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For the Love and Beauty of Nature

Stephen R. Kellert

Modern humans have in many ways lost their bearings as biological beings, as just another animal and species in the firmament of creation. Despite a contemporary emphasis on mitigating climate change, on protecting biological diversity, on preventing pollution, on sustainable development, on a green economy, we are even more separated, if not alienated, from our biological roots. In our heart of hearts, most of us view progress and civilization by how much we have seemingly transcended the constraints of our biology, become in effect a new and emergent being, one who through technology, engineering, mass production, construction, and urbanization has become uniquely created through the transformation of physical nature and the suppression of other organisms. Even our efforts at mitigating climate change, preventing pollution, achieving energy efficiency, and fostering biological conservation often promote the very technological tools and econometric models that created the disconnect from nature in the first place.

Yet until we first address how we are in the fullest sense a formative reflection of our relationship with the nonhuman world, we will

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STEPHEN R. KELLERT is the Tweedy/Ordway Professor of Social Ecology and codirector of the Hixon Center for Urban Ecology at the Yale School of Forestry and Environmental Studies. His work focuses on understanding the connection between human and natural systems. He has served on committees for the National Academy of Sciences and is a member of the International Union for Conservation of Nature Species Survival Commission Groups. He has authored more than one hundred publications, including *Building for Life: Understanding and Designing the Human-Nature Connection* (2005).

not easily resolve the linked environmental, social, and spiritual crises of our time, or avert the catastrophe that could result as much from what Richard Nelson called our "imperiling loneliness . . . that isolates us from the natural community" as from the more obvious forms of environmental destruction.[1] In effect, I am asserting that our environmental challenges cannot be addressed solely or perhaps even initially through the likes of climate treaties, cap-and-trade systems, regulating toxins, commodifying ecosystem services, new modes of global environmental governance, or other techno-policy fixes, as important and difficult as these may be. These well-intentioned acts of political engineering largely constitute Band-aids that may bring symptom relief but do not confront the underlying disease, a modern humanity fundamentally at odds with its experiential dependence on the biological world not only for material sustenance but, just as critically, for a host of emotional, intellectual, moral, and spiritual needs as well.

This lack of recognition of the necessity of emotionally and intellectually reconnecting with nature is so widespread that it often prevails even among those who profess an environmental ethic. This was dramatically illustrated to me by participating in a conference in memory of Aldo Leopold, the famous advocate of a "land ethic." Leopold described this moral imperative in this way: "An ethic to supplement and guide the economic relation to the land presupposes the existence of some mental image of land as a biotic mechanism. We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in. . . . A thing is right when it tends to preserve the integrity . . . and beauty of the biotic enterprise. It is wrong when it tends otherwise."[2] In effect, Leopold's land ethic advanced the idea that our conservation objectives must derive from a fundamental moral affinity based on understanding, appreciating, and recognizing the natural world's beauty, on loving and even spiritually connecting with that world. Despite this famous

1. Richard Nelson, "Searching for the Lost Arrow: Physical and Spiritual Ecology in the Hunter's World," in *The Biophilic Hypothesis*, ed. S. Kellert and E.O. Wilson (Washington, DC: Island Press, 1993), 223.

2. Aldo Leopold, *A Sand County Almanac, with Other Essays on Conservation from Round River* (New York: Oxford University Press, 1966), 230.

dictum, the conversation that day focused almost entirely on legal, financial, and political mechanisms for controlling climate change, the loss of biological diversity, correcting market failure by trading in nature's goods and services, and other forms of economic, engineering, and regulatory intervention. It reminded me that Leopold in his time had lamented equally well-intentioned market-oriented technical and policy fixes that attempted to make conservation "easy" but thereby risked making it "trivial."

An analogous danger exists today of believing that technological innovation, economic incentives, and legal-regulatory controls are all that matter and that emotional, cognitive, or values-based considerations focusing on our relationship to the natural world are either unimportant or secondary as a necessary step in securing a sustainable and meaningful future. I believe this perspective is not only misguided, but a self-defeating folly. We require a renewed realization of an ancient awareness that as individuals and social beings, like any species, we are formed by the quality of our relationship with the natural environment. It may help to introduce the concept of biophilia,[3] which, stated simply, asserts that humans possess an inherent biological affinity for the nonhuman world that is instrumental to their health, productivity, and well-being. The more complicated aspect of biophilia is the many ways this affinity manifests itself, from the widely recognized inclinations to utilize and exploit nature to equally important attraction and curiosity, affection and kinship, knowledge and understanding, mastery and control, moral and spiritual relation, even fear of and aversion to the natural world. All these physical, emotional, and intellectual affinities for nature are universal, genetically encoded tendencies because they confer fitness in the ancient struggle to survive and thrive. These inclinations represent a spectrum of self-interest contingent on the quality of our experiential ties to the nonhuman environment. Whether we live off the land or become investment bankers, our capacities for physical health, critical thinking, problem solving, social bonding, emotional

3. E.O. Wilson, *The Human Bond with Other Species* (Cambridge: Harvard University Press, 1984); Kellert and Wilson, *The Biophilic Hypothesis;* S. Kellert, *Kinship to Mastery: Biophilia in Human Evolution and Development* (Washington, DC: Island Press, 1997).

attachment, coping and mastery, even moral reasoning rely on a vast matrix of contacts and connections with natural process, especially during the formative years of childhood.

All these physical, emotional, and intellectual affinities, when adaptively expressed, give rise to an ethic of appreciation, love, and respect for nature that motivates us to sustain and protect it for reasons of personal and collective self-interest. As Wilson remarked in the case of biodiversity, but applicable to any environmental challenge: "A robust, richly textured, anthropocentric ethic can . . . be made based on the hereditary needs of our species, for the diversity of life based on aesthetic, emotional, and spiritual grounds."[4] If we lack a diverse base of physical and mental connection to nature, we rarely strive after its conservation, no matter the technological, economic, or policy mandate to do so. Loving nature, delighting in its beauty, extolling its exquisite complexity, and finding meaning from connecting with creation remain no less critical as motivators to sustain natural systems as reaping material gain from utilizing its goods and services or being legally exhorted to prevent its injury.

There is, nonetheless, this cant of mind that regards emotional and valuational concerns about the human relationship to nature as impractical and romantic preoccupations lacking the realism of the only real motivators of action—desire for material gain or fear of environmental catastrophe. There is also the simplistic notion that calling for a renewed relation to nature focuses only on the outdoors in typically undisturbed surroundings lacking humans. On the contrary, the promotion of emotional, intellectual, and spiritual affinities for the natural world is all about self-interest and practicality, and these experiential ties can and must occur in representational ways, indoors, and in the urban built environment as much as through direct experience of the wild.

I return to the Leopold conference by way of illustration. The meeting occurred in the recently completed LEED Platinum–designated building of the Yale School of Forestry and Environmental Studies, the building a new standard of "greenness" measured by such standards as

4. E.O. Wilson, "Biophilia and the Conservation Ethic," in Kellert and Wilson, *The Biophilic Hypothesis*, 38.

energy efficiency, carbon neutrality, recycled and recyclable products, nontoxic materials, renewable power, and other low-environmental-impact features. Yet the building also incorporated many *biophilic* design features that sought a positive connection to nature in the built environment.[5] The meeting room, for example, was distinguished by its great spacious vaulted space, its curved ceiling, the extraordinary degree of natural lighting even on that dark rainy day, its extensive natural materials, the fractal geometry of its oak-paneled walls and laminated Douglas fir arches, and other biophilic design features. I asked the audience whether they liked the room and whether they thought Leopold would have enjoyed being educated there. All answered in the affirmative. I asked how they might respond to the room if it had equivalent energy efficiency and carbon-mitigating features but instead was a box, artificially lit, served by processed air, with no windows and no good views. How would they experience that room after two, four, six, eight hours? Might they become restless, fatigued, afflicted (as has been found elsewhere in such rooms) by itchy skin and sore, scratchy eyes?[6] Would they choose to be there the next day or in the future? If they were permanent occupants of the building, would they be motivated to sustain the structure and recycle it generation after generation once the low-environmental-impact features had been surpassed by new innovations?

My point was that the room's biophilic design features, its deliberate attempt to forge a positive connection to nature, was all about practicality and self-interest. The building was a modern structure in an urban setting, but it remained a reminder, whether the occupants recognized it or not, of our evolutionary biology in a natural, not artificial world. Being sustainable means keeping something in existence, and we only sustain those things we feel a deep affection and attachment for because we perceive that their special qualities convey enduring meaning and value. Long before the lawsuits are filed, the regulatory standards are promulgated, the global policies are forged, a necessary step is the commitment that derives from a sense of con-

5. S. Kellert, J. Heerwagen, and M. Mador, eds., *Biophilic Design: The Theory, Science, and Practice of Bringing Buildings to Life* (New York: John Wiley, 2008).

6. S. Kellert, *Building for Life: Designing and Understanding the Human-Nature Connection* (Washington, DC: Island Press, 2005).

nection to the spaces and places we inhabit as organisms. As Leopold admonished:

> There must be some force behind conservation, more universal than profit, less awkward than government, less ephemeral than sport, something that reaches into all times and places . . . something that brackets everything from rivers to raindrops, from whales to hummingbirds, from land-estates to window-boxes. . . . I can see only one such force: a respect for land as an organism . . . out of love for and obligation to that great biota.[7]

The conference participants nodded their heads in polite recognition of what I had tried to express. Soon enough, however, they returned to the "hard" stuff of whether to impose a cap-and-trade system, establish regulatory mandates to correct environmental injustice, implement more punitive punishments to correct environmental misdeeds, or create a new system of global environmental governance. They seemed certain that only in these ways could they realize Aldo Leopold's vision of a more environmentally just and harmonious world.

7. Leopold, *A Sand County Almanac*, 198.