birds who feed exclusively on carrion, especially when a three-

meter wingspan is involved. The condor's *whoosh* hints of angry bees, hives full of them, audible hundreds of meters away. These huge birds don't "alight" when they land, they *whomp*, and they don't always stick the landing.

The second thing you notice about free-flying condors is their unabashed curiosity. Any time I was out in the open I was aware of being watched. If I were to walk along an open ridge, I could count on having a condor circling close, swiveling its head to stare directly at me for the entire 360 degrees before whooshing off to its next engagement. The condor lacks any of the diffidence other raptors affect; hawks and eagles will soar over mountain-summitting humans without ever looking us in the eye, as if we were no more consequential than bedbugs.

Dick Smith wrote about this. Smith, parenthetically, is one of only three Californians to have a designated wilderness area named after him, the other two being John Muir and Ansel Adams. In his *Condor Journal*, which was excerpted in *The Condor Question*, Smith wrote, "Despite their seeming composure, condors are insatiably curious. They like to investigate. You may see one soaring high above you. All at once he's larger and lower—just above your head, without seeming to have done anything to come down so quickly." Smith goes on to speculate that this curiosity is what historically made the condor so easy to shoot.

I doubt that anyone who has spent significant amounts of time with condors could have missed this personality trait. Mike Wallace, who coordinates the California Condor Recovery Program, explains it from the scientist's perspective: "Curiosity plays an important role in the life of scavengers. Condors must continually investigate the activity of other species if they are to be consistently successful at foraging."

Guys like Wallace weren't treated nicely in *The Condor Question*. The complaint is made early on that "something seems to happen, often, to men for whom wildlife becomes a profession." Labeled "cage-breeders," scientists advocating the recovery plan are

“All Condors needed for their recovery was habitat where they could fly wild and free, “unmolested by biologists”

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chided for being overeager to resort to technology, and for succumbing to “romance for captive breeding.” The condors themselves are portrayed as victims of “the trauma engendered by hands-on biological technicians.” The accusation is made that “the USFWS and Audubon people have become so concerned with the problem of the bird that they have lost sight of what a bird is.”

I ended up spending a night on Mike Wallace’s couch, waiting for the proper permit, sharing the living room with two snoring dogs. Over the couch was a faded pencil sketch of a Northern Goshawk. I asked about it over breakfast. It turned out to be a sketch of a hawk Mike had trained during his years as a master falconer. I realized, over time, that Mike’s experience taming raptors was the flip side of his current project to prepare them for the wild. The protocols he developed for raising and releasing captive birds are the exact opposite of what one would do to domesticate a falcon.

Mike drove me down to the field station after breakfast. We took a zoo vehicle because he was concerned that my pickup wouldn’t be able to handle the rigors of the “road” in. Before meeting Mike I had studied his scientific papers, but during the seven-hour ride I got to know the man behind the keyboard. This man was all about raptors. He had researched turkey vultures for his master’s thesis, and for his doctoral dissertation had studied the Andean Condor. Here was a fellow in his early sixties, still with a full head of hair, whose entire career trajectory was about keeping the California Condor off the list of extinct North American birds.

When we finally got to the field station, snuggled into an old-growth stand of mixed conifer, David Brower’s words kept swirling around in my head: “A condor is five per cent feathers, flesh, blood, and bone. All the rest is place.” *This is the place*, I told myself. *iPerfecto!* Of course, Brower also wrote, “That place requires space to nest in, to teach fledglings, to roost unmolested, to bathe and drink in, to find other condors in and not too many biologists, and to fly over

wild and free.” The Sierra San Pedro Martir had all that, arguably, depending on how you defined “not too many biologists.”

Mike would leave the following day. Before he went I was assigned a spot out on a ridge under a Jeffries pine, nestled nearly out of sight behind a matched set of granite boulders. The precipice functioned as a condor highway, and my charge was to sit there and watch, day after day, and to record the numbers on the patagial tags I was able to scope, always keeping an eye out for the missing bird.



Have I mentioned that it was glorious? I’d spent the previous year as an apprentice hawk watcher with the Golden Gate Raptor Observatory, trained not only to distinguish one distant species of raptor from another, but also to discern the age and gender of raptors whenever possible. But no amount of training with eagles, hawks, osprey, harriers, kites, and falcons prepared me for condors. These are the Harley Davidsons of the bird world: big, fast, noisy, and yet stable enough to cause a fellow to change his religion. If an airborne condor tends not to flap its wings much, that’s because it doesn’t have to—it owns the wind.

In his condor journal, Dick Smith wrote, “To sense the close passage of a traveling condor is an experience out of this world.” What disquiets me now

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is how close the condors came to being out of this world permanently. The conservation community was still disputing the condor question in 1987, debating the finer points of captive breeding until the population crashed and only twenty-two California Condors remained on the planet. Remember, no one engaging in this debate wanted extinction. Those against the recovery plan were genuinely convinced

“I used to think of habitat preservation as the one-size-fits-all solution

of its “wrongheadedness,” as Anne and Paul Ehrlich had put it in the book’s introduction. Well-meaning ornithologists genuinely felt that captive breeding was the problem, not the answer for *Gymnogyps californianus*. But birds with a theoretical sixty-year life expectancy kept dying young, largely because we didn’t know what was killing them in the wild.

Most of the science behind *The Condor Question* is based on the work of Carl Koford, who began studying condors in the field as part of an Audubon fellowship to assess population viability. Koford spent more than four hundred days with the condors prior to World War II, with a typical day being described on May 6, 1939, when Koford wrote: “I watched #1 nest from 7 a.m. until 6:15 p.m. & saw both birds in the nest in the afternoon & saw the chick too. The day was clear overhead with light breezes. I camped about 400 yards WSW of the nest as before.” (When it comes to scrutinizing field notes, sometimes historical ecology isn’t as exciting as you’d think.)

Central to the argument of *The Condor Question* is a 1979 interview Koford made shortly before his death. In it, he speculates that a ten-bird decline in the condor population “during the past dozen years” could have been caused by many factors, “including shooting, nest area disturbances, consumption of poisoned food, and seasonal food shortages.” Koford asserts that these factors can all be remediated without needing to capture the remaining population of condors. Koford’s

concern about poisoned food is amplified by other authors in the book who cite concerns about a specific poison used in rodent control, sodium fluoroacetate. Although anecdotal evidence was presented about condors dying after consuming poisoned ground squirrels, none of these factors added up to the mortality that was taking place. Even if rodenticides could have been rectified instantly, it is doubtful that extinction could have been staved off.

Back in 1981 we didn’t know that significant condor mortality was being caused by the ingestion of lead bullet fragments. When hunters shoot animals such as deer, they usually target the chest area, hoping to hit the heart and/or lungs. Modern high-velocity hunting ammunition fragments on impact. After the animal dies the hunter will typically field dress it, removing the internal organs and leaving behind a “gut pile” prior to transporting the carcass. The viscera attract scavengers, who end up being poisoned by the lead fragments contained within.

The lead-poisoning connection was not made until after cage-bred condors were released back into the wild. The stark reality is that radio telemetry helped scientists find dead or dying condors so that lab work could be done on the blood to determine what was causing the problem. The science behind this was not published until 2006, seven years after the first captive-bred condors were introduced into the wild. Had the decision never been made to capture the remaining wild condors, they would most probably have perished by now, and “extinct” would have been the final word in the debate.

There is still a great deal we can learn by re-reading *The Condor Question* several decades after its initial publication. For example, we can learn that environmental righteousness is only an attitude, not an argument. On top of that, it would be worthwhile to realize how close environmental romanticism came to allowing a magnificent species to go extinct. Dick Smith wrote, “There is something unreasonable about a condor. The bird has to be comprehended, not

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analyzed.” That sounds really sweet until one realizes that what dying condors really need is to have their blood chemistry analyzed.

This is not to suggest that we shouldn’t approach *Gymnogyps californianus* contemplatively as well as analytically. One morning while en route to my field site, I came across a condor’s primary flight feather, one that appeared to have been recently molted. Not having a tape measure handy, I held the quill against my rib cage and extended my arm sideways to assess the feather’s length. It reached all the way to my knuckles. One feather! And yet, the most amazing thing about these birds isn’t their wingspan, it’s their lifespan.

Considered from the hindsight of 2015, when there are 432 condors alive, more than half of whom are free-flying birds, *The Condor Question* seems to have been infected as much by pessimism as acrimony. In one place it predicted that a bird emerging from captive breeding would be “a mangled facsimile of the original.” In another place it predicted that zoo-propagated birds will behave similarly to hatchery-raised trout that don’t know how to act like other trout, eating the wrong food in the wrong part of the stream. Kenneth Brower laments that “a released bird is only half a bird.”

There were indeed problems when the first zoo-propagated condors were released into the wild. In Arizona, several condors were killed by Golden Eagles until the eagles re-discovered condors not to be a threat. Other problems required more creativity to solve. When a condor was electrocuted after landing on a utility pole, imitation power poles that would provide a mild, harmless shock were introduced into the pre-release pens. The condors learned never to land on power poles. Problem solved.

A certain amount of “aversion training” takes place before condors are released into the wild. In essence, they are being trained not to trust *Homo sapiens*. In terms of longevity, it apparently benefits condors not to consider us a friendly species. I was requested,

during my stint at the field station, to reinforce this training should the need arise, perhaps going as far as chucking a pine cone in a condor’s general direction if it approached too close. “Don’t treat them as if they’re endangered,” Mike Wallace counseled. The irony of this was not lost on me: here I was, Senior Lecturer in Environmental Studies and Sciences at a university that prides itself on fostering environmental compassion, being admonished not to let condors think I’m a nice guy.

The birds I observed in Sierra San Pedro Martir were not mangled facsimiles of condors, nor were they only half the birds they should have been. Yes, they still rely on conservation efforts, and they will need to be monitored, protected, and perhaps even coddled well into the future. But they are a vibrant community, learning as they go how to become wild creatures, teaching each other how condors are supposed to behave. Condors, after all, are smarter than trout.

Thanks to radio telemetry, we finally located the flying Pleistocene radio station for which we were searching. She had nested in an area so remote that even the latest technology couldn’t keep up with her, and I’m strangely encouraged by that. Her chick didn’t make it, unfortunately, but at this very minute there are four juvenile condors riding the updrafts of the Sierra San Pedro Martir who were born in the wild. More to come.

I left the field station impressed and inspired by the condors I’d met. They were more adaptable than I’d expected them to be, and less relict. I saw far more to indicate vitality than to portend senescence. I’m happy to report that the California Condor is not getting its feathers ruffled by such things as radio transmitters. Like most birds, they appear disengaged about existential issues such as extinction, preoccupied by the more immediate issues of feeding and breeding. Maybe it’s all the better that we humans are the only

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species who can comprehend extinction's full tragedy. Or do we? I can only hope we learn from the condors' resurgence and can use that resurgence as a testimony to the possibility of saving other species.

John Seibert Farnsworth is Senior Lecturer in Environmental Studies and Sciences at Santa Clara University, and for the past three years has been a doctoral researcher at the University of Stirling. He is completing work on a new book, *Coves of Departure: Field Notes from the Sea of Cortez*. A grant from the Santander Foundation underwrote his work at the California Condor Field Research Station.

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ON GRIEF AND HEALING THE WORLD

By Piro Hiroko Ishizaka

The real tragedy is that we have become people who can't cry. As Francis Weller says in *Entering the Healing Ground: Grief, Ritual and the Soul of the World*, "we live in a flat line culture, one that avoids the depths of feeling" (p. 87). We avoid feelings because we are afraid to cry. This also keeps us from caring, because caring is a feeling that sometimes moves us to tears.

Have you noticed that whenever you *really* cry, when you don't stifle the outflow of tears and snots and sometimes even dribbles of saliva, when you cry so that, as Martin Prechtel says in "Grief and Praise," "You don't look good when you are done," then you feel lighter? This lightness is required for us to take action on our caring, which is taking on the responsibility for healing the world. Without the lightness, we are lost in the heavy and the dark. It's very difficult to act in the dark; one literally cannot find the way.

There must be some native story about tears becoming rivers that quench the thirst of the world.

Again, from Francis Weller, "We suffer, as I have said, from what I call premature death, where we turn away from life and walk with ambivalence towards the world, neither in it nor out of it, lacking a commitment to fully say yes to life" (p. 89).

It's not just a matter of healing ourselves *before* we can do the work in the world. I am not sure if there is a real healing of ourselves without extending to heal the world. Moving through grief may be the indispensable component that compels and *allows* us to truly act.

Some native people knew this well. Sobonfu Some says that in the African village where she comes from, allowing grief breathing room to move about and ex-

press itself, so that its heft is no longer perched on one's shoulders, was considered natural and necessary in order to live well as a human being.

The native wisdom of her village also knew that the Grief Work—and it *is* work—of not only acknowledging, but of moving *through* the grief—letting its powerful river flow out unimpeded by any dams—must be held in community. Her people had grief rituals somewhere in the village almost every day. Here is another tragedy of American culture: we usually suffer alone. Grief has been relegated to the small private spaces behind closed doors where we each struggle desperately to make sense of it.

Moving *through* grief instead of around it is scary business. Who wants to enter what feels like a dark tunnel alone, especially when we perceive that it might suck us in forever? Our immediate heartfelt and gut-wrenching feelings seem very private, as they come from the core of our beings. But giving these feelings permission to move about freely in the community

“Since the causes of grief...are universal even though they feel private, perhaps grief must exist in the community sphere.

without shame allows what seems like a dark tunnel to expand into a spacious healing ground. This ground is held by the support of the community, which ideally includes a shaman or an elder practiced in the art of navigating through the dark.

Since the causes of grief—whether it be the destruction of earth or the impermanence of human life—are universal even though they feel private, perhaps grief must exist in the community sphere. Not allowing it its proper seat there prevents us from entering the healing ground, both personally and collectively. In addition, keeping our grief behind closed doors separates us from each other and from the “other” of Nature. Releasing it from the shackles of privatization into open space might help to unblock the dams in the healing

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flows of the world—dams made bigger daily by our inability to take on full responsibility to act as sane, mature, and wise human beings.

Piro Hiroko Ishizaka was born and raised in Japan for the first half of her childhood. She considers herself a bridge; between cultures, East and West, nature and humans, spirit and matter. This essay was inspired after a conversation with Brooke Hecht, President of the Center for Humans and Nature at the Geography of Hope Conference in March 2015.

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wide strip of paper, two artists outlined a landscape on which we shared our ideas for a way forward. It was a braided river of words that asked, “What do you love too much to lose?” and “What will you do to defend what you love?”

The result was a collective statement of our values. In the realm of social media, this crowd-sourcing of meaning is sometimes called a *folksonomy* or *social indexing*. It is a bottom-up version of traditional taxonomy, and we read it aloud, together.

Conference co-chairs Kathleen Dean Moore and Robin Wall Kimmerer offered their own additions to our folksonomy, and their words have already begun to shape my own thinking.

Moore donated the word *avulsion*, which Wikipedia defines as “the rapid abandonment of a river channel and the formation of a new river channel.” We don’t need to dam the river, she said—we must redirect it. A few well-placed rocks can shift the entire flow. Sometimes those rocks are words.

Kimmerer spoke of a “grammar of animacy.” The English language refers to the non-human world as “it,” while pronouns such as “he,” “she,” and “we” are reserved for members of our species. Western culture needs a new singular pronoun to describe the other members of our biotic community. The word Kimmerer proposed is *ki* (pronounced “kee”). The good news, she added, is that we already have the plural pronoun: *kin*. To learn a new language is to change your outlook on the world.

Kimmerer also introduced us to the Thanksgiving Address of the Haudenosaunee people. These are the “words before all else,” the recitation that begins each meeting of the tribes of the Iroquois Confederacy. It is their expression of gratitude to everything in their world: plants, animals, sun, moon, and winds. Each section of the address concludes with the phrase, “now our minds are one.” As my friend Curt Meine points out, wholeness of mind can be both a communal and an individual aspiration.

The Thanksgiving Address identifies the things

that we can agree upon, the values we share in the face of our obvious differences. That would seem to be a great place to begin any collective project.

At one. Atone. A tone.

Finally, I should mention the improvisatory singing of the vocalist Rhiannon, who performed several times at the conference. Her guttural utterances remind us that speech is both sign and signifier. We understand as much from pitch and tenor as from literal meaning. One song sounded vaguely like French, and she encouraged us each to sing in our own unique language. Later, with a collective hum, she led the entire audience in a series of harmonies that ultimately formed a uniform tone. All things do eventually merge into one.

Steve Dunsky is a documentary filmmaker for the U.S. Forest Service. He co-directed the documentary *Green Fire: Aldo Leopold and a Land Ethic for Our Time*, which was co-produced by the Center for Humans and Nature, the Aldo Leopold Foundation, and the U.S. Forest Service.

The biennial conference, *Geography of Hope*, sponsored and hosted by Point Reyes Books, brings together leading writers and activists in the coastal village of Point Reyes Station, California, for a three-day feast of readings, discussions, and activities to inspire and deepen an understanding of the relationships between people and place. This year the Center for Humans and Nature was a co-sponsor of the conference. For more information about the *Geography of Hope* conference please visit the Point Reyes Books website. A slightly different version of this article appeared in *Orion Magazine* as part of the *Orion Noteworthy* blog series: <https://orionmagazine.org/category/blog/orion-noteworthy/>

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CHN BOOKSHELF

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.*

S. F. Aikin and R. B. Talisse, *Why We Argue (and How We Should): A Guide to Political Disagreement* (Routledge, 2014).

K. Babine, *Water and What We Know: Following the Roots of a Northern Life* (University of Minnesota Press, 2015).

W. B. Connolly, *A World of Becoming* (Duke University Press, 2011).

S. Dhammika, *Nature and the Environment in Early Buddhism* (Buddha Dhamma Mandala Society, 2015).

J. M. Groh, *Making Space: How the Brain Knows Where Things Are* (Harvard University Press, 2014).

J. Haidt, *The Righteous Mind: Why Good People are Divided by Politics and Religion* (Vintage Books, 2012).

D. J. Haraway, *When Species Meet* (University of Minnesota Press, 2008).

D. Kirby, *Death at Sea-World: Shamu and the Dark Side of Killer Whales in Captivity* (St. Martins, 2012).

E. Ostrom, C. Chang, M. Pennington, V. Tarko, *The Future of the Commons* (Institute of Economic Affairs, 2012).

E. Parens, *Shaping Our Selves: On Technology, Flourishing, and a Habit of Thinking* (Oxford University Press, 2015).

A. L. Peterson, *Being Animal: Beasts and Boundaries in Nature Ethics* (Columbia University Press, 2013).

D. Wall, *the Commons in History: Culture, Conflict, and Ecology* (MIT Press, 2014).

THE
LAST WORD



JULIANNE
LUTZ WARREN



PICTURING: GHOSTS

I. **to raise a ghost:** *to cause it to appear (Oxford English Dictionary).*

To get this perspective,
you must have wealth or wings.

II. The soul or spirit, as the principle of life; also **ghost of life.** *Obs. exc. in phrase to give up (earlier to give, give away, yield up) the (one's) ghost: to breathe one's last, expire, die.*

Three hundred-and-ten-million
years ago,

birds and humans shared
a common ancestor.

Take for evidence: we,
in rhinestoned skins,
recognizing ourselves
in feathered ones
recognizing themselves
reflected in mirrors, and,
of course, in beings
teaching and taught
to sing, pitching ahead

as remembering.

Two million
years ago,

Peregrine falcons, like
animated pollen
wind dispersed
from the family tree,
braved, keen-eyed,
unnamed Earth, plunging
into shaggy tundra, tropics
bronzed by dusk,
erupting sea islands
adrift from skyey plain
to forest-spiced cliff,
and, at that time,
in Africa, lived
a chewingmachine,

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bulleting faster than the coming Express
to talon-catch—slower birds
on wing—
now late Passenger
pigeons, Mourning doves,
Black-crowned night
herons,
Redstarts,
Blue jays,
White-throated sparrows,
who learned first to sing,
still, in boreal's summer, conduct
midnight sun soul to city
in dark mid-winter,
notes sparkling like
spruce tree lights
jazz ing
with silver trumpets
in Central Park.

III. *ghost-land*

After other races vanished the Lenape
with their words, they renamed the place
“Central Park,” where
marshy blueberry thickets
grew in sea-salt air— but not much longer—
over creek-gurgling schist, feeding
White-sucker-spawn-and-Hogchoker-
fed Raccoons and Meadow voles,
potato-famined Irish pig farmers
and German gardeners, in a free Black village
with three churches, and their school's
Holy children wore cloth shoes
with leather soles. Red maple
leaves turned
red in fall and fell
underfoot,
then, greened again in spring overhead
trees' clapping boughs the very stars
re-constellated in tune with the
mappists' imagination— grid lines
glittering gold on clear nights,



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as subway lines
 uptown
 burrowed
 carrying creamy-stockinged fares
 to plays at
 the Century Theater
 between 62nd and 63rd Streets
 on Central Park West.

The theater's greatest success was
 Eleonora Duse, who, in 1923, aging,
 one year before her death,
 happily exited gloomy Europe,
 sailing to New York, where
 she acted Mrs. Helen Alving's part
 in Henrik Ibsen's

Ghosts.

[Muffled laughter of a young woman and man in another room.]

MRS. ALVING: [Looks to the wall.] We are all of us ghosts. [Wrings her hands.]

[ELEONORA DUSE peers out the window, noticing the manner of people walking in the park. She thinks gratefully about the youthful innocence of a nation virgin to the horrors of invasion.]

ELEONORA DUSE: There is something so buoyant. [Looks in the mirror hung on the wall, affixes her charcoal-wool hat with a crystal-head pin.]

IV. *Philos. **the ghost in the machine**: Gilbert Ryle's name for the mind viewed as separate from the body*

Egg yolk is the color
 of Peregrine toes, feet
 of sleek-bulk
 like a man wearing
 well-fitting, four-fingered
 leather work gloves
 with long black nails,
 -curving-
 smooth sharp



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as a saber tooth
hooks winged prey.
A darting bill-bite severs
cervical vertebrae; he
delivers the plummy-puppet
meal to his mate.

Clutch to clutch three
dangle-dance in mid-air
to mooring ledge where,
three into one,
she plucks and tears
flesh and eats,
 between wails
as he takes her back,
 flapping wings,
 weightless,
 but for one nuzzling thing,
talons drawn in.

Dark-artery breasts
turn brooding menace. Strangely,
as it appeared, the remedy
for bug-vectored disease
and crop pests was
feathered phantom
meat salted with
war-borne technology.

First swimmers
in original seas—
mute hearts—
slick out
fissures
of warm
chestnut-
flecked shells,
suddenly, a slight
barb's breadth
too-thin for
safety.



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V. *the ghost walks* (*Theat. slang*): there is money in the treasury, the salaries are forthcoming.

The steel-girded, masonry
Century Theater,
as it was widely recognized,
had “deadening acoustics.”

In 1930, after a mere
twenty-two years running,
the unprofitable Beaux-Arts
venue was razed.

In its place,
the Century Apartments raised luxury
again, despite the Great Depression.
The building towers Art Deco-confidently
as a well-lit, homey cliff, welcoming prosperity
restored with Peregrines, captive-bred
and released, safe from DDT,
an abundance of
rock doves to eat, yet,
with few sheltering
crevices
for nest scrapes.

Window ledges,
narrow
and
steep,

fresh laid eggs—
breast-sturdy shells regained—

elliptical geometry
and
gravity
to rolling, and—
not sturdy enough for this—

falling

expose

to lashed-up wind and rain,



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so many feet,
scrambling
on crowded sidewalks
pancaked with chewed up gum,
and cast off plastic bags
float east

across the street
to flap from trees,
most spookily at night,
in Central Park, where
black nannies charged
with white babies in strollers
peregrinate.

VI. Sc. 'A piece of dead coal, that instead of burning appears in the fire as a white lump' (Jamieson).

In the spring of 2014,
a parking lot magnate
and his wife,
bolted
a gravel-filled box
to the brick outside
their 32nd floor
Century Apartment
residence.

Two obsidian-eyed
nestlings fledged,
according to
historic
landmark law,
illegally.

That fall,
building management
unbolted
said breeding ground
for predatory rebels
from that high ledge,
to which the parent birds,
quiver (again) quenched,



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unspooked,
maintain fidelity.

The following week,
in September,
on the day of the parade,
this announcement:

Appreciating the burning irony,
John D. Rockefeller, Senior's
also philanthropic heirs—living
the oil magnate's hope for,
in his own words,

“efficiency in giving
so that wealth may be
of greater use
to the present and
future generations”—

inspired by a movement of
that future's fiercely
present “Y”s

—will divest from
their corporate legacy,
aiming to keep carbon,
good as gold, unburned,
in the ground.

It is “schizophrenic,”
their spokesperson said, to maintain “investments
undermining our grants.”

For all time,
as far as we can see,
the laws of physics say,
inescapably,
greenhouse gases
in the air—
think
carbon atoms with
two “O”s—
sucked hard
by sun-flecked plants
long dead (some
chewed to flesh)
pressed to Earth



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in quickcoil breath
 fossil haunts
 uplift
 spiriting again into the air—do
 warm
 concrete, soured sea,
 crystal ice,
 and naked soil, the ecosphere
 ripple-change
 Paradoxically,
 the human species— we running matters
 since
 growing
 high on
 upright
 necks
 such
 BIG
 ridged fat-rich
 brains— full of a certain ingenuity,
 now live in a different time
 on a different planet that
 need new names—for
 a self-made mirror of ourselves
 mirroring ourselves shading
 fierce green fires—
 of glimpses
 cold-blind,
 dimming, and
 not dead.

VII. *Television*. A displaced repeated image on a television screen caused by a duplicate signal travelling by a longer path.

To blame the world,
 is to condemn ourselves.



THE
LAST WORD

VIII. ghost-dancers

September 21, 2014:
People's Climate
March
south on
Central Park West@ 62nd and 63rd.

A Peregrine falcon
is perched
on the high ledge
too far overhead
for those on the street
to notice. No human being
knows what that bird
is seeing.

Of the 400,000 people
on the ground,
over 50,000 are the Millennials,
the original human generation
born tongue-first singing,
“climate justice, now,”
into a shrinking or is it an expanding world,
whose clenchedteeth
dreams glimpse the stellar
with scientific wonder,

Cosmos

yet
forget
giraffes, and,
whose members know,
in surprising, complex detail, that
to celebrate Earth—
each and every other tangled other—is
to exalt
our human selves
pitching ahead
counting down...
as remembering
silence...
and a swell of voices.



Coming October 2015

CITY CREATURES

Animal Encounters in the Chicago Wilderness

Edited by Gavin Van Horn & Dave Aftandilian

Join artists, poets, and essayists in exploring human relationships with nonhuman animals in our everyday urban worlds, from backyard to bioregion. A project of the Center for Humans and Nature.



Top center: Diana Sudyka, Monk Parakeet Colony, gouache watercolor painting (2013). Top right: Molly Schafer, Littleted, watercolor on paper (2013). Bottom: Brooks Blair Golden, Owl, part of the Art in Public Places project, acrylic and spray paint on concrete (2012); photograph by Lisa Roberts.

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