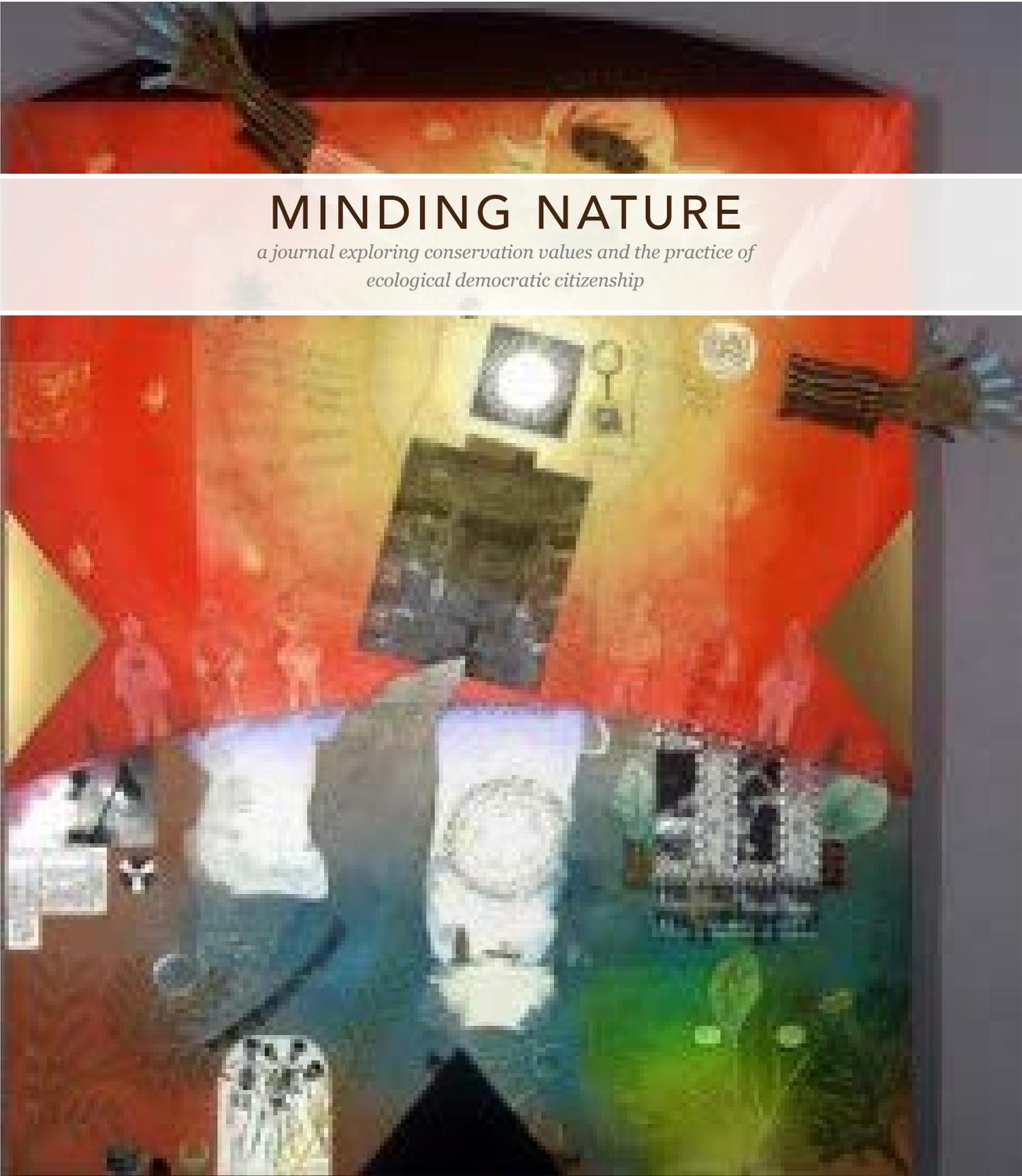


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*Expanding our Natural and Civic Imagination*

An abstract artwork featuring a complex composition of overlapping geometric shapes and vibrant colors. The palette includes deep reds, bright yellows, oranges, blues, and greens. The composition is layered, with some elements appearing to be on top of others, creating a sense of depth and movement. The overall effect is one of dynamic energy and visual complexity.

# MINDING NATURE

*a journal exploring conservation values and the practice of  
ecological democratic citizenship*

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**ON THE COVER**

Lindy Lyman, South / The Forest Peopled: Childhood, Noontime, Summertime, Fire [Acrylic, inks, found papers, found objects, on unprimed canvas, 50" x 42" 1997.]

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## WHO(SE) ARE WE?



BRUCE JENNINGS

*Quidquid est in territorio, est etiam de territorio. [“Whatever is in the territory is indeed of the territory.”]<sup>1</sup>*

*Remove not the ancient landmark, which your fathers set up.*

—Proverbs 22:28

**INDIANA IS CALLED THE HOOSIER** state. There are many legends about the origins of that term. One says it derives from the practice of hailing unknown persons as they approached a settlement by saying “Who is there?” slurred into “Who’sh ‘ere?” I prefer a slightly different folk etymology, rendering the question as “Whose are you?” Whom do you belong to or with? Are you of us in this place, or of another group and another place? On the American frontier in the 1820s—no less than at border crossings and checkpoints of all kinds today—the fundamental question of identity was tied to the fundamental question of belonging.

Naming-affiliation was of first importance, and it remains so across a broad spectrum of social and natural activities, from volunteer groups culling non-native vines, to parties where people meet each other for the first time and the conversation turns to place-based life stories; from ecological field research to being “carded” when you want to buy alcoholic beverages or to vote. Rationally, I think a standardized identity card would help in the efficient management of social welfare and health systems; viscerally, I resist the idea because it takes the identity question out of the civic life world and puts it into the virtual reality of a data base. So I rather like the fact that the nickname of my home state originated in spoken language, in dialogic exchange, in a hermeneutic of question and answer. Today, mere words in the absence of documents, official seals, and state certifications are of little effect. Belonging is now highly bureaucratically bordered.<sup>2</sup>

Who and whose are we? To whom does each person belong, and where? This question does

not pertain just to each human person, but, if we take the concept of belonging seriously, it pertains to each form of life, each creature—where do we all belong, where will we be permitted to dwell, develop, flourish, and enact the behavioral repertoire and the symbiotic, ecological possibilities inherent in our kind? Is there a connection between cultural and political belonging (in linguistically mediated ways that are more or less uniquely human) and natural belonging (in creaturely ways that are more or less common to all forms of life)? Might something called “just belonging” or “moral membership” be the connection and hold the answer to these questions?

---

In places all over the world—in watersheds, at polluted brownfield sites, on rooftop gardens in cities—conscientious and successful environmental conservation, preservation, and restoration efforts are taking place on regional, local, and neighborhood levels. If we look at actions being taken locally, there are many stories of hope to tell about the trusteeship of places of belonging.<sup>3</sup> If we think about the global picture, however, a quite different face of the relationship between humans and nature is revealed.

As a species, we don’t share well with natural others. It is

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estimated that the number of different plant and animal species on earth are between ten and twenty million. In that teeming web of life, human beings alone gobble up about 25 percent of the all the energy and nutrients produced by plants.<sup>4</sup> We hog nearly half of the total land area on earth to meet our voracious agricultural needs.<sup>5</sup> We have slipped dangerously below the estimated minimum level of global forest cover needed to sustain living systems and geochemical cycles. We have nearly fished out the waters of the world. And half of the population of all the vertebrate animals have been culled as a result of human activities in the past forty years.<sup>6</sup>

On the physical side of this sorry ledger, human economies have come to rival natural planetary systems in their power and effects. Vulcan is a piker by our modern-day standards. We artificially generate reactive nitrogen and phosphorous in quantities that are destructive and unsustainable, to say nothing of the net volume of carbon dioxide we add to the atmosphere because we produce more of it, and do so faster, than the land and oceans can absorb. Of course, the physical side of the Earth's ledger has profound effects on the biological side.

As a species, we don't share well with each other, either. If non-human species and ecosystems are being disrupted and displaced on a massive scale today, the same can be said for significant numbers of persons and social systems. According to data compiled by the Pew Research Center, there were a record number of 65.3 million displaced people around the world in 2015: some of them displaced from their previous homes and communities but still residing in their home country; many of them refugees on the move internationally and seeking asylum in foreign lands.<sup>7</sup>

Europe is the main vortex for this at the present time. 12.5 million displaced persons are from Syria alone, up from "only" 1 million as recently as 2011. Many "unaccompanied minors"—that is, children alone—are also being displaced at an accelerating rate; of the nearly 200,000 entering

Europe since 2008, 100,000 arrived in 2015. Roughly half of these children are coming from Afghanistan. By American standards, European countries have not had that much of an ongoing experience with immigration on a large scale, but the repositioning of large numbers of human beings is being felt there now. Over 1 million people have applied for legal immigration in the last year. And in 2015 an estimated 1.8 million people entered European Union countries illegally, up from 100,000 in 2013. Many die on their journey toward an uncertain destination. More than 3,770 migrants were reported to have perished trying to cross the Mediterranean in 2015, most while attempting to cross from North Africa to Italy, but 800 have died in the Aegean en route from Turkey to Greece.

These displaced persons are fleeing political turmoil and violence, or economic turmoil and disasters such as drought and famine. To be sure, some are seeking new opportunities or a new life. But many are having a new life thrust upon them. If that weren't enough, for a growing number displacement is not followed by re-placement but rather turns into an unending political and legal limbo of non-belonging. Those in this limbo are not being incorporated in a stable way into a new country, culture, or

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way of life that will offer security and sustenance or rights and meaningful roles. On the other hand, they cannot be repatriated to their country of origin, either, for reasons of safety, circumstance, and humanity. Those they left offer little but harm if they return; those toward whom they are traveling, initially welcoming, now increasingly are doling out their hospitality very selectively and begrudgingly.

Once welcoming countries are becoming more closed to refugees as the human queue swells and lengthens, and as natives, virtually all of whose ancestors were once newcomers to their place if one looks back far enough, resist the migrants. I believe that they do so at least in part for reasons having little to do with those displaced as concrete persons, but because they fear the migration itself. They may even be internally displaced themselves—a life they had imagined for themselves and their children having failed to materialize, they are unemployed or underemployed economic refugees in the churning of neoliberal political economies.

Animating these observations is my sense of a profound solidarity deficit in contemporary Western societies and legal systems. This deficit cuts across environmental policy and human rights and economic policy. The deficit is kept in place by forces of wealth and power, but it stems from the ethical discourse and the social imaginaries that legitimize the forces that keep us at odds and make us strangers to one another in both humans-and-nature and humans-to-humans relationships. A countervailing discourse with a relational imagination is necessary to counteract this solidarity deficit. We must develop conceptual resources and capabilities that will enable human beings to think and act like members of a community of reciprocal recognition and mutual empowerment in their dealings with their own and other kinds.

In these pages I have written before about two basic notions that I now propose to consider from a new angle.<sup>8</sup> The first is the just recognition of

membership—by which I mean being able to recognize the inherent moral status and moral considerability of oneself and others, including non-human species and ecosystems. The second is the notion of a just relationship of mutuality—by which I understand solidaristic and caring practices flowing from the natural condition of creaturely (including human) being—developmental, fragile, interdependent, and symbiotic being. Membership and mutuality contain a moral calling: an invitation and a challenge to live lives of communal concern and support. Membership recognition confers a parity of voice and an equality of civic respect to persons as they engage in the active life of a community. Mutuality is exemplified by a number of features and practices such as care, empathy, reciprocity, and solidarity—standing up for, with, and as another.

Just recognition of membership and just relationship of mutuality are equally important; while they are conceptually distinguishable, they are not distinct and must be pursued together in practice. And when we think about them in relation to the notions of belonging, community, and place, membership and mutuality become even richer notions.

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When thinking about this, a good place to begin is the

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remarkable discussion of belonging and human rights by the political philosopher Hannah Arendt in her book *The Origins of Totalitarianism*.<sup>9</sup> Doing so soberly reminds us that our current crisis of human displacement is not the first, and maybe not even the worst, such catastrophe in the long century that has stretched from World War I until the present day. In Europe during the interwar years there were large-scale population migrations and ethnic and nationalistic turmoil. Arendt studied the legal and political response that the European countries made to this situation and argued that the traditional responses of the nation-state system—naturalization and repatriation—broke down at that crucial moment. There were no orderly legal or moral resources ready to step in and fill the vacuum that was created by the failure of these familiar and traditional solutions to massive population dislocation.

As a result, a new kind of statelessness—legal non-belonging—emerged. One of the philosophical and political traditions not up to the task, Arendt argued, was the discourse of Enlightenment constitutionalism and humanitarianism centering on the notion of universal rights grounded in humanity as such. Writing of this period in ways that have a striking resonance to events taking place in migrations from the Middle East and North Africa into Europe today, she was struck by the inability of the nation-state to protect human individuals whose only identity was that of a human being. “The conception of human rights, based upon the assumed existence of a human being as such,” Arendt observed, “broke down at the very moment when those who professed to believe in it were for the first time confronted with people who had indeed lost all other qualities and specific relationships—except that they were still human.”<sup>10</sup>

An abstract conception of belonging cannot bear the moral and political weight that the contemporary global world places on it. I believe that this pertains to both human social-political belonging and natural ecosystemic belonging. Arendt argues that human rights should be un-

derstood to protect embodied selves—in other words, somebodies somewhere. We should not try to apply rights to everybody everywhere—the transcendental egos of Kant’s moral philosophy and the liberal Enlightenment tradition—who stand outside time and place, embodying only their humanness. Regarding the middle decades of the twentieth century, she dryly notes, “The world found nothing sacred in the abstract nakedness of being human.”<sup>11</sup>

If belonging is to convey recognition of moral membership and considerability effectively, then it must be more than a designated status or category. Rather, it must be belonging as a form of social practice in place—in an institutional structure of norms promoting and protecting right relationships and in a shared lifeworld of cultural meanings and identities. Note that these meanings and identities can be pluralistic and diverse; they need not ipso facto be homogeneous or hegemonic.

However, this notion of belonging as a practice (or as a network of symbiotic practices) poses a conundrum at the practical level because it presupposes the functioning of a kind of political community that the contemporary nation-state and global political economy no longer provide and that seems to have no al-

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ternative supporting venue.

In the face of this, Arendt turns to the traditional resources and support structures of private life, which can offer support and acceptance even in the absence of legal membership and belonging:

The human being who has lost his place in a community, his political status in the struggle of his time, and the legal personality which makes his actions part of his destiny a consistent whole, is left with those qualities which usually can become articulate only in the sphere of private life and must remain unqualified, mere existence in all matters of public concern. This mere existence, that is, all that which is mysteriously given us by birth and which includes the shape of our bodies and the talents of our minds, can be adequately dealt with only by the unpredictable hazards of friendship and sympathy, or by the great and incalculable grace of love, which says with Augustine, “*Volo ut sis* [I want you to be],” without being able to give any particular reason for such supreme and unsurpassable affirmation.<sup>12</sup>

But must we look for moral identity and relationality only in the private realm of goodness, care, and love? Can we not find the affirmation of human rights both in the interdependent life-world, on the one hand, and the highly structured legal and institutional artifice of the nation-state, on the other? And must we in the conservation community continue to pursue the rights of nature through separate silos of environmental law, policy, and economics, on the one hand, and personal moral commitment and aesthetic contentment (the fulfillment of private duty and the personal experience of beauty, awe, and wonder) on the other? In my attempt to explicate the practices of membership and mutuality, I seek to understand the meaning of belonging from a perspective of just ecological place. What is needed is neither a cosmopolitan conception of a belonging without any borders, nor a statist conception of a belonging

wholly defined by political-legal territoriality, but rather an ethical understanding of a belonging with many fluid and dynamic communal borders and natural landscapes, many webs of particular living within a planetary web of life. *Volo ut sis*.

---

From a moral point of view, belonging embraces just membership recognition and just mutuality in relationship. Coming to belong—being recognized as rightfully belonging—is the gateway to just practices or forms of relational living, namely, equal dignity, concern, and respect. As Aldo Leopold once observed, we abuse non-human beings because we think we own them rather than recognizing that we belong with them and they with us.<sup>13</sup> There is an arc of human moral development here. I think this arc bends toward belonging in the following way.

To belong is to *belong to* something. “Belonging to” is an identity-conferring type of membership involving status and self-esteem that is fundamental for personhood, psychological and moral development, and motivation. But this form of recognition and this mode of belonging are normatively open-ended or underspecified from a substantive human rights, social justice, or environmental justice point of view. Belonging to is compat-

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ible with highly inegalitarian and discriminatory modes of relationality in particular communities and traditions. Chattel slaves, after all, experienced a mode of belonging to, albeit not often an ethically defensible one, that involved more than merely the fact that they were legally owned by someone else. As Arendt notes, slaves often have a more secure existence than the new kind of stateless person who has no mode of belonging at all.<sup>14</sup>

To belong is to *belong with* something. “Belonging with” is not so morally open ended as belonging to. It points toward substantive demands for participatory voice (direct for human members, indirect and represented for non-human members) and claims of considerability and care for all—equity of concern and respect. This is a symbiotic network of values fit for an ecological web of life. This provides an important criterion for evaluating which types of transactions and interactions are to be nurtured, facilitated, and promoted by common rules and public policy, and which are to be discouraged or prohibited.

To belong is to *belong for* some purpose. “Belonging for” entails an acceptance of interdependence as the condition of membership, and it carries with it responsibilities of solidarity and community that inform the many practices of belonging—how we belong, what belongs to us, how it should be shared, and to what ends. Belonging is conferred but it is also lived, earned, constructed, and reconstructed by actions over time. Belonging is wasted unless it allows one to develop an imaginative capability to see the linkages between the condition of the flourishing of others and the flourishing of oneself.

“The land was ours before we were the land’s,” Robert Frost reminded Americans on the day of John F. Kennedy’s inauguration:

Possessing what we still were unpossessed by,  
 Possessed by what we now no more possessed.  
 Something we were withholding made us weak  
 Until we found out that it was ourselves  
 We were withholding from our land of living,  
 And forthwith found salvation in surrender.<sup>15</sup>

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The essays and images in this issue of *Minding Nature* are so rich and vertiginous that they deny brief categorization. But one of the themes that seem to me to course through them is indeed the puzzle and promise of belonging.

The two essays from Center Scholars Jonathan Haidt and Melvin Konner are concerned with moral beliefs and sensibilities that can be seen as more universal and cosmopolitan, on the one hand, and as more localized, place-based, and communal, on the other. These essays elegantly engage many of the quandaries that I have attempted to address above.

Two other Center scholars, Jeanne Gang and Sylvia Earle, discuss the changing practices of zoos and aquariums in their civic and educational roles and in their treatment of animals. Here, too, belonging is a key notion insofar as these institutions are today thinking in new ways about how creatures belong to these institutions and how the institutions belong to them. What lessons about natural belonging do they teach, what scientific understanding of ecologically emplaced living for all species do they embrace? In his essay, Jason Michael Lukasik also provides a thoughtful historical and critical perspective on many of the misguided ways we have thought about confined and

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wild belonging.

Painter Lindy Lyman reflects on the carefully curated 1997 exhibition, “The Synchronous Forest,” created by her and acoustic artist Jeremiah Lyman Moore. This photo essay can be accompanied with a sound experience available on the HumansandNature.org website. James Ballowe returns to *Minding Nature* with a fascinating interview with Estella Leopold, who has recently published a new book, *Stories from the Leopold Shack: Sand County Revisited*.

In his striking meditation on the fires around Fort McMurray, Alberta, Timothy Leduc relates our ecological malaise to the experience of addiction and to spiritual ways various cultures have found to confront it. At the core of addiction is an emptiness that has been likened to a “hungry ghost.” In his discussion of this Leduc aims to “clarify the continuing difficulties in our climate change responses as human and ecological communities suffer from intensifying impacts.”

The last word belongs to Brian Doyle, who explains how he learned a lesson about belonging from a Goshawk. No ID cards needed to be displayed.

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Bruce Jennings is Senior Fellow at the Center for Humans and Nature and Editor of *Minding Nature*. His new book, *Ecological Governance: Toward a New Social Contract with the Earth*, was published this year.

## NOTES

1. A medieval principle of sovereignty, later extended in international law to cover the asylum and protection of refugees. See R. Jennings and A. Watts, eds., *Oppenheim's International Law*, vol. 1, Peace. Introduction and Part 1, 9th ed. (London: Longman, 1996), p. 384.
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9. H. Arendt, *The Origins of Totalitarianism*, (1951; rev. ed., New York: Schocken Books, 2004), 381.
10. *Ibid.*, 380.
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12. *Ibid.*, 382.
13. A. Leopold, *A Sand County Almanac and Sketches Here and There* (New York: Oxford University Press, 1989), vii.
14. H. Arendt, *The Origins of Totalitarianism*, 377.
15. R. Frost, “The Gift Outright,” *The Poetry of Robert Frost*, E.C. Lathem, ed. (New York: Henry Holt and Company, 1969), 348.

## Why Be Good?

By MELVIN KONNER

Assume for the moment that we know what good is. Doing it often involves sacrifice, and if no one is looking, why not do something evil—something selfish, at others' expense? Do we have to be taught the difference between good and bad, right and wrong? Are we naturally drawn toward either?

My own upbringing was steeped in Modern Orthodox Jewish tradition, which includes hundreds of commandments. My family kept most of them, and I was in the synagogue every day from around age eight to seventeen. I was also taught the philosophic and theological basis of the commandments.

Many of these lessons came through stories, as they had for perhaps three thousand years.<sup>1</sup> In one of the first passages I learned to read in Hebrew, Cain slew his brother Abel, and when God questioned him he said, "I know not. Am I my brother's keeper?" (Genesis 4:9).<sup>2</sup> Perhaps God expected him to be, but in any case God evidently did not tolerate homicide, as Cain's punishment reveals.

The concept of evil persists as the human race grows so thoroughly bad that God decides to destroy the whole species, except for Noah, his family, and many innocent beasts. After the flood, Noah thanks God with an animal sacrifice, and God says, "I will not again curse the ground any more for man's sake, for the imagination of man's heart is evil from his youth"

(Genesis 8:21).

The Hebrew translated here as "the imagination of man's heart" is *yetzer lev ha'adam*, which could be "the inclination" or "the will" of the heart. According to the ancient rabbis of the Talmud, this evil inclination (*yetzer ha'ra*) is balanced by a good one (*yetzer ha'tov*); our task is to tip the balance toward good, which in our weakness we could never do without the Torah's guidance.

Of the Ten Commandments (Exodus 20:1-17), the first four, about getting right with God, and the last six, about doing right by others, are meant to help us curb the evil will. If there were no tendency to kill, steal, commit adultery, and so on, why would we need commandments? Every culture has such rules and consequences, overlapping in content—which is in itself evidence of inclinations in human nature.

Jesus embraced the Ten of course, but cited two other Torah commandments as encompassing all others (Matthew 22:37-40). The first is, "Thou shalt love the Lord thy God with all thy heart, with all thy soul, and with all thy might" (Deuteronomy 6:4, although Matthew says "mind," not "might"), and the second is, "Love thy neighbor as thyself" (Leviticus 19:18). But both Moses's ten and Jesus's two convey the message: Get right with God and you will do right by others.

By the time I lost my faith at seventeen, I had realized two things. First, many atheists in history had been very good people, despite having neither love nor

fear of God. Second, I now personally needed a scientific narrative—an explanation—of the origins of ethics both in development and evolution. Let's consider these in turn.

#### THE APPROACH FROM DEVELOPMENT

How do children grow up to be more or less good?

Puritan parents in colonial New England had a clear answer. They found their children brimming with evil urges, like wild animals needing taming.<sup>3</sup> Punishment, even beating, was essential, and a wrathful God was waved at kids like a bogeyman from hell. It was a culture of fear: no fear, no conscience. But they did not invent “Spare the rod and spoil the child.” It is based on Proverbs 13:24, which reads, “He that spareth his rod hateth his son: but he that loveth him chasteneth him betimes.”

Sigmund Freud, the physician who founded psychoanalysis, softened this perspective, positing strange but natural childhood fears, with conscience resulting from internalized, imagined punishments that keep civilization more or less together.<sup>4</sup> In this view, we are born with deep-seated feelings of lust and aggression, but also with fear, and in early life our experiences with powerful adults—especially, in Freud's theory, a potentially punitive father—lead us to repress our innate sexual and violent inclinations. This, by age seven or so, becomes the basis of conscience, which Freud called the “superego.”

While Freud analyzed adult patients on his couch, uncovering dark thoughts and unpleasant memories of childhood, psychologist Jean Piaget devised countless ingenious experiments to explore directly how the minds of children work. Playing marbles with kids in Geneva, he saw *them* discover frameworks of fairness, almost instinctively.<sup>5</sup> They seemed somehow to understand: no rules, no game. Younger children, asked where the rules came from, said, “a gentleman,” but older ones knew the rules had emerged *within* the game and knew they could change them if they agreed and obeyed—which meant: *playing fair*.

There is truth in both these views, but the facts as we know them now are subtler and more complex. Toddlers approaching the age of two are often heard to say “No” or “Don't” aloud to themselves when they are, say, about to touch a flame.<sup>6</sup> This clearly shows that they have internalized warnings from others and that they are using language to restrain impulses. But are these just impulses that threaten the self (what Freud called the ego)? Or do very young children have some

sense of fairness, some “Don'ts” that apply to how we treat others?

It seems that they do. New studies have carried Piaget's line of reasoning much more deeply into development. In experiments even infants prefer a doll or a puppet that helps over one that hurts others, and by nineteen months of age toddlers act in line with the preference, treating those who help positively and those who hurt negatively.<sup>7</sup> At nineteen months, too, they expect an experimenter to divide a reward equally between two animated giraffe puppets who have contributed to a task, while at twenty-one months they take into account different efforts as well.<sup>8</sup>

These studies suggest that our idea of fairness goes back far before we can articulate statements about it, and even perhaps that we may not need to be taught. Going developmentally even deeper, empathy is in some sense with us from the beginning, a kind of emotional-brain resonance enhanced by mirror neurons.<sup>9</sup> Infants are capable of mimicry at birth<sup>10</sup> and a more complex “like me” intersubjective capacity by fourteen months.<sup>11</sup> Contagious crying clearly occurs in newborns, and it persists until nine months of age.<sup>12</sup>

While neither mimicry nor emotional contagion equals empathy, and while we cannot assume that similar behavioral phenomena at different stages of development reflect similar mental states,<sup>13</sup> the brain functions that underlie these early behaviors could be part of the foundation for the later development of conscience. Perhaps we could put it this way: first we have the resonance, then the empathy, and finally the moral reasoning.

Developmental psychologist Jerome Kagan has tried to trace early moral development, seeing morality as “a developmental cascade” including “(a) inhibition of punished acts; (b) a representation of prohibited actions; (c) the emotions of uncertainty, empathy, shame, and guilt; (d) the semantic concepts of good and bad; (e) accepting the moral obligations of social categories; and (f) the concepts of fairness and the ideal.”<sup>14</sup>

He goes on to try to time their emergence: “The inhibition of prohibited actions and the cognitive representation of prohibited behaviors, as well as the affect states that follow violations, appear by the end of the second year of life. The concepts of good and bad appear early in the third year, the experience of guilt and awareness of social categories by 4-6 years, and the notions of fairness, the ideal, and relational social categories during the school years.”<sup>15</sup>

But we have already seen that what some people are willing to call basic empathy and a sense of fairness occurs much earlier. Also, Kagan's formulation relies on a cultural framework of development, including punishments and prohibitions to be internalized, semantic concepts that depend on language, and moral obligations.

Piaget thought that the sense of fair play could be co-constructed by children playing marbles. Ann Cale Kruger, also a developmental psychologist, devised an ingenious experiment to test Piaget's idea. She gave eight-year-old girls some scenarios in what is called distributive justice—problems about fairness in distribution that are much more complex and verbally based than the ones given to the toddlers mentioned above.<sup>16</sup>

The goal was not to grade the girls on “correct” answers about fairness—there were no correct answers. It was to assess the *complexity* of their moral reasoning based on conversations about the problems. But it was also a before-and-after experiment. Following an initial assessment the girls got to discuss the problems with a same-age friend or with their mothers. In the retest after those conversations, girls who had talked with a peer improved more in their moral reasoning—complexity, not “correctness”—than those who had talked with mom.

“Our idea of fairness goes back far before we can articulate statements about it

This seems a clear vindication of Piaget. After the age of reason—seven or so—kids can figure out a lot about

justice without parental guidance. Yet Kruger also believes that teaching is a cross-cultural universal, and that moral principles and other rules are among the things that all cultures try to teach, often during initiation ceremonies before or during puberty.<sup>17</sup> How does she reconcile this view with Piaget? Well, cultures reinforce their children's universal understanding of fairness, and they also get more specific: you say “Sir” or “Ma'am” to older people; you joke with certain categories of relatives, but not others.

Less benignly, you may use other categories to determine how much justice you have to mete out to whom. Gender, race, ethnicity, religion, sexual orientation, and in some cultures left-handedness and disability can give you a sort of free pass as you grow up knowing that all people are equal, but some are more equal than others.

## THE APPROACH FROM EVOLUTION

So no culture has relied just on natural fair play for the development of even basic morality; all cultures teach. In the tradition of my childhood, I was taught that we humans have a sense of responsibility—a conscience—that distinguishes us from animals. Biology taught me to say “*other* animals” and to be less sure about the distinction, but all cultures make it. For Jews, the *good* tendency needs commandments, ultimately divinely inspired; without them—or the Bhagavad Gita, or the sutras, or the Blessings on the Mount, or for that matter what the hunter-gatherer trancers I apprenticed with saw in the spirit-world—we would not know what to do and what not to do.

And yet there are those pesky atheists who somehow do the right thing. As I lost my own faith in divine guidance, I sought evolutionary sources of good and evil. In the half-century since, we have learned that animals, like us, have plenty of both: generosity and selfishness, altruism and violence, help and harm. Help evolves if it is mutual, directed at kin, or enhancing to reputation, or when threats from another group demand exquisite cooperation; occasionally help looks pure, with no explanation at all. Harm evolved for too many reasons to mention.

Frans de Waal, a leading expert on ape, monkey, and other animal behavior, is convinced that we humans are on a continuum with our non-human relatives in behaviors such as empathy, altruism, fairness, cooperation, and reconciliation.<sup>18</sup> He has contributed to an explosion of knowledge about primate and other animal behavior in the half-century since I began musing on the evolution of morality. Clearly the roots of all these admirable behaviors may be found in evolution because they occur in many other animals.

So do selfishness, indifference, deception, betrayal, and violence. The exclamation of Charles Darwin to a colleague more than a century and a half ago remains apt today: “What a book a Devil's chaplain might write on the clumsy, wasteful, blundering low & horridly cruel works of nature!”<sup>19</sup> As someone long suspicious about categorical distinctions between humans and other animals, I am glad to see continuities in desirable traits, but I also see them in disagreeable ones.

As anthropologist Katherine Hirschfeld points out in a recent commentary, “Examples from the animal world can only take us so far.”<sup>20</sup> They have not yet helped us much to discern the balance between good and evil impulses in human nature, much less to alter them—although they certainly put an end to the idea

that beasts are bad and we are good. In fact, the word “beastly,” with its usual connotations, should be retired.

And there are other problems of definition. One study found that chimpanzees are empathic toward humans and toward chimps they know, but not toward strange chimps or baboons.<sup>21</sup> But the measure used was contagious yawning—even more tenuously related to empathy than contagious neonatal crying.

Also, a growing consensus of primatologists and evolutionary psychologists holds that humans are not just somewhat, but much more cooperative than other primates.<sup>22</sup> Not all agree that “human cooperation represents a spectacular outlier in the animal world,”<sup>23</sup> but many endorse a recent statement by Joan Silk and Bailey House based on many studies: “There can be little doubt that humans cooperate more extensively, with a wider range of partners, and at greater personal cost than other apes do. At some point a sizable quantitative difference becomes a qualitative difference, and it may not be fruitful to argue about exactly where that point lies.”<sup>24</sup>

For me, the same applies to language, teaching, providing for the young after weaning (it takes a village), and culture.<sup>25</sup> I still resist categorical distinctions, but “at some point a sizable quantitative difference becomes . . . qualitative.” Culture is strongly tied to those other three distinctive traits, and when I ask the question, “Does non-human culture exist?” my short answer is no. What some call culture in non-human primates, I call proto-culture; I find it compellingly interesting because it helps me guess how human culture evolved, but it is not the same—not even close.

So if culture is almost uniquely human, how does it influence conscience?

#### THE ROLE OF CULTURE

Human culture always includes teaching, and as we saw above, morality is usually among the things taught. For many, like the Puritans of New England, we find fear enlisted as a moral teacher. For example, Hopi kids were traditionally frightened out of their wits by adults dressed as *Kachina* spirits, powerful, scary beings that know who’s been naughty and nice.<sup>26</sup>

Across large numbers of cultures, initiation rites invoke stress and even pain to create teachable moments that tie up the ethical loose ends of childhood, leaving little doubt about what a *person*—read: a member of *our* culture—must do and be.<sup>27</sup> These rites

are windows into the moral teachings of a culture. Rabbinical tradition holds that children can be considered responsible for their own sins at age twelve for girls, thirteen for boys; knowledge and reason can now tip the balance against the evil impulse, in favor of the good. Many Jews mark this transition with a ritual that is stressful, at least intellectually.

Deep scarification among the Nuer of the Sudan, tooth filing among Efe tropical foragers of central Africa, and circumcision among Australian aborigines are among the painful rites that mark the end of childhood in cultures around the world, and these memorable assaults on the body encourage and internalize the rules, morals, customs, and other messages of the culture. Go through this, the adults and the tradition say, and you’ll be one of us. But there is much more to culture than just initiation.

Among the !Kung (Bushmen) I lived for two years with in Botswana, the central religious experience is the trance dance, for healing. I was an apprentice, and although I didn’t get very far, the altered states of consciousness frightened me. Advanced healers confront a world of gods and spirits who—like those of the ancient Greeks—have motives, feelings, and caprices of their own. Healers must talk them out of taking a sick person away, and morals may not matter. But if chastisement is involved, it is likely for the survivors, for not taking good enough care of the one who is ill.

For the marvelously welcoming Buddhist monks I befriended and briefly taught and learned from in Dharamsala,<sup>28</sup> bad thoughts and actions threaten all sentient beings with cosmic disorder. The monks’ (and nuns’) path—decades of study and meditation—may

bring them a little closer to liberation from the cycle of re-birth, which they view as the highest possible achievement; or, if they fail, they may have to recycle after death in unenviable forms. So is fear the actual basis of morals in all these cultures? No. In fact, “Spare the rod and spoil the child” is a false saying.

A new meta-analysis of 111 published research findings on 160,000 children shows that spanking is associated with *more* aggression, antisocial behavior, externalizing and internalizing problems, mental health problems, and negative relationships with parents, and with *lower* moral internalization, cognitive ability, and self-esteem. Also, adults with a childhood

“First we have the resonance, then the empathy, and finally the moral reasoning.”

history of spanking were more antisocial and had other mental health problems, as well as favoring physical punishment, perpetuating the cycle. There was no difference between the effects attributable to what was called “spanking” and those of what was clearly physical abuse.<sup>29</sup>

We have already seen that empathy and distributive justice have deep roots in early childhood or younger, built on by maturing reason. Researchers have found that even Bogotá street children growing up amid war and violence

made universal and noncontingent moral judgments not unlike those of normative samples studied in the United States and other countries. They thought it was wrong to steal and hurt others not because one may get punished... but because of considerations with justice and the welfare of others. Nearly all also judged it would be wrong to steal or inflict harm even if it were legal or common... These findings, that war-affected children and adolescents display noticeable moral knowledge in spite of having been exposed to violence, poverty, and dislocation, are incompatible with the grim picture of moral disorientation and truncated development painted by some.<sup>30</sup>

So goodness arises in kindergarten (“All I really need to know...”) or even on mean slum streets, just as fair play arose in those Swiss marble games—naturally.

Except when it doesn’t.

Kids on the autism spectrum have trouble with empathy,<sup>31</sup> while some kids with conduct disorder harm others without remorse.<sup>32</sup> Aggression is as natural as compassion, especially in boys; some must be *taught* not to hit or throw things. Perhaps they would outgrow it, but before that they could cause serious harm. Some persist as bullies, and a few become lifelong bad actors. The existence of these outliers, common enough to cause great social problems, proves that empathy and conscience do not develop naturally in everyone.

As for adults, recent experiments and mathematical models support the claim that we are the most cooperative species<sup>33</sup>—but watch the news and see: *we are not cooperative enough*. Worse, science, as well as common sense, tells us we cooperate best when directing harm out at a common enemy. Groups are very often *internally* altruistic even as they mirror each other’s violence—sometimes a seemingly endless es-

calation of retribution.<sup>34</sup>

Recall Kruger’s observation that some fundamental aspects of morality develop naturally, but that all cultures supply specific rules to channel them. Consider a few illustrations of this principle among the contributions to the “Culture and Conscience” dialog on the Center for Humans and Nature website.

“No culture has relied just on natural fair play...for even basic morality; all cultures teach.

Anthropologist Louise Brown studies prostitutes in Lahore, Pakistan. Shamed by their society, they still have a code of honor, which Brown herself ran afoul of. A mother there sold her daughter’s virginity to a distant powerful sheik, an honorable exchange that would result in a better life for the girl. But Brown gave sex away to a male companion for free, with no intent of marriage; worse, she allowed her daughter to do the same. The professionals viewed both as loose women giving everything for nothing.<sup>35</sup>

These contrasting codes of honor both build on a foundation of shame that develops naturally in childhood and that in both these cultures is channeled to shame women who have sex. But the context that is shameful is very different. And of course, if it were not a man’s world—even granting that women and men have different sexual drives and sexual risks—then neither the prostitutes nor the anthropologist would be shamed. Cultures created by men (and they are everywhere) guarantee guilt and shame for women.

There are so many other interesting cases. Physician-anthropologist Jessica Gregg writes movingly of the conscience of her patients, who are heroin and other opioid addicts.<sup>36</sup> They know the larger culture they are hoping to adapt to, which often means leaving the subculture of their comfort zone behind. They are “navigating north with a broken compass,” but they don’t stop trying.

Polly Wiessner deftly describes the moral commonalities between the !Kung of the Kalahari and the Enga of New Guinea, two cultures she has studied for decades.<sup>37</sup> The Enga say, “We live suspended in a spider’s web; care must be taken not to break a single strand,” and both they and the !Kung live this message by taking care of each other—inside the circle of friends and kin. Outside it, the !Kung are indifferent and the Enga violent. Enga boys’ initiation mandates that they marry a spirit woman and deny themselves sex with real women for years, but what they are really

doing is marrying each other, so that they can face the world in fierce solidarity. Conscience becomes tantamount to in-group loyalty.

Psychologist Cristine Legare describes how, like many cultures, the Zande of North-Central Africa use witchcraft to explain random harmful events, which enables them to find the “why” while at the same time externalizing blame.<sup>38</sup> It is a widespread cultural path to a clearer conscience. And the Corsicans studied by anthropologist Sarah Davis sometimes left her feeling “utterly alienated” and—like Louise Brown—questioning her own value. These were “typically instances in which my notions of a kind of abstract individualism based on merit clashed with local notions of personhood grounded in social networks that went back generations.”<sup>39</sup> Much the same can be said of how personhood is grounded in any traditional culture.

Rabbi Emanuel Feldman, a respected Orthodox Jewish thinker, goes further: “Culture is not necessarily elevating or positive. It can also be negative. There can be a culture of guns and a culture of caring; a culture of violence and a culture of peace; a culture of love and a culture of hate.” Many Nazis and the professors who condoned them were highly “cultured” in a different sense, even as they formed a culture of hate. “Those living in a narcissistic, self-absorbed culture will find their inborn selfish instincts to be enhanced and enlarged, while those who live in a giving, tolerant, and open culture will find it easier to overcome those inborn instincts and to transcend them. . . . A culture of evil can actually obliterate conscience; a culture of benevolence can refine and enrich conscience.”<sup>40</sup> Thus, he separates culture from conscience, which he speculates may be inborn, or even eternal.

Katherine Hirschfeld makes a related, essential point: When cultures become repressive, individual voices allow conscience to survive.<sup>41</sup> She writes of poets and other artists who “can transcend the limits of culture to resonate with the universality of conscience,” and we know that an opposition leader can be the

conscience of a nation—Martin Luther King, Jr., Nelson Mandela, Aung San Suu Kyi. “These dissenting voices represent a natural effervescence of conscience that can never be fully suppressed. Some special quality of insight and imagination allows a select few to see beyond the limits of culture and recognize the essential personhood of outsiders not conven-

tionally granted human status.”

Anthropologist and psychoanalyst Robert A. Paul argues that “culture *is* conscience” and he reminds us that conscience means “knowing together.”<sup>42</sup> But what happens when the cultural conscience of one group clashes with that of another, as in the Holocaust? And how do Hirschfeld’s effervescent dissenters find the courage of their conscience when it goes directly against the one shared by the dominant culture?

#### CONCLUSION: THE MORAL ARC

People make the greatest sacrifices for kin, friends, tribe, and country when they are at war, but unfortunately this inward-turning altruism is paired with outward-turning hatred.<sup>43</sup> With “civilization,” cultural order improved, but always at the cost of what anthropologists call “structural violence”: the oppression, using force, of the many by the few.<sup>44</sup> Also, the resulting “orderly” energy was aimed at other civilizations. *We* were human, *they* were not, a process that psychoanalyst Erik Erikson called *pseudospeciation*, a concept that unfortunately remains useful today.<sup>45</sup>

Yet the definition of humanity—the people we are decent to—has widened; perhaps one day it can encompass the human race. Surprising to some, violence has declined by many measures, including both in-group (me against my kinsman) and out-group (us against them) violence.<sup>46</sup> We also inhabit the non-human world differently. In one human lifetime we have gone from imagining nature as threatening yet endlessly bountiful to knowing it as vulnerable and finite;<sup>47</sup> the earth, in a way, is like a family farm. We can only survive by relying on it, but not in the old sense of unbridled exploitation; it is limited and surprisingly small. It is all we have, and we need to take care of it for coming generations of the human family. The arc of the moral universe, as Martin Luther King, Jr., and others have said, bends toward justice—but only if we keep bending it, as conscience and culture now urge we do.<sup>48</sup>

It is not always clear what good means; some people think it is good to kill Jews or Tutsis, exile Muslims, excise girls’ genitalia, behead non-believers, exploit humanity and nature without end. Culture does not shape conscience only one way. But we are progressing toward a more inclusive sense of what is good. The conscience arising out of instinct and built upon by culture need not make us cowards. It can embolden us to build a better world.

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# *The Ethics of Globalism, Nationalism, and Patriotism*

By JONATHAN HAIDT

**T**he year 2016 may long be remembered as a global turning point, perhaps on a par with 2008 (the global financial crisis), 2001 (the 9/11 attacks), and 1989 (the fall of the Berlin wall). This is the year that the battle between globalists and nationalists became the central axis of conflict within and across many nations, especially in Europe and the United States. Consider this extraordinary thirty-two-day span of events:

**May 22:** Austria comes within one percentage point of electing Norbert Hofer as president, which would have made it the first European nation in modern times to choose a national leader from a far-right party with historical links to Nazism.

**May 26:** Donald Trump secures enough delegates to virtually guarantee that he will be the Republican nominee for president of the United States, despite his pledges to ban immigration by Muslims and to build a wall along the entire length of the Mexican border.

**June 12:** A young man who swore allegiance to ISIS murders forty-nine people at a gay nightclub in Orlando, Florida; it is the worst mass shooting in American history, and the worst terrorist attack in the United States since September 2001.

**June 16:** An old man shouting “Britain First” murders Jo Cox, a member of the British Parliament and a leading voice against Britain leaving the European Union.

**June 23:** Britain votes to leave the European Union.

Most of these events would have seemed unlikely just a few years ago. But with right-wing nationalism and ISIS-inspired terrorism on the rise before that fateful month, and with the string of horrors that have occurred after that month (including so many terrorist attacks in Europe and the Middle East, and the killings of so many unarmed black men and police officers in the United States), political violence and political upheaval have come to feel like the new normal. 2016 is an emotional turning point, and it may come to be remembered as the year that the Western world turned away from—or at least slowed down—its long march toward globalization and transnational entities such as the European Union.

What on earth is happening? And why is it happening in some of the most economically successful countries in the world? Even the Scandinavian countries, which have experienced little political violence in the last few years, are seeing surging support for right-wing parties with strongly anti-immigrant and anti-EU views.

“It would behoove us all, therefore, to understand the two sides better.”

In my previous essay for the Center for Humans and Nature, “How Capitalism Changes Conscience,” I discussed research using the World Values Survey, which shows that rising prosperity changes the values of the educated elite, particularly in capital cities and university towns.<sup>1</sup> In an essay in *The American Interest* entitled, “When and Why Nationalism Beats Globalism,” I described how this new cosmopolitan elite then acts and talks in ways that insult, alienate, and energize many of their fellow citizens, particularly those who have a psychological predisposition to authoritarianism.<sup>2</sup> The globalists strongly support open borders and high levels of immigration while (often) opposing efforts to encourage assimilation of the new arrivals. (“Integration” is usually acceptable, but “assimilation” is controversial.) The globalists generally support transnational organizations, even when these organizations require reductions in national sovereignty. The globalists frequently accuse their opponents of racism.

I drew on work by the political scientist Karen Stenner to show how these sorts of steps add up to a “normative threat”—a perceived threat to the existing moral order that activates the “authoritarian dynamic” in those who are predisposed to authoritarianism. So if you want to understand why nationalism and right-wing populism have grown so strong so quickly, you must start by looking at the actions of the globalists. In a sense, the globalists “started it.” They initiated the chain of events which have caused right-wing nationalist reactions in many countries. This is consistent with scholarship suggesting that conservative movements are usually best understood as reactions to waves of change promoted by progressives.<sup>3</sup>

In my *American Interest* essay I offered advice (from Stenner) about how the globalists can manage nationalist reactions and reduce their intensity. Here are her key recommendations:

Paradoxically, then, it would seem that we can best limit intolerance of difference by parading, talking about, and applauding our sameness...Ultimately, nothing inspires greater tolerance from the intolerant than an abundance of common and unifying beliefs, practices, rituals, institutions, and processes.<sup>4</sup>

Stenner and I were both offering advice to the globalists on how best to manage the “problem” of nationalism. But in this essay I would like to dig deeper into the moral worldviews of the two sides and take

them seriously as moral worldviews worthy of respect. The conflict between globalists and nationalists is likely to be front and center in many Western nations for the next decade or more. It will probably grind on in Europe until the European Union either achieves its goal of “ever-greater union” in a way that garners widespread popular support, or else breaks up and returns to a trading block of nation-states with lower aspirations for union. And the battle will grind on in the United States long after Donald Trump leaves the national stage, as the United States becomes a “majority minority” country sometime between 2050 and 2060.

It would behoove us all, therefore, to understand the two sides better. What do globalists want, and why? What do nationalists want, and why? The answers will differ across nations based on their differing historical, economic, and demographic trajectories. Yet if we step back far enough, we will see networks of psychological traits and philosophical commitments—recognizable across countries and centuries—that predispose some people to join one team or the other. I’ll end this essay with a discussion of patriotism, including an approach to patriotism that might be endorsed by both sides in some countries.

#### WHICH SIDE ARE YOU ON?

Please read the following two paragraphs, and note how they make you feel. Does one “speak” to you? Does one strike you as being vaguely offensive?

L	D
<i>Imagine there's no countries. It isn't hard to do. Nothing to kill or die for, and no religion too. Imagine all the people, living life in peace. You may say that I'm a dreamer, but I'm not the only one. I hope someday you'll join us, and the world will be as one.</i>	<i>It is not true that human activity can be released from all restraint. . . . Man's characteristic privilege is that the bond he accepts is not physical but moral; that is, social. He is governed not by a material environment brutally imposed on him, but by a conscience superior to his own, the superiority of which he feels.</i>

Figure 1. The LVD test

I call this the “LVD Test,” which stands for Lennon vs. Durkheim. John Lennon’s song “Imagine” is a good candidate for being the anthem of the globalists. It is progressive in that it looks forward to a utopian future. It is anti-nationalist and anti-religious. It is, in essence, *anti-parochial*. Anything that divides people into separate groups or identities is bad; removing borders and divisions is good.

Emile Durkheim was not a conservative, but as one of the founders of modern sociology he studied the forces that bound groups together and created communities in which individuals were willing to restrain

themselves and live according to rules and norms. In his master work *Suicide* (from which the excerpt on the right is taken) he described the process by which individuals come to accept the constraint of external authority. Such constraint is essential for the creation of any society or institution. It is also generally good for people, Durkheim believed. Using only the primitive data available in the 1890s, Durkheim showed that people who are more tightly bound by ties of family, religion, and local community have lower rates of suicide. But when people escape from the constraints of community they live in a world of “anomie” or normlessness, and their rate of suicide goes up.

I use the LVD test when I lecture on political psychology because it is a quick and intuitively compelling way to begin a discussion about the ideal society. Compared to where your country is now, do you want to loosen it up or tighten it up? Do you want to make it more open to the outside, or do you think it’s already too open, and is in need of stronger borders and gates? A recent cover story in *The Economist* pointed to exactly this distinction as the new divide in the rich countries. The article quoted Stephan Shakespeare, a British pollster:

We are either “drawbridge up” or “drawbridge down”. Are you someone who feels your life is being encroached upon by criminals, gypsies, spongers, asylum-seekers, Brussels bureaucrats? Do you think the bad things will all go away if we lock the doors? Or do you think it’s a big beautiful world out there, full of good people, if only we could all open our arms and embrace each other?<sup>5</sup>

That quote was written in 2005, but it could not be more timely in Europe or the United States today. The trends, fears, and alliances that brought us to the global turning point of 2016 were a long time in the making.

#### WHAT IS HUMAN NATURE?

The drawbridge quote points us to what is arguably the fundamental cause of the division between globalists and nationalists: their underlying theories of human nature. If you really believe that the world is “full of good people,” then why not lower the drawbridge and leave it down? But if you have a darker view of human nature and are inclined to see more threats in the world, then you’ll want to retain full control of the drawbridge, lower it selectively, and check people’s papers before you let them in. (The drawbridge

metaphor works particularly well for Britain as it considers its relationship with the European Union).

In his book *A Conflict of Visions*, the economist Thomas Sowell offers us a detailed and profound analysis of these two views of human nature.<sup>6</sup> He calls them the “unconstrained vision” and the “constrained vision.” The key is whether you think that people *need* constraints to behave well, or whether constraints *cause* people to behave badly. Here are my paraphrases of Sowell, crafted to complement the Lennon and Durkheim quotes above.

Unconstrained Vision	Constrained Vision
Human nature is malleable and can be improved—perhaps even perfected—if social conditions are improved. Anything is possible, if the artificial constraints placed on human beings can be removed. We must therefore free people from the petty tribal loyalties that cause mistrust and war.	Human beings need external structures or constraints in order to behave well, cooperate, and thrive. These external constraints include laws, institutions, customs, traditions, nations, and religions. These constraints are built up slowly and organically in local communities, but they can be destroyed quickly by radical reformers who don’t understand their value.

Figure 2. The two visions of human nature, from Thomas Sowell

Sowell explains his use of the term “vision” as a “pre-analytic cognitive act.” A vision is “what we sense or feel *before* we have constructed any systematic reasoning that could be called a theory.”<sup>7</sup> Sowell’s use of a visual metaphor makes good psychological sense. When we open our eyes, we see the world effortlessly, without any awareness of the computation and guesswork that our visual system was doing behind the scenes. Reality presents itself to us as a fact, not an interpretation. Therefore, if someone else sees the physical world differently, it can be quite upsetting, as we learned in the Internet craze of 2015 when the world debated whether a dress in a photograph was black and blue or white and gold.<sup>8</sup>

Sowell’s point is that social and political perception is like visual perception: social reality presents itself to us as fact, not as interpretation. People who hold the unconstrained vision believe that people are fundamentally good, and they think it is obvious that all have the same potential to succeed. Any inequality we find in the world is therefore obviously caused by institutionally entrenched racism, sexism, or some other form of injustice. This is why the unconstrained vision is usually held by people on the left; it underpins and gives rise to the progressive impulse to question, challenge, and replace existing institutions in the name of “social justice.”

But people who hold the constrained vision of hu-

man nature see things differently. They start from the presupposition that people are deeply flawed, egocentric, irrational, and prone to violence. They see peace and civil order as hard-won accomplishments; barbarians and chaos are always waiting to crash through the gates. Furthermore, it seems obvious to them that people are different—some are smarter, stronger, or harder working than others, and therefore the mere presence of inequality in the world is not proof of injustice. This is why the constrained vision is usually held by people on the right; it underpins and gives rise to the conservative impulse to maintain the status quo, even when that status quo contains inequalities, and even when the person him or herself seems (to a progressive) to be a victim of that status quo.

Edmund Burke's *Reflections on the Revolution in France* describes the constrained view succinctly:

Society requires not only that the passions of individuals should be subjected, but that even in the mass and body, as well as in the individuals, the inclinations of men should frequently be thwarted, their will controlled, and their passions brought into subjection...In this sense the restraints on men, as well as their liberties, are to be reckoned among their rights.<sup>9</sup>

#### IS PAROCHIALISM GOOD OR BAD?

Globalists see nationalists as hopelessly parochial. The word “parochial” means, literally, concerned with matters of the local parish, rather than the larger world. But as it is commonly used, the word is an insult. OxfordDictionaries.com offers these synonyms: narrow-minded, illiberal, intolerant, conservative. Indeed, English voters who favored Brexit were often mocked as “Little Englanders”—racist xenophobes who wanted to raise the drawbridge and turn their backs on the world, even if that would lead to breaking up Great Britain by losing Scotland and Northern Ireland. I do not think that most nationalists, or most people who favored Brexit, can be fairly called “racist.” I think that term is thrown around far too casually and used too superficially to describe anyone who

“Social reality presents itself to us as fact, not as interpretation.

disagrees with globalist policies on immigration. It is true, however, that neo-Nazis and others who focus on pre-

servicing the genes, blood, or race of the host country, rather than its culture and values, are always nationalists, never globalists. There is an ugly fringe on the far

right of most nationalist parties, and the Internet has let them become much more visible in recent years.

But this does not mean that parochialism itself is bad, and some philosophers who hold the constrained view of human nature have offered a principled defense of it. Burke, also in his *Reflections*, noted the moral benefits of local attachments and the moral depravity of those who shun them:

To be attached to the subdivision, to love the little platoon we belong to in society, is the first principle (the germ as it were) of public affections. It is the first link in the series by which we proceed towards a love to our country, and to mankind. The interest of that portion of social arrangement is a trust in the hands of all those who compose it; and as none but bad men would justify it in abuse, none but traitors would barter it away for their own personal advantage.<sup>10</sup>

Burke noted that “turbulent, discontented men of quality” who are “puffed up with personal pride and arrogance, generally despise their own order.”

Adam Smith offered a similar argument that parochialism and local commitments more generally are good things because they cause people to apply themselves in ways that can do the most good:

That wisdom which contrived the system of human affections...seems to have judged that the interest of the great society of mankind would be best promoted by directing the principal attention of each individual to that particular portion of it, which was most within the sphere both of his abilities and of his understanding.<sup>11</sup>

Burke and Smith are each offering a moral justification for parochialism—for caring more about those close to you than those far away. Burke and Smith doubted that people freed from local commitments and parochial identities would work as hard or care as much about distant others. Indeed, the repeated finding that conservatives in the United States give a larger percentage of their money and time to charity than do more cosmopolitan progressives seems to support their speculation. Most of the charity effect seems to be due to the greater religiosity of conservatives, rather than to conservative ideology per se; nonetheless, the fact that the active ingredient is involvement in local religious communities (whether right-leaning or left-leaning) seems to bear out Burke's conjecture that “little platoons,” whatever their other effects, pull us out of ourselves and toward others.<sup>12</sup>

## IS PATRIOTISM GOOD OR BAD?

Given their fundamental disagreements over human nature and the moral value of parochialism, it is inevitable that Globalists and Nationalists would disagree about the moral value of patriotism.

Most definitions of patriotism refer to positive feelings about one's country (love, devotion, pride) and a sense of duty or obligation to support or protect it. Patriotism is therefore a form of parochialism—it is a commitment to a local and circumscribed group instead of adopting a universal or “citizen of the world” identity. This is why Globalists are often critical of patriotism, and why they sometimes say things about patriotism, or about their country, that Nationalists perceive to be disloyal at best, and treasonous at worst.

When a country is attacked by a foreign enemy, there is almost always a surge of patriotism. People have a strong urge to come together, and many of them reach for the flag. Americans saw this happen after the Japanese attack on Pearl Harbor, and again after the Al Qaeda attacks of September 11, 2001. Britain saw this happen at the start of both World Wars, and again after the Al Qaeda attacks on the London transport system in 2005. In the wake of those terrorist attacks, British intellectuals debated whether some form of patriotism was compatible with progressivism.

George Monbiot, a leading thinker of the British left, took a strong position against the moral value of patriotism. In an essay titled “The New Chauvinism,” Monbiot rejected what he called “an emerging national consensus,” which included some left-of-center writers, that “what we need in Britain is a renewed sense of patriotism.”<sup>13</sup> Monbiot granted that a widely shared sense of patriotism might make British citizens (including Muslim citizens) less likely to attack each other, but he made the good counter-point that patriotism makes the state more inclined to attack other countries, for it knows it is likely to command the support of its people. If patriotism were not such a powerful force in the US, could Bush have invaded Iraq?

Monbiot then asserted that “internationalists” (i.e., globalists) should use a strictly utilitarian framework to resolve moral questions because internationalists believe that all lives are of equal worth. He then argued that from this utilitarian perspective, patriotism is almost always unethical:

When confronted with a conflict between the interests of your country and those of another, patriotism, by definition, demands that you should choose those of your own. Inter-

nationalism, by contrast, means choosing the option which delivers most good or least harm to people, regardless of where they live. It tells us that someone living in Kinshasa is of no less worth than someone living in Kensington, and that a policy which favours the interests of 100 British people at the expense of 101 Congolese is one we should not pursue. Patriotism, if it means anything, tells us we should favour the interests of the 100 British people. How do you reconcile this choice with liberalism? How, for that matter, do you distinguish it from racism?

This is the kind of statement that turns many people away from Globalism. Most people believe that that their own government should place their welfare above that of foreigners, just as most people believe that their own spouse, mother, friend, boss, or teammate should care more about them than about a stranger far away. The willingness to erase local loyalties and obligations in order to maximize overall utility makes sense in John Lennon's imaginary world, but it is sacrilege from a Durkheimian perspective in which

“States do have special duties to care for their own citizens, even as they attempt to act humanely toward others.”

people have distinctive duties tied to their particular roles and relationships. And if Burke and Smith are correct, then universalism won't even deliver the benefits

in reality that it promises in the abstract.

To be a nationalist, in America or in Europe, is to be frequently lectured to and called a rube by the globalist elite. The globalists assert things to be obvious and indisputable facts (e.g., “diversity is our strength”) that seem to nationalists to be obvious and indisputable falsehoods. The globalists explain away the nationalists' policy preferences as resulting both from lack of education and from selfishness (i.e., not wanting immigrants taking scarce resources from the National Health Service). The globalists assemble panels of economists and other academics, and sometimes even movie stars, to argue their case. This is why Brexit leader Michael Gove said, “I think people in this country have had enough of experts.” This is why Donald Trump's attacks on “political correctness” have won him the gratitude of so many working-class and rural white voters. Even if you are a globalist, can you see why nationalists are often full of seething resentment? Can you see why people who feel a deep emotional attachment to their country and want to preserve its

sovereignty and culture are angry at people who tell them that they are wrong to do so?

So let us take another look at patriotism. Are there forms that might be acceptable to both globalists and to nationalists?

#### PATRIOTISM RECONSIDERED

As the conflict between globalists and nationalists has moved to center stage in many countries in recent months, several commentators have offered insightful new thinking about patriotism and nationalism. The key question all have addressed is: how can people show love and loyalty to their nation in ways that bring benefits to their nation while minimizing the harm done both to immigrants within the country and to citizens of other countries?

The economist Larry Summers responded to the Brexit vote with an article titled: “Voters Deserve Responsible Nationalism not Reflex Globalism.”<sup>14</sup> As an economist who is firmly convinced of the value of international trade, he acknowledged that big trade agreements, such as NAFTA, have often failed to live up to the hype that had been used to sell them to voters. He noted that “the willingness of people to be intimidated by experts into supporting cosmopolitan outcomes appears for the moment to have been exhausted.” He urged Western nations to adopt a new approach that directly rejects Monbiot’s universalism:

A new approach has to start from the idea that the basic responsibility of government is to maximise the welfare of citizens, not to pursue some abstract concept of the global good... What is needed is a responsible nationalism—an approach where it is understood that countries are expected to pursue their citizens’ economic welfare as a primary objective but where their ability to harm the interests of citizens elsewhere is circumscribed. International agreements would be judged not by how much is harmonised or by how many barriers are torn down but whether citizens are empowered.

Examining immigration rather than trade, the philosopher David Miller just published a book with the timely title *Strangers in Our Midst*.<sup>15</sup> Like Summers, he concludes that states do have special duties to care for their own citizens, even as they attempt to act humanely toward others. In the end he recommends that the immigration policies of liberal democracies be guided by four values: weak cosmopolitan-

ism, national self-determination, fairness, and social integration. By “weak cosmopolitanism” he means a broadly humanitarian orientation in which “we must always consider the effects of our actions on all those who will bear the consequences, no matter who they are or whether they are in any way connected to us,” yet at the same time, he believes we are not obligated to treat the claims and interests of non-citizens as equal to those of citizens. Miller specifically rejects as overly demanding and unrealistic a “strong cosmopolitanism” in which all human beings have equal claim on each nation’s care, protection, and money.

And finally, *New York Times* columnist David Brooks wrote a column about the Globalist-Nationalist debate titled “We Take Care of Our Own.”<sup>16</sup> He summarized my *American Interest* essay and then improved upon it by showing how America in particular can easily formulate a patriotism acceptable to both sides. He notes that America, unlike most other countries, was founded as a universalist nation. It has long been a source of pride that America takes people from many countries and unites them behind American ideals. Like Stenner, Brooks criticizes “the forces of multiculturalism” for damaging America’s longstanding commitment to cultural union and assimilation. This damage left an opening, he says, for Donald Trump’s unwelcoming nationalism, which has more in common with the kind of “European blood and soil” nationalism that is often overtly racist.

Brooks concludes that:

The way out of this debate is not to go nationalist or globalist. It’s to return to American nationalism—espoused by people like Walt Whitman—which combines an inclusive definition of who is Our Own with a fervent commitment to assimilate and Take Care of them.

Brooks’ essay was published on July 15, 2016, six days before Donald Trump gave his acceptance speech at the Republican National Convention in which he painted a dark vision of America going to hell in a dangerous world. Trump’s nationalism was all about “us” versus “them” and how we can kick them out or otherwise defeat them. It was the opposite of Brooks’ recommendation; it was what Summers would call “irresponsible nationalism.”

The Democrats, in contrast, in their convention, did exactly what Brooks urged. It is to be expected that the Democrats would feature speakers from all races, each waving the American flag symbolically or literally; that’s normal convention showmanship. But

for many viewers, the emotional highlight of the week occurred on Thursday, July 28, 2016, just before Hillary Clinton was introduced by her daughter, Chelsea. The speaker before Chelsea was Khizr Khan, an immigrant from Pakistan whose son Humayun joined the U.S. Army and fought in Iraq. Humayun died a hero's death, having stepped forward to intercept an approaching car loaded with explosives. He saved the soldiers under his command and possibly many more on the base they were guarding. His father addressed the convention and the country:

Tonight we are honored to stand here as parents of Captain Humayun Khan and as patriotic American Muslims—with undivided loyalty to our country. Like many immigrants, we came to this country empty-handed. We believed in American democracy; that with hard work and goodness of this country, we could share in and contribute to its blessings.

Then, directly addressing his remarks to Donald Trump, who had said he would try to restrict Muslim immigration to America:

Let me ask you [Mr. Trump]: have you even read the United States constitution? I will gladly lend you my copy. [He pulls out his copy from his jacket pocket.] In this document, look for the words “liberty” and “equal protection of law.” Have you ever been to Arlington Cemetery? Go look at the graves of brave patriots who died defending the United States of America. You will see all faiths, genders, and ethnicities. You have sacrificed nothing and no one.<sup>17</sup>

Khan's embrace of America, its values, and its constitution was a stirring example of a kind of patriotism that can unite most nationalists and most globalists. It celebrates “us” without denigrating “them.” It is welcoming and assimilationist. This approach may not work in countries that define themselves by the history of a single ethnic group. But with some tinkering it should work in Britain (which can take credit for having pioneered so many liberal institutions), in France (whose revolution was one of ideas and rights), and in other countries that have long traditions of openness, or of taking in refugees.

Diversity is difficult and often divisive. It's not shades of skin color that divide; it is the perception that people in other groups have different values, and that they behave in ways that violate our moral worldview. Among the most important divisions within many Western nations is now the division between

globalists and nationalists. The two sides have many real differences that must be worked out by a long and difficult political process. But political disagreements may become more tractable if both sides can understand each other a little better, and if both sides share a love of their country that is both passionate and—to varying degrees, perhaps—welcoming.

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# *From Exhibit to Classroom: Transitioning Aquariums and Zoos for the Twenty- First Century*

By JEANNE GANG

## INTRODUCTION

People young and old are captivated by Calypso, the Green Sea Turtle who lives at the National Aquarium. Whether swimming in the crystal-blue waters of the Blacktip Reef exhibit, nibbling on romaine lettuce and the occasional squid, or peeking her head out just above the glistening surface, the five-hundred-pound, three-flippered Calypso is a sight to behold. The giant turtle was rescued by the Riverhead Foundation for Marine Research and Preservation in 2000, after becoming cold-stunned and stranded in the Long Island Sound. At the time of her rescue, Calypso weighed only six pounds and had a badly infected front flipper that was later amputated. Due to federal regulations governing the rescue, rehabilitation, and release of endangered marine life, the Riverhead Foundation could not return Calypso to her habitat. Instead, she came to live at the National Aquarium, where she has been delighting visitors ever since as one of the Aquarium's most popular attractions.

By providing Calypso with a clean habitat, ample food, and medical care, the National Aquarium has likely spared her from the fate of many sea turtles in the wild who face mounting challenges including poaching, bycatch, disease, and habitat loss.<sup>1</sup> In partnering with organizations like the Riverhead Foundation and the North Carolina Aquarium, the National Aquarium is also helping to rescue, rehabilitate, and release a variety of species of sea turtles who can be

returned to their habitats. And through various media and educational programs, the Aquarium is working to communicate the crucial message that it is we humans and our harmful activities that pose the greatest threat to these animals.

But while the experience of seeing Calypso in the Blacktip Reef exhibit at the National Aquarium is designed to motivate visitors to take personal and political action toward conservation, studies show that it doesn't.<sup>2</sup> According to the report "Do Zoos and Aquariums Promote Attitude Change in Visitors? A Critical Evaluation of the American Zoo and Aquarium Study," by Lisa Marino, et al., "there remains no compelling evidence for the claim that zoos and aquariums promote attitude change, education, or interest in conservation in visitors."<sup>3</sup> How can these well-meaning organizations who do so much for animal rehabilitation, like saving Calypso, make progress on conservation action? Is it possible these institutions have a business model that is preventing them from succeeding in their missions—and, if it is, how can they bring about change and stay financially viable?

## TRANSITIONING MODELS: FROM ENTERTAINMENT TOWARD EDUCATION

Today's aquariums and zoos have come a long way from their early days as aristocratic menageries, those captive collections of "exotic" animals that were held by rulers as a show of power and for personal entertainment,<sup>4</sup> developing into organizations with science-based missions by the turn of the nineteenth century. Having adopting conservation-based missions

toward the end of the twentieth century, today's aquariums and zoos—and the people who lead and work for them—have a far more humane attitude toward animals than any of their predecessors. This evolving ethic reflects larger social and cultural changes informed by emerging science, policy, and technology. For instance, scientists' developing understanding of the sentience, intelligence, and consciousness of a range of species (humans included) has led to significant changes in the practice and regulation of aquariums and zoos.<sup>5</sup> These include instituting higher standards of care and display, adopting conservation-oriented missions, discontinuing breeding programs and performances, and, most recently, initiating efforts to retire large mammals to sanctuaries.<sup>6</sup>

The National Aquarium, for example, has recently announced that it will no longer hold dolphins in captivity, and that it plans

“Today's aquariums and zoos have outgrown the entertainment model. that it plans to establish a

sanctuary for the eight dolphins currently in its care by 2020.<sup>7</sup> The Monterey Bay Aquarium has long enjoyed popularity, prosperity, and support for what others have termed its “captive-free model,” as well as efforts to educate the public about ocean health, sustainable aquaculture, and research and conservation activities within its community. Even the Georgia Aquarium, an organization that until recently contracted with Russia to capture beluga whales that they intended to exhibit, has announced that it will “no longer take dolphins or whales caught in the wild, a dramatic policy reversal.”<sup>8</sup> Yet, while we see these organizations continuing to evolve, today's aquariums and zoos have nevertheless maintained a model in which their viability is dependent upon the entertainment value of displaying animals to visitors.

Many aquariums were in fact established specifically for this purpose—conceived as economic anchors that could help attract investment in their cities' ailing downtowns.<sup>9</sup> Building aquariums was about reinventing these former waterfronts of industrial production into playgrounds of shopping, leisure, and entertainment. Zoos were built or significantly renovated for the same reason; to produce an entertainment destination that could be an economic driver. And while many of these same organizations may have explicit conservation missions, partner with scientific institutions, and consider themselves educational institutions, most, if not all, of them continue to brand themselves as enter-

tainment venues.<sup>10</sup>

To be sure, aquariums and zoos do share educational information with their visitors. They do this by accommodating large contingencies of visiting school groups, providing informational placards and signage accompanying exhibits, training staff members and volunteers to engage visitors, telling stories on their websites, and offering on- and off-site programs for people of all ages. But while these good intentions to educate have built brand awareness about a particular aquarium or zoo, they are not measurably changing conservation behavior in visitors.<sup>11</sup> Perhaps even more significantly, because entertainment remains a primary concern, crucial public education issues like climate change and habitat loss as the result of human practices—and even the foundational theory of evolution—are either diluted or not communicated at all.<sup>12</sup> The terms climate change and global warming are still noticeably absent from many of today's aquariums and zoos, especially in conservative areas of the country, while logos for some of the least environmentally friendly corporations are conspicuously present,<sup>13</sup> despite scientific consensus that the world is getting warmer due to human activities. This kind of information—that we humans are not outside of or dominant over nature, but rather interconnected and inseparable from all life, and that our actions resonate globally—could be communicated to visitors in a way that encourages action. It becomes far more difficult, however, when visitors are primed to expect entertainment and spectacle in exchange for an often steep monetary investment and then encouraged to consume. “You don't want [visitors] walking away saying, ‘I paid to get in, I bought my kid a hot dog, I just want to show my kid a fish—and you are making me feel bad about climate change,’” said a former AZA official, speaking to this idea in 2012.<sup>14</sup> Instead, many aquariums and zoos seek merely to “inspire” visitors—and to maintain their financial solvency through the price of admission, otherwise known as gate revenue.

It is true that these organizations do foster interactions between people and animals, often exposing children, especially in urban areas, to animals and habitats—to “nature”—they might never see otherwise. These experiences can make people feel good or in awe or inspired, and sometimes they may even motivate a child to become more interested in science or to recycle plastic, although unfortunately this remains unverified outside of anecdote. But when a child sees an animal that might not have the same backstory as

the rescued three-flippered Calypso, even if she comes away from the experience exuberant and in awe, is she not also being taught to normalize the idea that animals live in swimming pools and exist to entertain us and that they are separate and subservient to humans? We should be talking about the potential disconnect between implicit and explicit messages and how these might be undermining the genuine efforts on the part of these organizations to educate and motivate their visitors

With their stated conservation missions, today's aquariums and zoos have outgrown the entertainment model, and their reliance on gate admissions is holding them back from becoming premier conservation and education organizations. The proliferation of concessions and gift shops that this entertainment model encourages, for example, often promotes the very materials threatening the health and well-being of animals and the environment. The plastics that create carbon pollution, choke poverty-stricken areas, and blight our ocean, often end up inside the intestines of animals like Green Sea Turtles.

But what if aquariums and zoos could re-establish their relationship to visitors not as entertainers or vendors but as true educators?

#### BECOMING TRUE EDUCATORS: THE FUTURE IS SCHOOL

Luckily, zoos and aquariums already have the resources and opportunities at their disposal to take this next step in their evolution. If they truly want to be conservation organizations—and become organizations that make crucial contributions to the world by educating people about the challenges facing animals and their habitats and motivating them to take action—they have to enhance their current educational focus and have more direct positive impact on their communities. Because these organizations are already recognized as civic institutions within their cities, they are uniquely positioned to become a new kind of civic asset. They could become schools that offer specialized, experiential science career training and technical education programs. By co-locating and co-operating schools on site at aquariums and zoos, these organizations can use their facilities, resources, and strategic urban locations to educate and train generations of students to become scientists, biologists, climatologists, and environmental stewards. Fully embracing their educational potential will not only allow aquariums and zoos to thrive as organizations and diversify their funding base, but also give them agency to create

better communities and a better world.

With an estimated 97,000 elementary and secondary schools across the United States serving nearly 50 million students, schools have an outsized influence on the education, health, and welfare of youth, their families, and their neighborhoods. And many city schools are currently grappling with a number of major challenges, including population shifts that affect enrollment; declining budgets; increasing debt and pension

obligations; and the need to provide social services beyond their core educational mission.<sup>15</sup> Meanwhile, they continue to prepare students to participate in society and a global economy that requires fundamental skills and rewards exceptional ones. The latter is especially true for the fields of math and science, in which U.S. students are catching up but still lag behind their international counterparts.<sup>16</sup>

Schools at aquariums and zoos would be specially equipped to address these challenges and empower American students with the types of knowledge and skills that will become increasingly critical for the future of our planet. To devise such schools would require curriculum development, entrepreneurial thinking, and financial support, as well as strong collaboration across institutional boundaries—things that aquariums and zoos already excel at—but it would also bring multiple benefits. These organizations are home to unique animals, expert knowledge, and advanced technical facilities—all of which could undergird a new kind of school with the essential mission to instill in people, beginning at a very young age, a holistic understanding of the relationship between humans and the health of the planet. Hands-on learning becomes applicable and possible in all subjects of the curriculum, providing students with much-needed skills and knowledge in the STEM fields. Innovative school programs could lead to certification in marine science technology, comparative biology, or sustainable agriculture—with jobs to follow. Specifically, students would gain expertise in fields that would benefit the future health of our planet—for instance, sustainable practices of farming and fishing.

If aquariums and zoos transformed into spaces of learning with active classrooms, learning labs, maker spaces, and hands-on studies of animals and environ-

ments, they could foster new sustainable industries, helping to create jobs and drive economies in ways that prioritize the natural environment. Public investment in aquariums and zoos would become an investment in our youth, helping to create the next generation of capable environmental advocates, and in the capacity and equity of our educational system, in which it is estimated that we are “underinvesting by a staggering \$46 billion annually”<sup>17</sup> while “needs are mounting as school conditions decline over time and funding to adequately maintain and renew school facilities is inequitably distributed across communities with vastly differing wealth and resources.”<sup>18</sup>

#### PRECEDENTS FOR IMPLEMENTATION: THE FUTURE IS NOW

Successful collaborations between schools and aquariums already exist today and can serve as precedents for pushing this education model further. The Urban Assembly New York City Harbor School, for example, is a public high school serving 432 young adults in grades 9 through 12. The Harbor School was founded in 2003 as a collaboration between the non-profit organizations Urban Assembly and Waterkeeper Alliance and the privately owned South Street Seaport Museum. Prioritizing student-centered learning and family engagement, the School is open to all students in New York City, with no screening process other than expressed interest on the part of the student. Their graduation rate is an impressive ninety-seven percent, soaring over the city’s average rate of seventy-seven percent and well above the national average of eighty-two percent.<sup>19</sup>

The Harbor School divides its curriculum between traditional coursework (English, social studies, mathematics, science, foreign language, art, physical education, and health) and career and technical education coursework. As freshmen, students learn about the New York Harbor and gain or strengthen skills like swimming (nearly half of incoming freshman learn to swim at Harbor School), rowing, and sailing. As sophomores, students select one of six programs of study, having identified and solidified that interest during their freshman year, and participate in work-based learning experiences that prepare them for careers in aquaculture, marine biology research, marine service technology, ocean engineering, scientific diving, and vessel operations, ultimately achieving industry certification. Many of these students, despite living in New York City surrounded by water, arrive at the Harbor School with little or no exposure to boats or water.

While the school’s diving program takes place in the open harbor waters when feasible, generally between May and October, during the colder months it partners with the New York Aquarium, allowing students to practice their skills inside the Aquarium’s tanks. During their dives, students join adult volunteers and Aquarium staff in maintaining the tanks and, in addition to keeping their skills fresh, they also earn wages and gain valuable work experience.

Perhaps most significantly, the Harbor School’s Billion Oyster Project offers a precedent for the kind of curriculum that has the potential to reshape our educational and environmental landscapes. Students have been growing oysters in the New York Harbor for the last six years, learning to “SCUBA dive safely, raise oyster larvae, operate and maintain vessels, build and operate commercial-scaled oyster nurseries, design underwater monitoring equipment and conduct long-term authentic research projects all in the murky, contaminated, fast-moving waters of one of the busiest ports in the country.”<sup>20</sup> The Harbor School students’ efforts have expanded to include thirty-six other public schools, and altogether the effort has restored over 11 million oysters to their native waters. The project incorporates education, job training, and research into a harbor-wide oyster restoration project.

“Our long-term goal,” says Harbor School aquaculture teacher Peter Malinowski, “is, over the next 50 years, to put a billion live oysters back in the water. A billion oysters would filter the standing volume of New York Harbor, which is about 74 billion gallons, once every three days. It’s our hope that putting oysters back in the water will clean the water and provide the necessary foraging and nursery habitat for the different fish species that spawn here and return the Hudson River back to what it used to be like. And in the process educate the next generation of activists and scientists who will go on to become stewards of their waterways.”<sup>21</sup>

Another precedent for this kind of successful partnership is the Dr. Theodore T. Alexander, Jr., Science Center School in South Los Angeles. The Science Center School is a dual-language K-5 public elementary school with an enriched math- and science-focused curriculum. It is located on site at the California Science Center, a museum of science and technology and home to the Space Shuttle Endeavour. Currently serving around 650 students primarily from the predominantly Latino Exposition Park neighborhood that surrounds it, the School was founded as part of

the Science Center’s twenty-five-year master plan to alleviate overcrowding at other local schools and increase learning opportunities for students, especially those who are identified as academically low achieving. The Science Center School’s curriculum is developed by both teachers and students. Twenty percent of instructional time is spent teaching, while 80 percent is reserved for child collaboration and lab time. In addition to having direct access to the cutting-edge facilities and habitat exhibits at the California Science Center, the School’s partnerships with organizations like the Resource Conservation District of the Santa Monica Mountains allow students to participate in conservation work. This year, the School’s third graders spent two days working to improve their native ecosystem, helping the organization remove non-native red swamp crayfish from Topanga Creek, where they have caused a severe shift in ecosystem dynamics. The School also partners with the nearby University of Southern California, bringing USC undergraduate and graduate degree students to the classroom to test curricula like the SunSmart program, which engages students in hands-on activities that teach them about ultraviolet rays and sun safety. With a grant from the National Institutes of Health, the SunSmart curriculum has become a full-fledged science experiment for the young students, who hypothesize about different levels of sun exposure around their playground, measure UV rays using wearable devices, and then graph their results.<sup>22</sup>

Unlike the majority of aquariums and zoos that avoid mentioning climate change, these schools are explicitly talking about and taking on critical climate-related issues, empowering their students with the tools to take action and to have real impact in their communities and beyond. Aquariums and zoos throughout the world can look to these precedents as they begin to transition to a more education-focused model, building on the incredible teaching tools they already have at their disposal: their facilities, experts, and collections.

#### INITIATING THE CHANGE

Many aquariums and zoos already have partnerships with schools, businesses, foundations, and gov-

ernment entities in their communities and regions that they can develop further by including a more sustained educational focus. By working with their local educational systems to identify where schools are closing or where there is a specific educational need or inequity, aquariums and zoos can develop and make accessible science- and conservation-based programs and training, or even entire curricula, to meet the needs of students in affected communities. Working with their city, state, and federal governments and both public and private foundations, aquariums and zoos can potentially tap into resources allocated for education, green infrastructure, and public space improvements. Aquariums and zoos can begin this process by assessing the programs they already offer and increasing their public visibility and accessibility; establishing deeper partnerships with existing urban schools, colleges, and universities; and offering their facilities as sites where students and young adults can work directly with the animals, learning skills applicable to advanced studies and jobs in science and conservation.

Having developed an ecosystem of partners in the public and private sectors, aquariums and zoos could eventually adapt or rebuild their facilities to reflect this new hybrid asset for education and conservation. By becoming carbon neutral or achieving net positive energy through a creative retrofit, these facilities could simultaneously function as educational tools and tangible manifestations of a conservation ethic, modeling for their communities and other organizations around the world the actions that are necessary to conserve our environment—foremost among them, mitigating carbon pollution to reduce the major threat to the health and well-being of all life on earth.

#### THE NEXT STEP FORWARD

As aquariums and zoos transition toward full-fledged conservation education centers, it will become necessary to phase out the entertainment model while phasing in a new kind of business model, leveraging their organizations’ resources to identify strategies for diversification. This could include developing new funding alliances, licensing new technology or curriculum developed by staff and researchers, or even establishing revenue-based contracts with employers who will benefit from better trained and certified employees. In defining a more explicit concentration on education, aquariums and zoos may even find new mission-aligned donors and revenue streams. A new

model for these organizations may at first seem challenging, but its potential is profound—not only providing a future pathway for the continued evolution of aquariums and zoos but simultaneously supporting the educational, ecological, and socio-economic health of their neighborhoods and cities.

There are also school systems that are limited ideologically and politically from addressing issues like climate change and evolution—yet another barrier to the kind of conservation education that is needed to change behaviors and develop people into environmental stewards. But the idea of attending a school that is educational, fun, and engaging while offering so much potential for future opportunity would possibly help parents overcome these barriers. Still, efforts to link aquariums and zoos with schools will need to be supported by partners in local government and by communities of citizens bound by their belief that social, educational, and attitudinal change is both needed and possible. Together, aquariums, zoos, schools, governments, and citizens can build a new culture of care and conservation permeating all aspects of society.

## A CONCLUSION

It is more than apparent that the current conservation education measures taken by aquariums and zoos are earnest attempts, but they are not profound enough to match the urgency of climate change and the destruction of habitat that threatens the survival of all animals, including humans. Moreover, if aquariums and zoos fail to continue their evolution as true conservation organizations and instead remain reliant on their entertainment model, hedging their viability on spectacle and consumption, they may find themselves on the endangered species list.

Data continue to show that today's youth have different attitudes and behaviors than previous generations, including a low tolerance for seeing certain animals in captivity.<sup>23</sup> While attendance at aquariums and zoos is generally declining, attendance at organizations that have proven themselves dedicated to evolving the current model is holding strong. This is especially true for those organizations that are viewed as more credible with regard to their missions, i.e., aquariums and zoos that do not hold large mammals and who have innovated in areas of rescue and rehabilitation. These model institutions are doing better financially because “reputational efficiencies noticeably predict revenue efficiencies.” In other words, “being

good at your [conservation] mission is good business [for aquariums and zoos].”<sup>24</sup> Now is the time to rethink the widespread entertainment model and reinvent zoos and aquariums as conservation education centers: places where charismatic animals like Calypso, the rescued turtle, will continue to inspire us, but also places where our investments in learning, personal growth, innovation, and ideas will ensure an inspiring ecological future for us all.

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# Twenty-First Century Zoos and Aquariums: Ambassadors for Nature

By SYLVIA A. EARLE

The planet's menagerie has become like shards of broken glass; we're grinding the shards smaller and smaller...Anyone can read about how much we are losing. All the animals parents paint on nursery room walls, all the creatures depicted in paintings of Noah's ark, are actually in mortal trouble now. Their flood is us.

— Carl Safina, *Beyond Words: What Animals Think And Feel*

"What is the best aquarium in the world?" a little girl asked me, as she looked into the eyes of Sydney, the giant grouper from Australia living alone in a large tank in San Francisco's Steinhart Aquarium.

"That's an easy question to answer," I said. "It is the ocean—the planet's big aquarium, all 321 million cubic miles of it. It is where 97 percent of earth's water is, and—no surprise—it is home for most of the life in the universe, as far as we know."

"And the best zoo?"

"It is all of the living world, land, sky and sea together, humankind very much included. We share space with millions of other creatures who live with us on earth. It's a tiny blue speck in the universe, but it is home for all people, everywhere, and all the fish, frogs, birds, bugs, trees, moss, and every other living thing. We need them to keep the planet healthy, and

now they need us to take care of them. We're all in this together."

"Oh," the girl said, looking back at the fish. "Does he know?"

## WHY KNOWING MATTERS

Actually, until recently, even the smartest people on earth did not know how dependent every living thing, including all humans, are on one another as elements of the natural systems that have shaped the world over billions of years. Technologies that did not exist a century ago have helped solve mysteries about when and how earth was formed, when life first appeared, about when, how, and where humankind fits in, and what shapes the grand earth processes that continue to make this planet suitable for life in an otherwise inhospitable universe.

Children in the twenty-first century are the beneficiaries of knowledge that their predecessors not only did not but could not know about the earth and the universe beyond, and why all people everywhere (children especially included) have a vested interest in doing whatever it takes to maintain the natural systems that shape the planet in ways that favor our existence.

Ten thousand years ago, when all of the people in the world were fewer than the population of a medium-sized city today, it was easy to understand how people and nature are connected, and to see how our existence is a part of, not apart from, the rest of life on earth. Food, shelter, clothing, and everything else required for life were obviously derived from the all-encompassing wilderness otherwise known as "nature."

But with seven billion people, largely concentrated

in densely packed cities where there is little chance of seeing stars by night or songbirds by day, where food comes packaged in markets and water is delivered in pipes, many people have lost touch with the reality of what keeps us alive. Nothing has changed concerning our absolute reliance on nature, the living planet that underpins earth's biogeochemical cycles—a code word for “life-support system.” But those systems have undergone unprecedented decline, owing to pressures human activities impose.

Headlines in recent years are filled with alarming news: global warming, deadly diseases, rampant poverty, dreadful conflicts, the swift decline of pristine coral reefs, rainforests, and deserts and other ancient ecosystems as well as a dishearteningly long list of creatures from bats to bees, whales to water bugs, that may not exist in another few decades.

Yet as the twenty-first century unfolds, some would say that humankind has never before enjoyed greater prosperity. Population has grown from about seven million people ten thousand years ago to a billion in 1800, followed by an unprecedented seven-fold increase in two centuries. Globally, people are, in general, living longer, and are in better health with greater access to knowledge and opportunities for a good life than their predecessors. Sadly, the natural living systems that have fueled the advance of human civilization have diminished in direct proportion not only to our increasing numbers, but also owing to the application of technologies that make it possible to unravel in decades natural systems that have taken millions—sometimes hundreds of millions—of years to form. Many arrows point to our arrival at precarious “tipping points” that can be stabilized—or not—depending on actions taken within the next decade. Never before have we so clearly understood what our options are; never again will there be a better opportunity to act on what we know to be a precarious—but opportune—moment in time.

There is time, but not a lot, to turn from the relentless displacement and consumption of all that

earth encompasses toward an era of urgent protection of the species and living systems

that remain in good condition, restoring where possible what has been lost and respecting the underlying processes that hold the planet within a range of condi-

tions favorable for life as we know it, which are called “planetary boundaries” by Johan Rockström, director of the Stockholm Resilience Centre, and by numerous collaborating scientists. Unwitting activities of the past two centuries, especially since the 1950s, have stressed four of the nine boundaries beyond safe limits. The other five are pressing the envelope.

If present trends continue, it is likely that coral reefs, most large sharks, blue fin tunas, some dolphin, whale, and seal species, and many kinds of frogs, birds, lizards, and countless other creatures will have been forever lost by the middle of this century. Old-growth forests, natural deserts, and pristine places everywhere are rapidly disappearing, consumed, or displaced by humans. The not-to-exceed limit of 350 parts per million of carbon dioxide in the atmosphere is already beyond 400 ppm and rising; biodiversity loss exceeds the intact minimum of 90 percent in critical regions such as Africa; about twice the sustainable amount of nitrogen and phosphorus for agricultural uses are now being consumed annually; only 62 percent remains of the 75 percent minimum required of the original forest cover needed to yield vital contributions to earth's biogeochemical processes. Harvard University's distinguished ecologist E.O. Wilson calls for at least half of the earth to be banked as intact natural reserves to protect vital biodiversity and the planetary processes they generate. Presently, parks that are open to the public but prohibit destructive uses safeguard about 14 percent of the land and 2 percent of the ocean.

Astronauts hurtling through space are acutely conscious of their life-support system, learning everything they can about how it functions, then doing everything possible to ensure that it stays in good working order. After all, their lives depend on it. If asked, how much of your life-support system do you want to keep in good working order, would the answer be 2 percent? 14 percent? Maybe half?

#### THE CHANGING ROLE OF ZOOS AND AQUARIUMS

Aquariums and zoos large and small have in the past been places established to showcase animals as entertaining curiosities, with varying degrees of concern about the physical or psychological well-being of the animals themselves. That approach is undergoing a seismic shift in response to many individuals and organizations insisting that animals in captivity—and in the wild—be treated with greater dignity, respect, and protection from human harm. Some question the

“New programs...are fueling new respect, new care, and new policies about the relationship humans have with nature.

need to have captive animals at all, except in special circumstances: for rescue, for recovery from injuries, for when return to the wild is not feasible, or, in some cases, for providing safe quarters for breeding to stave off extinction.

In the 1980s, Christopher Parsons, the long-time head of the BBC's Natural History Film Unit, envisioned an electronic zoo that would feature the best images ever recorded of wild animals in action: cheetahs bounding across African plains, snow leopards reclining on rocky ledges, pandas munching on bamboo, sperm whales engaging in open-ocean conversations, and even fragile jellyfish pulsing through pastures of plankton. A vast library of images has been assembled under the auspices of the nonprofit organization Arkive in the United Kingdom in keeping with Parsons' dream of capturing as much as possible of the splendor of life on earth, with the urgent desire that the animals, not just the images, would continue to exist.

New 3D imaging and virtual reality experiences can now vicariously transport zoo and aquarium visitors into jungles, mountain peaks, under polar ice and into the great depths below, enhancing their understanding of what it might be like to be a jaguar, a whale, a honeybee or a maybe a deep sea shrimp.

Whether institutions are fostering wildlife recovery, research, education, conservation, or entertainment, attitudes about zoos and aquariums and their governing policies are changing, in part owing to the voices of people who have come to care about animals and the natural world through experiences they have had at those very places, often as children. I am one of those people.

As a child, I learned in school about elephants through pictures and stories. At the Philadelphia Zoo, I reveled in the essence of a fellow mammal who was magnificently huge, but who shared familiar features that I could relate to: eyes, ears, skin, a little hair, and a very impressive nose. I had no idea then about what has now been definitively documented: the enduring, close-knit societies of elephants, their emotions, their individual behaviors, their grief when family members die.

Now that I know, I share the ethical concerns that have inspired a number of zoos, including my beloved Philadelphia Zoo, to no longer keep elephants, but rather to retire existing captives to places where they have more elephant-friendly space and surroundings and a larger number of elephants for company. Re-

turning captive elephants to their native homes is not realistic for many reasons, including the destruction of much of the natural lands they once inhabited, the current dangers of slaughter by ivory poachers, and the tightly-knit social structure of elephant families, which might or might not accept a newcomer.

“...two of the greatest miracles of life are the infinite capacity for diversity coupled with a common chemistry that wondrously connects us all.

Similar dilemmas are now faced by aquariums that have featured captive dolphins, orcas, beluga whales, and other marine mam-

mals as star attractions for public amusement, but have recently been inspired to rethink the wisdom, ethics, and financial risks involved with continuing to do so.

Until well into the twentieth century, whales, otters, manatees, seals, and sea lions were regarded as commodities, valued for their fat, flesh, or fur, and rarely thought of as individual animals capable of solving problems, having families, or even feeling pain. Just as song birds and waterfowl were once treated as fair game, free for the taking, whales and their mammalian relatives have experienced a long history of conflict with humankind that is undergoing a rapid shift.

The film *Free Willy* created a public outcry aimed at returning Keiko, the actual captive orca that inspired the fictional film story, to the place of his origin, the coastal waters of Iceland. It took a lot of time, effort, and money to organize and eventually achieve that well-intended goal, but years of adaptation to captivity deprived Keiko of knowing how to effectively be a successful orca in the wild. After a carefully monitored release, he was able to find food and to travel hundreds of miles, but he did not succeed in being accepted by other orcas. But who knows? Given a choice, Keiko may have elected to have the two years that he experienced on his own in the wild rather than having a longer life in the confines of a small tank in a Mexican amusement park.

Other films, notably *Blackfish*, have had a profound impact on the public perception of the ethics of keeping intelligent, socially sensitive marine mammals in confined spaces. Even before knowing the devastating trauma and misery imposed on orcas and their families when individuals are taken for public display, in 1981 I was deeply moved by the plight of a lone orca who had been placed in an open-air exhibit in Hong Kong. From his vantage point in a small, barren pool

at the top of a hill, he could see the ocean in the distance, but had no hope of knowing again the comfort of its embrace.

Dolphins have been popular animals in zoos and aquariums for many years, but the horror of what is involved with taking them from the wild, graphically exposed in the film *The Cove*, has sent shock waves through the institutions that have had various species of dolphins in captivity for many years. Once regarded as prime attractions (as they still are in many new aquariums in China), there are efforts underway to retire dolphins, even those born in captivity, to spacious coastal facilities with access to the sea. John Racaneli, director of the National Aquarium in Baltimore, is wrestling with this issue. He says it is, in a way, a good problem to have as it reflects a positive shift—a sea change in the way people view wild animals (and our sensitivity toward them) as something more than entertaining performers or candidates for consumption.

For all of the attention given to the ethical treatment of marine mammals in zoos and aquariums, it is puzzling that the incidental injuries and deaths imposed by fishing—especially large-scale commercial fishing with drift nets, trawls, and long lines—have somehow escaped comparable concern, although the impact is exponentially greater.

According to a World Wildlife Fund assessment based on the official records of fishermen worldwide, more than 300,000 wild marine mammals are killed annually on this planet in the process of taking millions of tons of fish, shrimp, crabs, and other ocean wildlife. Legally, a “take” of twenty thousand dolphins by fishermen is considered permissible under U.S. fisheries policy. Entanglement in Alaskan crab pots in Alaska and lobster pots in New England annually kills dozens of large whale species: humpbacks, northern right, fin, and minke. Millions of baited hooks dangling from thousands of long lines kill not just targeted fish species and unintended marine mammals but also thousands of sea turtles, sea birds, and unwanted fish that are discarded as allowable “bycatch.” Even more damaging are bottom trawls that capture shrimp and so-called ground fish by scraping entire ecosystems into very large nets, retaining for market only a fraction of what is engulfed. It is the equivalent of bulldozing a forest to capture a bushel of songbirds.

New programs aimed at educating the public about the importance of wildlife in the sea and on the land are growing in popularity and are fueling new respect, new care, and new policies about the relationship hu-

mans have with nature. Rather than bringing wild animals to places convenient to viewing by people, there are numerous ways in the twenty-first century for people to go to where wild animals can view them. Some aquariums and zoos not only are promoting field trips to local parks among their members, but are also collaborating with institutions to have travel programs to wild places, where whale watching, bird watching, and even fish watching are featured attractions. Citizen-scientists are engaged to make vital surveys that make possible evaluation of health and change over time.

The New England Aquarium in Boston supports a vigorous program of conservation research including expeditions that enlist citizen scientists to explore distant coral reefs as well as the nearby forests of kelp and local gatherings of seabirds and whales. The South Carolina Aquarium in Charleston and the Florida Aquarium in Tampa (see photo below) take visitors on vicarious journeys via indoor exhibits from far locations inland to the deep sea, complemented by programs that encourage visitors to go take the real journey, outside.



The Mote Marine Lab and Aquarium in Sarasota Florida, and the Birch Aquarium at the Scripps Institution of Oceanography in San Diego, California, are examples of institutions that are primarily focused on oceanographic research but have developed public displays and vigorous outreach and education endeavors. Eugenie Clark, founder of the Mote Marine Laboratory and celebrated shark specialist, was ahead of her time in recognizing individual attributes of the fish that she studied. Out of respect for a small burrowing fish that she got to know personally during twelve years of close observation, she chose to abandon standard scientific procedures and not to capture and preserve it as a specimen after the end of her project.

She helped foster in me new ways of looking at

fish, not just as would-be filets with fins, but rather as a kaleidoscopic assemblage of more than five hundred families encompassing well over 33,000 species—a greater number of back-boned animals than all mammals, birds, reptiles, and amphibians combined. Many more await discovery even in well-known American rivers and streams. The fish specialist Richard Pyle, known for his dramatic descents into the ocean’s “twilight zone” using rebreathers in depths greater than five hundred feet, finds an average of thirteen new species per hour of dive time.

The advent of scuba diving in the 1950s has provided people with greatly improved access to lakes, rivers, and oceans and the creatures that abide there. The unintended consequences of having millions of divers exploring previously inaccessible parts of the planet, coupled with growing popularity of home aquariums, is that people are beginning to have enhanced respect for the character and individual personalities of our scaled, finned cousins, as well as for the thousands of invertebrates and intriguing aquatic plants that occur only in the ocean. The flip side of this exposure is that large aquariums as well as home aquarists have sometimes been responsible for selectively depleting certain desirable species, such as clownfish and colorful little gobies. Ingenious aquarists have responded to demand by figuring out how to convince certain clownfish to breed in captivity. Cultivation of corals, jellyfish, and other invertebrates is not only yielding new insight into the biology of these creatures but also providing a healthy alternative to extracting animals from wild reefs.

Small animals that are natural “homebodies” with limited range are far more adaptable for life in a tank and also for cultivation. Many kinds of seahorses have been successfully reared in laboratories for aquarium display and in commercial facilities where large numbers of the tiny animals are snapped up for use as ingredients in traditional Chinese medicines. Not so easy to grow from scratch are large animals with complicated life histories. Whale sharks come to mind—the biggest fish in the sea!

Japanese aquarists were the first to successfully capture and exhibit these gracefully elephantine creatures, and I was invited to swim with one in the Osaka Aquarium in 1991. I had experience diving with whales in Hawaii and Mexico, and I encountered many sharks in many places many times. But a whale shark was another matter. I felt privileged to be in the presence of a creature I had only read about and seen in pho-

tographs taken by lucky divers. Fast forward to 2010 to a place in the Gulf of Mexico, about one hundred miles offshore from Louisiana’s port city, Fouchon, in mid-June, when a small tuna, Bonita, filled the sea with masses of spawn. There to enjoy the Bonita caviar were hundreds of whale sharks! Photographs that I snapped of spots just in front of the big dorsal fin were entered into a computer program and later matched to files of photos taken by scientists in the four countries normally visited by these wide-ranging animals.

“Zoos and aquariums can help lead the transition...into a peaceful, productive, and enduring future.

I first became impressed with the distinctive diversity that exists among animals while visiting with the natural-

ist-artist Sir Peter Scott and his wife Philippa at their home in Slimbridge, England. On an unfinished canvas, Sir Peter had painted a gallery of swan portraits, each face distinctively different from the other, and each one named. To me, the swans crowding around a marshy area just outside the house all looked pretty much alike. But Sir Peter’s pointed out the differences in size and shape of the leathery skin just behind the bill. Each was as distinctively different as a fingerprint. Already, I had learned to recognize the unique patterns on the flukes of individual humpback whales and observed certain behavioral differences as well. During weeks of living in underwater laboratories I could identify by behavior alone the identity of several large barracuda.

Now it seems obvious that two of the greatest miracles of life are the infinite capacity for diversity coupled with a common chemistry that wondrously connects us all. The naturalist Henry Beston suggests in *The Outermost House*, “We need another and wiser and perhaps a more mystical concept of animals... In a world older and more complete than ours, they move finished and complete, gifted with the extension of senses we have lost or never attained, living by voices we shall never hear. They are not brethren, they are not underlings, they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendour and travail of the earth.”

The application of this concept to fish is nicely articulated by Jonathan Balcombe in his book, *What a Fish Knows*: “If there is one overarching conclusion we can draw from the current science on fish it is this: Fishes are not merely alive—they have lives. They are not just things, but beings. A fish is an individual with personality and relationships. He or she can plan and

learn, perceive and innovate, soothe and scheme, experience moments of pleasure, fear, playfulness, pain, and—I suspect joy. A fish feels and knows.”

The popular film *Finding Nemo* has helped inspire new attitudes about fish thanks to toothy cartoon sharks delivering catchy one-liners such as “Fish are friends, not food!” It is likely that fish will always be regarded by some people as delicious as well as delightful, but knowledge gained about the nature of the many kinds of fish may inspire greater discrimination about the who, what, why, and where of aquatic creatures chosen for consumption.

The Monterey Bay Aquarium helped pioneer printed guides for those who want to make informed decisions about their culinary choices. The lists of those to avoid owing to low numbers, high bycatch, and use of fishing gear that destroys habitat are featured in a red column. Yellow indicates caution, and green means go for it.

No indication is given about the relative age of the animals, but unlike chickens, which eat plants and go to market in less than a year, or cows, sheep, goats, and pigs, which also primarily eat plants and rarely reach full maturity before becoming various cuts of beef, bacon, or chops, most wild-caught fish are high-on-the-food-chain carnivores that may be decades old when captured.

A century ago, wild birds, their eggs, and their feathers were being commercially marketed for food, products, and decorations, but as people became more aware of their other values, protective policies came into effect including international treaties that take long distance migratory routes into account.

Half a century ago, marine mammals were regarded primarily as commodities, described dispassionately in terms of barrels of oil and tons of meat. By 1986, all but three nations agreed to abandon commercial whaling and focus on other vital values, from tourism to art, music, and the role of whales as important elements in planetary biogeochemical cycling.

Now, at the beginning of the twenty-first century, zoos and aquariums can help lead the transition from a past marked by a long and destructive war with nature into a peaceful, productive, and enduring future.

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## *In a Climatic Realm of Hungry Ghosts: Global Healing as Sacred Choice?*

By TIMOTHY LEDUC

We don't know what we need, and so long as we stay in the hungry ghost mode, we'll never know. We haunt our lives without being fully present.

—Gabor Maté

Images of families, friends, and strangers expressing so much grief and consoling each other for their common losses fill our screens these days. I could be referring to floods in Bangladesh, a hurricane like Sandy hitting America's eastern seaboard, or another record-setting extreme event that is now more norm than aberration. The shocked faces that are fresh in my mind as I write these words are those from Fort McMurray, Alberta, which in May of 2016 experienced a devastating forest fire that consumed its homes, neighborhoods, and sense of safety. Such anguish is the real image of today's climate changes as they intensify in response to our unsustainable use of energy, as is supported by evidence that warming trends over the past decades have extended and intensified the forest fire season. Despite an increasing awareness of this changing reality, within a couple days of Fort McMurray's evacuation the media reports were focussed on the immanent re-opening of camps for the close-by oil sands as central to getting the community back on its feet.

Something about the way we are responding

to the turbulence of our time resonates for me with Gabor Maté's description of the hungry ghost realm of people caught in addiction.<sup>1</sup> At the core of one who is addicted is a painful emptiness that cannot be filled by all those things we desire so dearly and try to maintain a firm grasp on. The addiction to a substance and way of living eventually brings the individual into a darkening cycle that intensifies the grasping and undermines their lives as they know them, as well as the lives of those who love them. Drawing upon a Buddhist cosmology, Maté describes the bound inhabitants of this haunting realm "as creatures with scrawny necks, small mouths, emaciated limbs and large, bloated, empty bellies." By contemplating this hungry ghost diagnosis, we can get a different view on the continuing difficulties in our climate change responses as human and ecological communities suffer from intensifying impacts.



Caption: Ft McMurray Wildfire near Highway 63

The December 2015 Paris Climate Conference offers a contrasting global political view on the climatic realm of our energetic additions. Amid a barrage of optimistic headlines like “Unprecedented Recognition of the Risks of Climate Change” (*The Economist*), “Nations Approve Landmark Climate Accord” (*New York Times*), and the *Conference’s* self-acclaimed “Major Leap for Mankind,” some critics expressed more restraint. With unprecedented floods hitting India and Britain as the negotiations proceeded, Bill McKibben made the point that these places are where the real climate news was arising.<sup>2</sup> What he saw emerge in Paris was “voluntary pledges” to reduce carbon emissions that would have been groundbreaking in the 1990s. The best-case scenario for this unenforceable climate accord is one where, he writes, the planet warms by “3.5 degrees Celsius, above preindustrial levels. And that is way, way too much.” Expressing a similar critique was Naomi Klein who, in her book *This Changes Everything*, describes climate change as “a civilizational wake-up call” that is speaking powerfully “in the language of fires, floods, droughts, and extinctions.”<sup>3</sup> Using addiction imagery, she depicts the agreement as saying something like this: “I acknowledge that I will die of a heart attack if I don’t radically lower my blood pressure. I acknowledge that in order to do that I need to cut out alcohol, fatty foods and exercise every day. I therefore will exercise once a week, eat four hamburgers instead of five and only binge drink twice a week and you have to call me a hero because I’ve never done this before.”<sup>4</sup>

“At the core of the addiction is a feedback loop that keeps us from attentively minding maladaptive patterns of relating.

Perhaps the strongest critics of Paris and international climate negotiations generally have been Indigenous activists representing various global communities on the front lines of today’s changes. The Indigenous Environmental Network has “long spoken about the failures of the UN process and the environmental movement as a whole” for their catering to corporate interests.<sup>5</sup> This is something many saw playing out again in Paris, including McKibben, who said that the agreement was calibrated just “enough to keep both environmentalists and the fossil fuel industry from complaining too much.” But it was far from having the energy to “push the renewables revolution

into high gear.” The added concern for Indigenous peoples was that the American and European delegations “caused reference to the ‘rights of Indigenous peoples’ to be cut from the binding portion of the Paris Agreement, relegating the only mention of Indigenous rights to the purely aspirational preamble.” This colonial dynamic is like a ghostly reminder of the 1783 Paris peace treaty that came to define the borders of what became the United States and Canada without mentioning the land’s Indigenous peoples. Indigenous voices clarify that a sustainable response to modern society’s energetic addiction, not climate change, must be mindful of its cultural and historic roots in colonial processes.

But what I am primarily concerned with is facilitating a dialogue between Indigenous and non-Indigenous understandings of what is needed to heal modern ways of being in the world. Offering an Anishinaabe view, Herb Nabigon says that when we are caught in an addictive pattern there comes a time when it is clear two paths are available. The first “is a dark and anxious way” where people predominantly “see the Earth only as a resource to be exploited.”<sup>6</sup> This is the realm of hungry ghosts that Maté explains is more common “in cultures that subjugate communal goals, time-honoured tradition and individual creativity to mass production and the accumulation of wealth ...when we place a supreme value on selfish attainments.”<sup>7</sup> When this way predominates then, Nabigon learned, the “nurturing Mother will become the dark Mother,” an understanding resonant with our intensifying turbulence. But another path is also open to us that, he explains, holds “the land in trust” and renews us to a role of “service [that] is directed towards Mother Earth, Sky Nation, or Spirit World.” Before considering what such a healing choice entails and what it might mean in the context of our global issues, let’s first consider the multi-scalar addictive patterns that haunt our climatic relations.

#### A GHOSTLY GLOBAL ADDICTION

Watching clips of the Paris climate conference from a screen across the ocean, I was struck by the images of sleek signage, global leaders in power suits, climate activists, and fly-ins of concerned pop-culture stars. The gathering looked so buffered from the stark experiences of communities that are being burnt, flooded, and blown to new realities. While LEED buildings, carbon offsetting of travel, renewable energy, and other efficiencies marked the event,

a lot of energetic behavior was still on display. I am reminded of the 2009 Copenhagen climate conference that required an estimated 1,200 extra limousines to be shipped in from neighboring nations for dignitaries, as well as the 140 private jets and massive public air travel that stretched the airport to capacity.<sup>8</sup> The discord between “what is done” and “what needs to be done” leads me to muse that a deeper issue may be fuelling these meetings. Returning to the diagnosis of Maté, addictive behaviors are “meant to calm anxiety—an unease about life itself, or about a sense of insufficient self . . . described as ‘brain lock’—the stuck neurological gears that cause thought to be acted out before the action can be stopped.”<sup>9</sup> Technologically buffered within these displays of modern power and ingenuity, there is a confident sense of calm that almost seems to maintain a stuck neurological gear as the world becomes more turbulent.

“the modern belief in controlled management makes it... difficult to surrender our actions to a broader sense of wholeness.

In my book *A Canadian Climate of Mind*, I connect our climatic situation to an addictive energetic bind using Gregory Bateson’s seminal analysis of an ecology of mind.<sup>10</sup> In attempting to understand the discrepancy between modern ways of living and the emerging sense of worldly interconnectivity, Bateson found the realm of addictions to offer some helpful insights. At the core of the addiction is a feedback loop that keeps us from attentively minding maladaptive patterns of relating, what Maté describes as “brain lock” and Bateson characterizes as “double binds.” Someone caught in an addiction is guided by unconscious beliefs, with the most prominent being the sense that they are in control of their addiction and can resist the substance. This belief is continually called into question by their predisposition to take risks that challenge their capacities to control the situation. As the addictive behavior escalates, they become more socially isolated from the concerns of family and friends, which further enables the addiction. What makes the ghostly realm of addictions troubling is that there seems to be no *rational* way out of double binds in as much as a response is required, and yet the response is enmeshed in historic ways of relating that brought about the issue.

A similar dynamic can be seen playing out in climate change. For example, an urban center is increas-

ingly impacted by summer heat due to a combination of warming trends and the urban heat island effect, and these impacts encourage more fossil fuel use to power air-conditioning that releases more greenhouse gases. On a global scale, the Paris meetings bring together global leaders of political, cultural, and activist interests to address greenhouse gas emissions through acts that momentarily intensify our energetic participation in the climatic issue. Then there is the Fort McMurray fire. Since the 1970s the forest fire season has lengthened in many regions around the world, and in Canada this is connected to a doubling of the areas being burned over the past four decades. While there are other issues related to forest management, the regional warming and resulting fires is what models of global climate changes are projecting.<sup>11</sup> This is something the IPCC has further connected to human greenhouse gas emissions. And yet within a couple of days the response to the loss was the need to get the oil sands camps running again. Seemingly highlighting our energetic bind, the winds changed a few days later and blew the fire toward the camps consuming one and requiring “heroic” defenses of others. Meanwhile, a few weeks later a deluge of rain fell across the ocean in Western Europe and swelled the banks of the Seine River to flood parts of Paris.

For Bateson, the ghostly nature of the double bind highlighted an isolation and pride-in-risk that also has certain resonances with my Canadian nation’s response to economic and climate uncertainty. There has been a historic colonial tendency for resources to be central to the nation’s economy, with the oil sands being the latest. While Canada’s new Liberal government was a strong advocate for the Paris climate accord, it has nonetheless remained committed to a more regulated development of oil sands extraction and shipment to markets through pipelines. We could echo McKibben’s words that this national response is calibrated to restrain environmentalists and industry. In light of climate change there are many issues with extracting tar-like bitumen, not the least of which is that for every unit of energy required to extract and process returns less energy than conventional oil. As with the escalating double bind, these economically rational acts are less efficient, produce more greenhouse gas emissions, and thus further the climate’s destabilization. In a sense, bitumen extraction, fracking, offshore development, and even carbon storage are analogous (on national and global scales) to those dark corners where the modern addict tries to secretly

maintain energetic ways that are hitting climatic bottom.

While there are various local, national, global, and cosmological dimensions of our bind that I consider in *A Canadian Climate of Mind*, I want to highlight here

“...the modern belief in controlled management makes it so difficult to surrender our actions to a broader sense of wholeness.

one more dynamic before moving onto the insights of a healing response.

The push for greater technological efficiencies in energy

use is a vital part of any climate response because of its broad everyday connections to people’s lives, and yet there are difficulties related to how people engage such solutions. These responses are often limited by a rebound effect where energy use continues to rise despite efficiency gains. For example, household energy use has increased by more than 30 percent since 1978 largely because the efficiency gains have been paralleled with more than a doubling of average house size over the past half century, and these houses have more appliances and fewer people. Similarly, automotive fuel efficiencies has occurred in a context of us driving further, with some research indicating we drive on average four times the distance than in the 1950s. The point is that efficiencies and technological responses promote a feeling of progress that is of value, but are simultaneously rooted in core values of modern ways that can conceal our binds.

What we are addicted to is not primarily fossil fuels, but rather the speedy, opulent, limitless, and virtual ways of being that the modern world wants to hang onto as central to any climatic response—this is what was on display in Paris. Such an approach makes human power seem infallible, while simultaneously fostering a feeling of disconnect from the increasing turbulence. What we need is an ever-vigilant mindfulness of these processes as we enact them, for such “awareness is the key to unlocking the automatic patterns that fetter the addicted brain.”<sup>12</sup> The world is responding to our binds, waiting to see if we can slow down, heal, and transform deeply ingrained patterns. We are being asked, in Maté’s words, to learn the great art of expressing “our vitality through the particular channels and at the particular speed Nature foresaw for us.”<sup>13</sup> This is an involuntary climatic initiation akin to what Bateson described as “a spiritual experience,” one that we need to attend if we are to no longer hungrily fuel an increasingly turbulent climate.

## A SACRED CHOICE

The ghostly addiction at the core of modern ways is what Anishinaabe healer Herb Nabigon depicts in the title of his book *The Hollow Tree*. It is, he writes, “a metaphor for what Western culture has become, an empty shell” where individual self-interest rules over communal needs.<sup>14</sup> The experience of addiction and its healing allowed Nabigon to see this hollowness within himself and then without in the colonizing culture that so impacted his life. He saw this only after his elders told him he was at a moment of choice: “You can either pick up your sacred bundle or you can die from drinking.”<sup>15</sup> If Nabigon wanted to live, it was time to remember his sacred connections and “transform that hollow tree into the sacred tree it was meant to be.” It is a fateful choice that comes to many addicts. On a climatic global scale, we are in the midst of a similar moment of truth when the Earth is asking whether we can re-affirm the sacredness of life.

In Nabigon’s Indigenous tradition, taking up a sacred bundle requires one to confront the urge to individual self-interest and profit as the primary means to living. When I scale up what such a sacred choice may look like for national and global communities, I am drawn to the decision of Ecuador and Bolivia. In these nations that have large, politically active Indigenous populations, “Nature has been granted its own basic constitutional rights.”<sup>16</sup> People can now “fight corporations on behalf of the Land” as a legal entity. This is not simply a symbolic gesture, for it nationalizes an Indigenous approach to human-nature-spirit relations that has globally sustained over 20 percent of the carbon stored in tropical forests. Those traditions that informed this conservation record were again threatened in Paris by an initiative aimed at “mobilizing carbon markets as a means of conserving forests,” something Indigenous groups saw as violating their “sovereignty and sacredness of their lands.” The ghostly focus on unending self-interest and profit is what we are bound to, even as a sacred choice starkly confronts its globalizing tendencies.

The decision to heal led Nabigon to Poundmaker’s Lodge, an Indigenous treatment centre that combines the Alcoholics Anonymous (AA) twelve-step recovery program with Indigenous approaches to healing. What does AA and related programs offer? According to Maté, they take people through steps for becoming more behaviorally responsive to their addictions. As research shows, the bind is “rooted in malfunctioning brain circuits and in implicit stories and beliefs that do

not match reality.”<sup>17</sup> For Nabigon, drinking gave him a feeling of control and escape from the loss of identity related to colonial violence. But what the drinking actually made him was a darker person who was “anti-social, unreasonable, angry, and full of resentment”; it isolated him in a pain that then called for more numbing behavior.<sup>18</sup> Treating such a condition begins by recognizing the locked behaviours have arisen from a “brain dysfunction” or illness that was learned over time in various social contexts.

While we cannot control the addictive urge, the next steps teach how we can control the brain’s automated responses to the desire by being mindful of the pattern. The aim is to create space for new behaviors and understandings to emerge, a process which took on Indigenous features for Nabigon. Beyond abstaining from the addictive substance, he also engaged a series of vision quests that utilized fasting. His elders asked him to fast in the four sacred directions so as to heal by coming into a world of greater spirit and meaning. In these purifying rituals one may ask for and receive blessings like imagery that can be a guide through life. Discussing a similar process, Maté says creating a healing environment “entails removing what is toxic—the stresses that enhance the addictive drive and trigger addictive cravings,” but it is more than abstinence, as the healing must be grounded in “an ecological and sustainable perspective.”<sup>19</sup> The Indigenous fasting ceremonies not only remove the toxic substance, but replace toxic ways of living that fuel the addiction with a world of meaningful relations.

Offering us an important reminder on what such change feels like, Nabigon states, “I won’t lie to you, suffering is part of the healing.”<sup>20</sup> Maté agrees when explaining arduous effort is needed because the “compulsions entice her to behaviours that, contrary to other distressing conditions, promise pleasure.”<sup>21</sup> Such sober reflections are what often feels so absent from a climate meeting like the one in Paris where the willful urge to more climatic modernization leaves one with the impression that this is all very manageable; the images say more than the media bytes about the need for a communal effort. What Nabigon and Maté highlight is that significant changes in bound behaviors is painful, but will also have its glories. On the deepest level, this effort aims to renew our sense of relationship to others and the source of life. While there is a clear spiritual dimension in Nabigon’s Indigenous approach and AA in general, Maté clarifies that this basically means recognizing “the truth of our oneness with

all that is, an ineffable sense of connectedness.”<sup>22</sup> The fast of Nabigon brought him to the awareness “that I was part of Creation,” an insight that reduced his ego as he “realized I was nothing without the help of Nature and the Great Spirit. I felt very humble.”<sup>23</sup> Humility about our human position is also what Ecuador and Bolivia have enacted on a national scale in recognizing Nature’s rights.

“What we are addicted to is not primarily fossil fuels, but rather the speedy, opulent, limitless, and virtual ways of being. Perhaps what keeps us from enacting a sustainable climate of mind is the way in which the modern belief in controlled man-

agement makes it so difficult to surrender our actions to a broader sense of wholeness. We are talking about the will to surrender addictive binds to a more encompassing sensibility of our relations. This is not about denying efficiency options, carbon offsetting, electric vehicles, climate change policy, and more, but making these technical responses a small part of an approach that actively recognizes our participation in something more. Such surrender almost seems to arise in calls to shift toward renewables as a means for reducing the consumption of global energy. But we also need to conceive renewable energy as part of a large-scale fast or detox that is responsive to our modern binds, not as a means to maintain modern levels of consumption. In the spirit of AA programs, renewables must be less a technological end than a means for creating space for more sustainable ways of being to emerge.

This is what Nabigon’s fasting rituals point toward, a social re-orientation of our ways so as to heal the deeper levels of our addiction to speed, limitlessness, and virtualizing ways. Undertaking the hard work of renewal was how he affirmed the decision to take up his sacred bundle and thus help move the healing on. His bundle came to hold tobacco, sweetgrass, sage, cedar, a sacred pipe, and the sweatlodge. These medicinal and ceremonial presences have their own teachings that he could facilitate in relation to others who need healing; they are not just material realities. This sense of humble dependence on the Creation’s gifts as the basis for service to others is consistent with the latter steps of AA wherein the journey that began in isolation shifts toward service to others as an affirmation of interdependence. The sacred bundle is for Nabigon a reminder of the need to walk the sacred path the Creator intends. Our climatic changes are urging us to

pick-up a comparable sacred bundle before the depths become too dark to find a collective way out.

What are some of the sacred objects that we may find in such a climatic bundle? Perhaps the medicine of a sacred tree like Nabigon's cedar that reminds us of what trees give us, including their uptake of carbon. It can also remind us of their centrality in many spiritual traditions across the planet, and the need to follow the Indigenous inspiration of Ecuador and Bolivia in legally recognizing Nature rather than trying to profitably market everything. The renewables of Sun, Wind, and Water must be represented, but not simply as energy sources for maintaining consumeristic ways of living. My book considers the Earth Hour as an emerging purifying ceremony that could be connected with the fasting ceremonies found in a diversity of spiritual traditions. What about an Occupy-scale movement based on carbon fasting from luxury emissions like many of our flights? As with Nabigon's ritual, the everyday aim is to abstain from consumeristic self-interest so as to open space for the spirit of our interconnectivity to change and heal us. Finally, something in this bundle must remind us of the need to slow down and bring our ghostly ways back into the Creation through whatever cultural wisdom we have in in our traditions.

## CONCLUSION

"Why is no one talking of the need to become soldiers, to put our bodies on the line to save the planet?" I received this question in response to a talk on these ideas, and it makes sense if we are receiving a "civilizational wake-up call." It made me think of a short essay by economist Lester Brown where he concludes by utilizing World War II as an exemplar of how quickly we could shift to a renewable economy when we see the need and have the will. As he explains, the American president informed the automotive industry that they would be able to focus on the war effort because he was "going to ban the sale of cars in the United States."<sup>24</sup> Responding to the Paris agreement, McKibben similarly states that what we need is "to leave almost all remaining coal and much of the oil and gas in the ground and put the world's industries to work on an emergency basis building solar panels and wind-mills." A war-like effort is needed to enact the arduous change.

Yet we also need to be careful of the limitations in using such a metaphor, for the reason we have not been able to muster such an effort is because there is no clearly demarcated external enemy to fight. Though

we can point to energy companies and other powerful interests whose tendrils reach into national governments and international processes like Paris, the war is against a modern way of living that is without and within. As Maté learned, we can never fully defeat addictive binds because "triumph and defeat" are war metaphors that fail to recognize how "addictions arise near our emotional core."<sup>25</sup> Waging a war against ourselves eventually leads "to inner discord and more distress." That said, a more peaceful change will be no less difficult and painful. As Nabigon relates: "I had to suffer so much to understand what liberation meant", but only after being "compelled to walk on the dark side first."<sup>26</sup> It was by looking at this dark path that he could start to pick up his sacred bundle with the hope of shedding "light on the darkness of humanity's shortcomings, exemplified so horrendously nowadays in our materialistic greed."

A warrior-like effort is required to move with the sacred transformation that is before us, but with a humble intent that can look at our binds and engage a broader realm of healing presences. What brought Nabigon to his fateful choice, as with many addicts who choose healing, was the experience of hitting bottom. A host of human and ecological communities are today being brought into the experience of what it means for modern systems to "hit bottom" on a global scale. It is an experience that Bateson described as a state of panic reflective of someone "who thought he had control over a vehicle but suddenly finds that the vehicle can run away with him."<sup>27</sup> An arising awareness of not being in control is challenging for modern ways based in managed control. Putting ourselves into increasingly risky situations, we want to respond by increasing an addictive dependence on the technological and economic ingenuity that promises to maintain the speed and limitlessness so on display in Paris.

What will collectively jolt us out of the climatic realm of hungry ghosts is difficult to foretell, as it is for any individual bound by their addiction, but it more often than not seems to entail some extensive pain on the way to a more heart-felt response. Watching a place like Fort McMurray suffer can feel so abstract and distant—that is, until I remember the feeling of loss that we all have from our past, imagine it on a community or cultural scale, and envision my family in the midst of it. Then my heart awakens to the need for an energetic change of my life, especially when I recognize that the rising turbulence is coming to a community near most of us over the coming decades.

With this heart energy we may be able to affirm with Nabigon our intent to not let the addiction have power over us and to recognize that we must humbly ask for help in bringing about this healing change. The hope is that wise choices can still be made before the collective health of our communities and planet descends too far into a dark, haunting bottom.

23. Nabigon, *The Hollow Tree*, 79.
24. L. Brown, "The Race to Save Civilization," *Tikkun Magazine*, September/October 2010, <http://www.tikkun.org/nextgen/the-race-to-save-civilization>.
25. Maté, *In the Realm of Hungry Ghosts*, 330.
26. Nabigon, *The Hollow Tree*, 91.
27. G. Bateson, *Steps to an Ecology of Mind* (New York: Ballantine Books, 1972), 330.

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7. Maté, *In the Realm of Hungry Ghosts*, 391.
8. Discussed in the conclusion of T. Leduc, *Climate, Culture, Change: Inuit and Western Dialogues with a Warming North* (Ottawa, Ontario, Canada: University of Ottawa Press, 2010).
9. Maté, *In the Realm of Hungry Ghosts*, 353-54.
10. The analyses of G. Bateson and others who consider issues of ecology, climate, energy, addictions, and spiritual healing are covered in more detail in my book, and the reader can refer to it for more detailed references of what is discussed here: T. Leduc, *A Canadian Climate of Mind: Passages from Fur to Energy and Beyond* (Montreal, Quebec, and Kingston, Ontario, Canada: McGill-Queen's University Press, 2016).
11. M. Flannigan, <https://www.ualberta.ca/~flanniga/climatechange.html>, accessed on August 7, 2016.
12. Maté, *In the Realm of Hungry Ghosts*, 344.
13. *Ibid.*, 362.
14. Nabigon, *The Hollow Tree*, xvii.
15. *Ibid.*, 33.
16. Paquette, "Indigenous Rights Cut from Paris Agreement."
17. Maté, *In the Realm of Hungry Ghosts*, 355.
18. Nabigon, *The Hollow Tree*, 23.
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## REVIEWS & REFLECTIONS

### IS IT TIME TO BREAK WITH THE COLONIAL LEGACY OF ZOOS?

By Jason Michael Lukasik

The shooting of Harambe the gorilla at the Cincinnati Zoo has reignited debate about how to properly care for and conserve zoo animals. Several petitions have been created on Change.org, seeking some form of justice for Harambe. Given the conservation mission of the modern zoo, there is much discussion about how we might make zoos better to prevent an event like the one that led to Harambe's death.

But what if the entire premise of zoos is to blame? Instead of seeking justice for Harambe, or improving zoo policies or exhibit design, we should first ask what, precisely, are we conserving in zoos? In my view, we are perpetuating an outmoded worldview rooted in colonialism.

#### WESTERN ORDERING OF THE WORLD

American zoos are focused primarily on conservation and education, according to the American Zoo and Aquarium Association. However, the purpose of zoos has been a source of contention for some time, as has their practice of keeping wild animals captive. Debates regarding animal rights and welfare, the poor success rate of programs to reintroduce animals into the wild, and a negative reaction to seeing animals caged have troubled many a zoo visitor.

The shooting death of Harambe has once again raised concern for an individual animal's well-being in the confines of a zoo. Harambe, an otherwise healthy gorilla, was put down in order to save the life of a young boy who had fallen into its enclosure. And while this type of event is relatively rare, animals in zoos may be fated by the very institution we have created to protect them. By enclosing creatures in order to put them on

display for humans, zoos engage their visitors in a ritual ordering of the world, fostering an exotic gaze and an imagining of wild and faraway places.

Before my academic career, I worked as an educator at a zoo for several years in Chicago. My experiences there helped me to realize the problematic premise that belies the zoo

“Zoos invoke colonial narratives about people, places, and animals.

experience. Despite thoughtful effort on the part of zoos to engage visitors in meaningful

conservation education, zoos invoke colonial narratives about people, places, and animals. While we intend for zoos to educate the public about conservation, we should also be mindful of the hidden curriculum experienced in a zoo.

#### A HIDDEN COLONIAL CURRICULUM

The colonial history of zoos is well known. At first, early zoos exhibited the victims of conquest—people, plants, and animals. As they evolved into public spaces and institutions, they continued the narrative of human dominance over nature, representing the collected specimen of knowledgeable societies. Zoos have moved from being a menagerie of conquered animals (and people) to collections that reflect the accumulated knowledge of difference and identity.

Early menageries, such as those hosted by royalty, were part of a colonial-era education to expose other parts of the world to Westerners. The colonial project sought to bring the world under both physical and epistemological control. Colonialism was, in large part, an educational project. Places, animals, and people were named and ordered through a Western lens.

Early zoo buildings were organized by taxonomy—cats, primates, ungulates all placed together. While the eighteenth-century Linnaean system of organizing living things is not wrong, per se, it is a uniquely Western way to portray species relationships, displacing other ways of envisioning the living creatures of the

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world. And while modern zoo buildings now focus on geographic areas—Africa, Asia, South America—with extensive immersion exhibits, these newer exhibits are inspired by tales of travel to exotic and faraway places.

The most popular animals featured in zoos are those that come from “exotic” areas that are geographically remote from the Western countries that exhibit them. The buildings that house them feature lush vegetation, waterfalls, and, most importantly, cageless exhibits. We do not like to acknowledge that animals are enclosed, and so modern zoo exhibits are designed to disguise the enclosure using glass panels, moats, and other deceptions. The result is what Nigel Rothfels, author of *Savages and Beasts: The Birth of the Modern Zoo*, calls a “convincing verisimilitude.”

We may consider ourselves to be post-colonial, but colonial narratives continue to inform our understanding of the world and the animals and people who live there. This framing is no longer appropriate, but how do we shed the colonial narrative and seek an integration of diverse cultural narratives of the land, people, and places? How might the modern zoo become post-colonial?

### REMOVING THE CAGE

When the Regenstein African Journey opened at Chicago’s Lincoln Park Zoo in 2003, visitors who had never been to Africa commented on how real the exhibit felt to them. How did they know? The cues were there: naturalistic surroundings and waterfalls, a meandering footpath, thatched roof huts. It is how we imagine Africa to be. We long for a colonial experience—a close encounter with a wild animal in a wild place. Close, but controlled. The dangers of past colonial travel are supposed to be non-existent in the zoo visit. We long to experience exotic animals on our terms. Zoos still today reflect the menageries of the colonial era, allowing people to view exotic animals at a safe distance.



Zoo visitors have learned the rules of the game—animals are enclosed, not caged; animals are in the enclosure, people are not. Exotic places, animals, and people are neatly represented in essential ways. The desire to conform the world to one of our own narration is an articulation of the colonial project.

But when these rules are broken, our imagined construct of the world begins to crumble. A young boy falls into the moat, and our ordering of animals breaks down. The child longs to see the majestic ape up close, though he is now in extreme danger. The gorilla is killed to maintain the mirage, so that zoos may continue to conserve colonialism. There are places for animals. There are places for people. We thought we knew where each belonged.

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## REVIEWS & REFLECTIONS

### SYNCHRONOUS FOREST REVISITED: A PHOTO ESSAY

By Lindy Lyman

The art challenges the technology, and the technology inspires the art.

—John Lasseter, Pixar

[Note: A recording of the environmental soundscape by Jeremiah Lyman Moore that accompanied Synchronous Forest can be heard at <https://soundcloud.com/jeremiahmoore/sets/synchronous-forest> —Ed.]

Standing at the crossroads of nature and technology, the artist is continuously called to re-create and challenge the beauty, vastness, contradictions, and complexities of this world. In 1997, “Synchronous Forest: The Dance Of Nature and Technology” was created in Colorado by Lindy Lyman, visual artist, and Jeremiah Lyman Moore, sound and installation artist. The exhibition premiered in 1998 at Regis University, Denver, and was shown again at The Museum of Outdoor Art, Englewood, in 1999.



J. Moore and L. Lyman in 1997

In observing the dance of Mother Nature and her offspring, Technology, we were fascinated by the spin of opposites: the real and the virtual, the innate and the artificial, the integrated and the incongruous. Our creative adventure was to envision these insights with paint on canvas, and to amplify and shape them with sound. Drifting from the airy to the mechanical to the ethereal, the acoustic dimension of the exhibition was played through a diffuse speaker array designed to envelop visitors in a bath of sound. Synchronously combining the imagery of analog and digital, ancient and cyber, our intention was to evoke a sense of timelessness, urgency, menace, and blessing.

We invited ourselves and our visitors to listen, wonder, explore, and consider: “Who really has the last word: Nature or Technology?”

To highlight this query, we created a rich textural “forest” soundscape of paintings, surrounding environments, and a central gauze-covered pyramidal listening structure with a small bench. The soundscape was comprised of layers and sequences from natural and technological worlds. The sound shaped the physical space, as well as one’s personal experience of being within it. Bees sang in duet. There was the subtle pattern of human breath. At one point, the sudden swoosh of a passing car overwhelmed the gallery. The recording had been taken at pavement level from the side of a road. Throughout the soundscape, an undergirding, vast matrix merged with/was intruded by sounds of technology—or were they sounds of nature?



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Mobiles made from gathered branches were festooned with patterned green circuit boards instead of leaves. A painted “divining rod” branch could be held in one’s hands, symbolically searching out the knowledge and nourishment of underground rivers. Wearable art was fashioned from shiny technological artifacts scavenged from recycling centers and dumpsters. Objects specific to the theme of each painting surrounded each canvas. Sandstone slabs and granite Colorado River stones provided an earthscape below each painting.

Withn the gallery space, four paintings were oriented to the true compass directions of east, south, west, and north, as well as to the corresponding times of one’s life, times of day, the four seasons, and the four elements. The fifth painting, “Ancient Source,” was positioned to welcome viewers to the exhibition, providing a grounding and pivoting point from which to experience the whole environment.

To view the paintings, one processed around the room as the sun processes throughout the day. At the beginning was East/The Forest Primeval: Birth, Morning, Springtime [Air Acrylic, inks, found papers, found objects, on unprimed canvas 50”x 42” 1997].



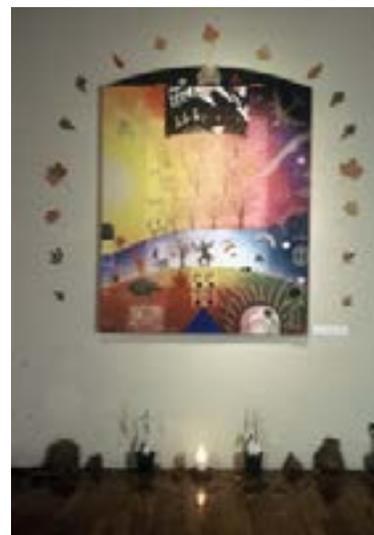
Installation view of East

Then came South/The Forest Peopled: Childhood, Noontime, Summertime, Fire [Acrylic, inks, found papers, found objects, on unprimed canvas. 50” x 42” 1997].



Installation view of South

Then West/The Forest Radiant and Reverberant: Adulthood, Afternoon, Autumn, Water [Acrylic, inks, found papers, found objects, on unprimed canvas. 50” x 42” 1997].



Installation view of West

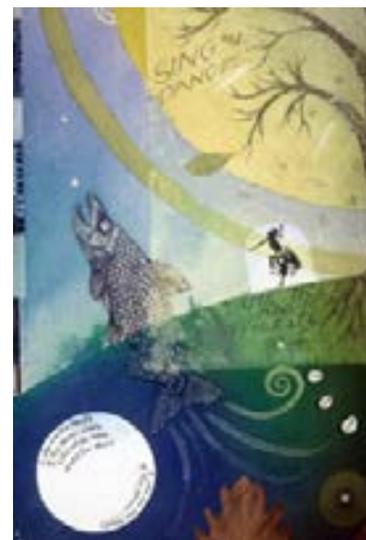
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And North/The Forest Deep and High: Elderhood, Life Passage, Wintertime, Earth [Acrylic, inks, found papers, found objects, on unprimed canvas. 50" x 42" 1997].



Installation view of North

At last viewers came to Synchronous Forest/Ancient Source [Acrylic, inks, found papers, found objects, on unprimed canvas. 50" x 42" 1997]. It was the “root” painting from which stem the four other paintings in the Synchronous Forest Series. Here, homage is given to the tree of life from deepest Africa: the drum is given by the tree, and the dance answers to the drum’s ancient rhythms of the universe. “Ancient Source” speaks to the deep legacy of wisdom from the ancients and the ancestors, and to the connecting source that holds all of life together.



Ancient Source

It is now nearly twenty years since “Synchronous Forest: The Dance of Nature and Technology.” Here are the questions we asked in 1997, at the peak of the Information Age: What is the use of technology doing to the world around and within us? Are we causing damage beyond hope of repair? Are we allowing technology to rob us of humanity and respect for nature? Are we distancing and distracting ourselves from the vastness of nature? Are we forgetting that humans are actually part of nature?

Now, in the year 2016, the world is deep within the Digital Age. In addition to the above, there are new questions to ask and to act upon: What are the ethics and ultimate effectiveness of genetic engineering, bio-engineering and geo-engineering? Cyber warfare and the dominion of outer space? The effect of digital media and virtual reality on the human brain, nervous system, and psyche? The preponderance of screen time on our lives? Is technology expanding our worlds of knowledge yet simultaneously putting us out of touch with our real-time, breathing selves within the body of this world?

How can citizens of the planet learn to be the intel-

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ligent, connecting link between nature and technology? Can we still transform “a world out of sync” into a synchrony of stewardship, responsibility, conscience, and ethics? Meanwhile, we hover within the vastness of earth time, eternity, urgency, menace, and blessing. We are constantly challenged and inspired by the worlds of nature and technology.

Perhaps from time to time we would find refreshment by remembering to step into the listening place of our own inner Synchronous Forest.

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Lindy Lyman is a native New Englander returned to her roots after forty years in Colorado. Teaching and making art are some of her favorite things. Although she is challenged by technology, she is equally inspired by sound and light, day and night, sun and moon, the seasons, the elements, and the wonder of many cultures, all singing and dancing together. She was honored to co-create “Synchronous Forest” with her son Jeremiah Lyman Moore, who practices Sound Design at his San Francisco Studio. [www.lindylyman.com](http://www.lindylyman.com) [www.jeremiahmoore.com](http://www.jeremiahmoore.com) All works are copyright 1997 by the artists, Jeremiah Lyman Moore and Lindy Lyman.

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Jeremiah Moore is a practicing sound artist and sound designer working solo and with collaborators across the disciplines of film, theater, radio, interactive work, mobile experiences, haptic augmentation, field recording, and site-specific installation. His solo work deals with interfaces between humans, nature, and technology, cultural observation, experiences of time, and transformation of commercial culture into meaningless bliss. His work blends field recording, processed materials, and synthetic sources.

## REVIEWS & REFLECTIONS

### REVISITING SAND COUNTY: AN INTERVIEW WITH ESTELLA LEOPOLD

By James Ballowe

Estella Leopold's *Stories from the Leopold Shack: Sand County Revisited* was published earlier this year by Oxford University Press, the press that in 1949 published her father Aldo Leopold's *A Sand County Almanac*. Born to Aldo and Estella Bergere Leopold, Estella is the youngest of five children, all of whom became professional ecologists and conservationists.

The eldest, Aldo Starker Leopold (1913–1982), received his doctorate in zoology from the University of California, Berkeley, and became a professor of Wildlife Ecology there. He was elected to the National Academy of Sciences (NAS).

Luna Bergere Leopold (1915–2006) received his Ph.D. in geomorphology from Harvard. After serving with the United States Geological Survey as a hydrology engineer for twenty-two years, he became a professor of Geology and Landscape Architecture at the University of California, Berkeley, and also was elected a member of the NAS.

Nina Leopold Bradley studied wildlife at the University of Wisconsin and became a well-known lecturer on her father's Land Ethic and other writings. With her husband Charles, she settled near the Shack where they, along with other family members and fellow ecologists, were instrumental in establishing the Leopold Foundation.

Aldo Carl Leopold (1919–2009) studied plant physiology at Harvard from which he received a doctorate in botany and became a professor of plant physiology at Cornell University.

Estella Bergere Leopold (1927) is a paleobotanist and conservationist who received her doctorate from Yale, served with the U.S. Geological Survey for twenty-

one years, and then became a professor of in the Department of Biology at the University of Washington for thirty years. She is the third of the Leopold siblings to become a member of the NAS. She continues to work three days a week at her laboratory on the campus where she does research in the palynology, the study of fossil pollen as a tool in reconstructing ancient floras.

JB: Estella, you write in your book about how *Stories from the Leopold Shack: Sand County Revisited* came about. Readers of this interview might want to know how the book was conceived and developed over a period of time.

EL: I began by wondering what I should do on long airline flights to Madison, Wisconsin, from the West Coast. So I began to carry a little yellow tablet and began to jot down notes, particularly stories that I knew that would help answer questions that Nina's grandchildren and others had asked. At first, the stories weren't organized. But after a bit I showed them to my typist, and, to my surprise, she said that she kind of liked the stories. So after that, I began to make a more serious outline. And I think that the whole book was something like a frame for the early notes that I was making in the air. A couple of years went by before we were done.

JB: So it began as a series of short essays and developed into the book. Did the notes have another purpose as well? And did that purpose carry over into the book?

EL: Well, at first it was just telling stories. Later I thought that there was more to this, and I began to talk about the Shack Idea. I mean my family developed and rebuilt our Shack, and we had so much fun together. But then, as we all grew older, we all had our own shacks, each of us five children. So I wanted to gener-

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alize about that. It was just simple outdoor living and a way to become very familiar with nature.

JB: Most of our readers will be familiar with the first Shack from having read your father Aldo Leopold's *A Sand County Almanac*. But you say the famous Shack spawned several other shacks built by you, your three brothers, and your sister. Your sister Nina's place, where I once visited her, is not what we would normally think of as a shack. It was quite comfortable and solar powered.

EB: Yes, the shacks were various. I think each of us began to yearn to have our own place in the country as we departed Madison and began our careers. So it was kind of natural to pick up some property and to develop some of the ideas we loved so much back in Wisconsin.

JB: And Carl, the youngest of your three brothers, even built a shack in Costa Rica.

EL: Carl was a botanist and studied seeds and plant physiology. And when he saw what was happening in Costa Rica to rain forests that had been cut and become sterile, he decided to look into the question of "why we can't replant the rain forest." And he succeeded in discovering how to do that, which I think was a marvelous accomplishment. There were no commercial sources for seedlings, but he figured how to grow them.

JB: In your book, you say that one of the purposes is "to counteract the new wrong idea" that nature is a dangerous place for children to be.

EL: Exactly. Of course, we all felt quite at ease in the country at our Shack up there in Wisconsin. But basically it is quite a turnaround now when you see so many parents afraid of letting their children walk to

school by themselves or go into the park to just have a nice long day all by themselves. This seems dangerous. Young people really need to have their own time in nature in order to become acquainted with it and to love it. If we cannot teach our children to love nature, who's going to defend it?

JB: One thing that keeps children from venturing into nature is the fear of insects. I remember your writing about the mosquitoes at the Shack, saying that your father seemed not to be bothered at all by them. Today, some children run screaming away from any insect. This was not something that you did. Another purpose of the book, you say in the book, is to explain "familiarity with nature and togetherness." Could you elaborate on that phrase for us?

EL: Well, of course, feeling at home in nature. For us it was taking long walks. Observing nature together. Planting pines and watching them grow. And togetherness—sometimes we were looking at birds in the spring and having a wonderful time watching the spring fauna as they migrated in. But mostly it seemed as if we loved doing it together. And even when my siblings left to pursue their professional careers, I still loved being out there in the same woods by myself or with my parents.

JB: You also write about what it was to have grown up on the very stage on which the Land Ethic was being practiced, not only by your father but also by all of you children and your mother.

EL: That's right. But I think Dad's concept of a Land Ethic initially began in New Mexico, where he just loved the vegetation and landscape. In the 1920s he wrote that, because of over-grazing, in only ten years the land could become badly eroded, full of gullies (arroyos). It lost its productivity and much of its natural vegetation. Dad's falling in love with nature in the

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Southwest and the moral issues of conservation developed there. And when Dad and Mother went back to Wisconsin, he kept writing about New Mexico. The Land Ethic was emerging in more and more detail during that time. But I think it all began in his first assignment with the Forest Service at the Apache National Forest in New Mexico.

JB: Just north of Silver City in the far southeastern part of the state.

EL: Yes. He told me that the original country had been so beautiful and so unchanged. But with grazing, it became badly eroded. And that's when he began to preach that conservation of the land should include a moral responsibility for its care.

“Young people really need to have their own time in nature in order to become acquainted with it and to love it.

JB: You often write in your book of the fun, even joy, that you and your parents and sib-

lings had at the Shack. For instance, in one chapter you talk about being out with bows and arrows and being amazed to see a large buck standing stock-still yards away. You, your mother, and siblings were good at the sport of target and game shooting with bows and arrows. You even made your bows and arrows.

EL: Well, Dad began the whole operation. He was a good craftsman. Then Luna and Starker began to make their own bows. It was Dad who made the perfect arrows. If they weren't perfect, he'd just throw them away. They made all of this gorgeous equipment. And they would ask permission to practice in a neighbor's field. Mother and Starker got pretty good. They found out that there would be an archery tournament in town and decided to try out. They went in, and Mother took first prize. She had never shot at a real target before. And so we were all very proud of her.

JB: And you also won archery prizes.

EL: No. But Starker and Mother were the top archers. Starker could kill a chipmunk with an arrow at fifteen yards. That was incredible shooting. And Mother, of course, with her target winnings. Dad was good, but he wasn't as good as Mother. But the equipment that he had made allowed her to become such a terrific archer.

JB: Yes. But on the day you saw the buck in a clearing, your family shot arrows at it and laughed to see each of them miss.

EL: I believe you are thinking about the account that Luna wrote. It was difficult to get near an animal that was holding still. As you read, nobody got a deer. But they certainly had a great time.

JB: You all seemed to have fun at that moment in not being able to hit the deer.

EL: Well, there is this story about Mother. After winning one archery prize after another for five years running, she even placed at a national meet. So Carl and Dad and I decided we would drive animals toward her at a Shack hunt so that she would have the best chance at a deer, because she was so good. So they did this. Carl and Dad were placed in such a way as to drive the deer toward Mother, who was perched on a hill, not far from the Leopold Center where it stands today. And Mother noticed that there were some wonderful grapes growing near where she was standing. So she put down the bow for a minute and began to pick grapes. Just at that point there came this wonderful buck with perfect horns, walking by her at forty yards. She would have had a marvelous shot, except that she didn't have the bow handy, and if she leaned over to get it, the buck would be gone. So they got together after that and laughed and laughed. Mother really had

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a wonderful chance, but it didn't happen.

JB: In the chapter "Thinking Like a Mountain" in *A Sand County Almanac*, your father writes powerfully about the effect of indiscriminate hunting when a wolf is killed and its pup wounded just for sport. As the wolf lay dying, your father saw "the fierce green fire dying in her eyes." It was a message that killing wolves, a natural predator of deer, would upset the natural order of things that sustained the mountain ecology. But there are some conservationists and ecologists who are critical of any hunting at all. How would you answer those people as to the value of hunting?

EL: Well, sometimes people were very critical. They were super critical of Dad who was on the Conservation Commission in Wisconsin and was promoting the idea that we have so many deer that we needed to consider having a doe season to keep the population down. And, of course, it takes an ecologist to notice the impact of these heavy deer populations on the forest. You had to look down at the ground and see that all the wild flowers had been eaten off. And the young trees that were coming in, like maples and hemlock—the deer just love hemlock—were being chewed right off. We were not getting plant reproduction like we should. And now where the deer are completely protected, the forests are getting terribly barren. Look at the conditions on the East Coast. You have to put hair-

“I think Dad's concept of a Land Ethic initially began in New Mexico.

is to be balanced either by wolves or man. And if we can't control that by ourselves, we are going to have to do something about introducing wolves. And we haven't done that very well, have we? There's a tremendous overpopulation of deer and elk all across the United States. It is serious.

JB: Also in *A Sand County Almanac*, your father writes about the Land Ethic in this way: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." Do you see your book as a complement to *A Sand County Almanac*, which is recognized as a classic philosophical text and memoir that has helped spur the ecological movement for nearly the past seven decades?

EL: Well, I think my father's book explains that the condition of the land can be such a delicate matter. If we misuse it, we destroy much of its beauty. My book describes the hard work of restoration ecology and the charm of observing that natural beauty. Just thinking deeply about the lovely sand hill cranes and their incredible dances and the use of their wings and their calls, it is an echo of beauty. Young children need to have that kind of exposure to natural conditions so that they can enjoy nature and fall in love with it. Dad's statement that you quoted embraces ecology and aesthetics, the beauty of the natural system.

JB: You had a front-row seat, a very special place, simply by the coincidence of your birth, being the youngest by seven years of all the children. And when your siblings moved on, you often found yourself alone with your father and mother as he was writing and editing *A Sand County Almanac*. Did he talk with you about that project while he was doing it?

EL: Yes, he did. The time you refer to was when he was writing the essay "Good Oak," which appears in *A Sand County Almanac*, as I related in my story under the title "Cutting the Good Oak." We were all so excited about that essay. And he just rattled it off one morning with his little sharp pencil and little yellow tablet. And it was such a beautiful piece. And it was bound to be in his book. And I remember him talking a

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little about how he was putting these chapters together. It took a while. It certainly was clear that some of these essays would hang together as a beautiful memoir for his interests.

JB: And you must have been excited by what you were reading as he developed his memoir.

EL: Indeed. For example, in “The Good Oak,” he just made an allegory out of here comes the axe and the saw. We’re sawing right through a ring of wood and five rings later we’re talking about the history of Wisconsin. Or another ring was the time when Marquette was exploring the Wisconsin River. Dad was making beautiful images out of basically a piece of wood, recording the time interval. It was an exciting, novel approach.

JB: And you found allegories as well in your book. Your adventures on what became known as your island and all the other stories you tell are not always revealed in his memoir. Some are foreshadowed there, perhaps. But allegories are meant for the next generations who might be curious about who their forebears were and what they were all about.

EL: It might seem silly. But it was kind of a nice exercise; wandering on the land was often an experience, especially going over to my island in the Wisconsin River, crossing a kind of creek, to the place where I decided to build little bridges out of maple logs. I’d just go and play over on the island and look at these huge cottonwood trees that were well spaced out, and a sort of open savannah with thin grass. It was kind of a sandy island. Standing on the riverbank, I could watch the current go by and see the tracks of a mink or an otter. Of course, the river otters were a lot of fun. In the snow, those tracks were joyous. The river otters would climb up on the bank and slide down into the river, run back up and slide down again. These tracks were

just hilarious. Anyway, these were joyous experiences. And I was alone. One of those times, I described the fact that the river ice was coming back down between an island next to my island and jammed up against the shore, because the distance between the two islands

“My book describes the hard work of restoration ecology and the charm of observing that natural beauty.

was narrow. The ice climbed like twelve feet in the air and made a tremendous noise. I was standing there

watching this ice, and it fell back upon itself, and just like a conveyor belt, it just kept coming. I was just thrilled and terrified. But I went back to the Shack and told Mother and Dad, and they said that that was pretty good and asked why I didn’t write about it? And I did. I wrote an essay for, I think, my ninth-grade class.

JB: And that essay, too, became a part of your book. The rebuilding of the Shack itself and the reconstitution of the area around it is fascinating, because your book tells the story from the perspective of an eight-year-old who grows up there into her teenage years. You seem fascinated by the evolution of the place that happened as you were growing up.

EL: At first, our Shack was just a little barn. It seemed like nothing when we got there. Dad had already leased the property, although we didn’t know that. We went into the Shack, and it was kind of dark. There was no door. There was a pile of frozen manure in the back of the barn. There was just one window. But we could see that the building was nicely built, because the interior had a series of beams that were carefully sculpted to fit into one another. And although some of the holes in the roof were huge, it was obvious that we could fix it up. So we did. We started right in. The boys built an original fireplace, which was hit and miss. But it worked to cook and to keep warm. But later we replaced it with a fine, handmade fireplace. It was kind

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of fun when suddenly Dad said that we should have planks to sit on all around the interior. So there were these planks the boys put into place so that you could sit in all kinds of corners, and you could put baskets of food on these planks. It was an evolving barn, that's for sure, because it became very comfortable and perfectly delightful. We loved cooking over that fire.

JB: And the other shacks that Starker, Luna, Carl, and you built on your properties in different locations in the West and Costa Rica, did they develop similarly?

EL: They were each rather different. For example, Luna—who was one of the principal architects on the Shack, too, because of the fireplace—had a very fancy construction for his shack in Pinedale, Wyoming. And he found two or three old log cabins, bought them, and had his friends and relatives come over to help him take them apart and bring the logs over to where he built quite an elaborate house with all native logs. And he built an incredible fireplace that opened into the main bedroom as well as the living room. He was just an amazing builder.

Starker's shack was just a camping spot in eastern California at a place called Sagehen Creek, the U.C. Berkeley ecological Field Station. He just used the front side of a little cliff where he built a series of wooden ledges where he could put his camping equipment and a cover that would come down in wintertime to cover it up. But it was basically a kind of a series of shelves.

And Carl's place in Cost Rica was a simple little shack that he revised a little bit. He rigged up a gravity flow pipe from the nearby creek for water.

JB: And your shack?

EL: My cabin was an original, two-room log cabin outside of Central City, Colorado, where I bought quite a

nice acreage. We had family gatherings where we built a fireplace and put a new roof on it and made it very nice. It's very much like the Leopold Shack, very simple.

JB: In your memoir and also in your father's memoir, there's a sense of the idyllic. Today, not many of us experience the idyllic in nature very often.

EL: Well, I think that it is a matter of patience. For example, a child can just wander off and begin to explore and see bugs or a beautiful flower or maybe a pool of water or birds. It is just patience and curiosity. I remember one time when Mother and Dad were taking a nap and I wandered into the woods, over the hill, and down to the wetland. And here was a tiny deer with big white spots and big brown eyes, a little fawn hiding in the bushes. And I was just so impressed, because that little creature was so beautiful and so quiet. I was very careful to back away and not frighten him, because I wanted to make sure that his mother could find him again. That I will never forget.

JB: That's a beautiful story. Would that our young could someday tell such stories, although they are experiences that cannot be replicated totally. They also must experience them.

EL: Well, there are several ways of having experiences. One way is as an ecologist who can look at a bit of vegetation and realize that it might be a nice pasture, but it has been grazed heavily and it has changed from what it used to be. You wonder whether it can be brought back more to its original condition. And, of course, that's what we were wondering at the Shack. We were trying to bring it back to something more like its original cover by planting and burning the prairie.

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rie, and so forth. But even in rough country where you have basically over-used, over-grazed vegetation, there are wonderful things to see and to hear. Even if nature isn't perfect, as in the original cover before we exploited it, it's beautiful. There are places of beauty everywhere; so we just have to be patient and look for them.

JB: Yes. And as a paleobotanist you have experienced nature that was for human beings uninhabitable, particularly in prehistorical times.

EL: Yes, the periods of severe volcanism. We've been studying such times in Colorado. And in those periods the lands were completely uninhabitable (unless you were an ant!).

JB: As human beings have come into a world that is inhabitable and that nurtures them, many have tended to ignore their natural surroundings and often to defile them, to work against their own best interests. Humans need the natural world because they belong to it. And that idea seems to me to be what your family has devoted itself to reminding us of.

EL: Yes. We certainly enjoyed the natural conditions. But when we got the Shack and its surrounding land, it was certainly in poor shape. Where we now have prairie was a depleted cornfield, and it was full of sand burrs. And you couldn't think of going barefoot there. But gradually we began to use seeds and brought in other kinds of prairie grass, and it began to change. It was perfect, but gee, it is a beautiful, flower-rich prairie now, and we are very proud of it.

JB: Estella, as we close the interview, I wonder whether you have any final thoughts about your book and how you hope it will fulfill your purposes.

EL: Sharing these kinds of observations of nature and

experiences together is kind of jolly. It's wonderful to think that perhaps some of the children will be interested in reading how it used to be in that part of Wisconsin and what can be done to enjoy it. Even an old cornfield full of sand burrs can be a challenge. But I hope that young people will enjoy seeing the experiences that some of us had. We were fortunate to be free and to wander around and take walks over this land together. And that made a very good family. Togetherness. Going birding in the spring when those warblers were coming up from the south. And you could enjoy seeing these absolutely spectacular birds coming in, not to mention the sand hill cranes. We used to have these flocks of geese. That's quite exciting, just to see, to hear, and to feel their presence. They talk to one another.

JB: Yes, and I think that your book conveys that so well. And let's hope that your book contributes to promoting the interest of future generations in what you call "familiarity with nature and togetherness."

EL: There's a group in Milwaukee that acts out parts in nature, little acts to interest children in nature. And they tell me that they are going to be using my book to stage some of the things for their audiences that happened to us at the Shack.

JB: What's the name that group?

EL: It is Kohl's Wild Theater program for the Zoological Society of Milwaukee. Dave McLellan directs a very active group of three actors, and their audiences are young kids in Milwaukee. They sent me a script that was quite amazing. It wasn't like what I had experienced exactly. But it touched on some of the things that were fun.

And I want to thank you, Jim. It's a pleasure to share with you some of the experiences that I treasure. And I

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appreciate the opportunity to expose some of the ideas I have in my book with others through this interview.

JB: It has been a great pleasure. I personally think that anyone who teaches or reads *A Sand County Almanac* should consider your memoir as a postscript to your father's classic. Your book complements that more philosophical text, and both are beautifully written. Thank you so much, Estella.

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James Ballowe, Distinguished Professor of English Emeritus at Bradley University, has taught environmental ethics and nature writing at The Morton Arboretum and the Field Museum in Chicago. For the past fifty years he has published essays, books, and poetry, concentrating on American cultural history. One of his latest books is *A Man of Salt and Trees: The Life of Joy Morton*. He serves as the volunteer Engagement Advisor for the team of the Center of Humans and Nature and edited the poetry for *City Creatures: Animal Encounters in the Chicago Wilderness*.

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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.*

W. Brown, *Undoing the Demos: Neoliberalism's Stealth Revolution* (Zone Books, 2015).

J. Osterhammel, *The Transformation of the World: A Global History of the Nineteenth Century*, P. Camiller, tr. (Princeton University Press, 2014).

C. Hamilton, F. Gemenne, and C. Bonneuil, eds. *The Anthropocene and the Global Environmental Crisis: Rethinking Modernity in a New Epoch* (Routledge, 2015).

G. M. Hodgson, *From Pleasure Machines to Moral Communities: An Evolutionary Economics without Homo Economicus* (University of Chicago Press, 2013).

W. Keane, *Ethical Life: Its Natural and Social Histories* (Princeton University Press, 2015).

C. C. Macpherson, ed. *Bioethical Insights into Values and Policy: Climate Change and Health* (Springer, 2016).

J. Rockström, *Big World, Small Planet: Abundance within Planetary Boundaries*. (Yale University Press, 2015).

B. Shapiro, *How to Clone a Mammoth: The Science of De-Extinction* (Princeton University Press, 2015).

H. Shue, *Climate Justice: Vulnerability and Protection* (Oxford University Press, 2016).

## THE LAST WORD



**BRIAN DOYLE**

### THE GOSHAWK

Here's a story. A friend of mine lives deep in the forest near the Oregon coast. He keeps a mess of chickens, as he says, choosing his words carefully to reflect the reality of living with what he calls pissy testy chippy loopy bedraggled unpredictable creatures as vain and cocky as any county commissioner you could name. In fact, he says, when I get particularly annoyed at them for one thing or another, I imagine them as tiny county commissioners stalking around in feathered jumpsuits, an image that cheers me right back up again, as does, occasionally, eating one of them, just to remind the others that the whole meal thing goes both ways. Most of the time I am just the lunk who delivers food to you, he says, but sometimes you are going to be food for me. They don't like this line of talk and they curse at me in their language, but I am injured to abuse and don't take it seriously.

To protect his chickens from weasels and minks and raccoons and foxes and coyotes he built a tall wire fence so sturdy and dense that no weasel could slip through it and no fox outwit it. I asked him about hawks and owls, and he said he figured owls and the big hawks didn't take the chickens because there wasn't enough room for approach and takeoff, what with the pen being sort of a tall narrow chute, and that the smaller raptors, the sharpshins and kestrels, were too spindly to hoist a chicken. So the raptors as a tribe never nailed his chickens, although he says he always thought there might be a real ambitious kestrel out there training for the big moment—they can hover and drop, you know, so if one of them really hit the weight room, you never know.

Then came the goshawk. A goshawk is a whopping large intent hawk who eats

not only rabbits and grouse and mice and voles but also, where possible, owls and weasels and raccoons and foxes. The goshawk is a swift burly ravenous being with paring knives for fingers and a serious jones for meat. A really big gos in the right circumstances might make a run at a bobcat or a fawn or a beaver, said my friend. I wouldn't be surprised to hear one of these days that a gos snagged a poodle or a bear cub. I wouldn't be surprised at all. You see a gos crash into a thicket at high speed, and flap out carrying the world's fattest rabbit, you arrive at maximal respect for the goshawk as someone who eats what he wants when he wants it.



Northern Goshawk

So one day I go out to chickens, he says, and there's a goshawk sitting on top of a dead chicken, right in the middle of the pen. This was not something I had ever seen before and I was startled. I was also annoyed, so I said some rude things,

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but that gos just stood there staring at me. Didn't budge an inch, and, believe you me, he or she was not afraid in the least. In fact I got the clear impression that what the gos was trying to impart to me was a message like: This is now my chicken, and I am going to hoist it out of here in a minute, and you are not going to be so foolish as to interfere with me, because that would be very foolish indeed.

You think maybe I am reading more into the situation than was actually there, said my friend, but I am here to tell you that the message was clear and inarguable. Another minute passed in silence as we stared at each other, and then I said aloud, How about you take this one and leave the others alone in the future, we'll call it a woods tax, is that fair? The hawk stared at me for another minute and then just lifted up, carrying the chicken as easy as you carry a pencil. That was a few months ago and it's interesting to me that he or she never came back for another chicken; or maybe he or she did come back and just sat on the fence thinking about taxes and poodles. Who knows? For all we know, we don't know so much.

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Brian Doyle is the editor of Portland Magazine at the University of Portland, in Oregon. He is the author of many books, among them the essay collection *Children & Other Wild Animals*.

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