



Foreword to *Ecological Literacy*

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The most important discovery of the past two centuries is that we are joined in one fragile experiment, vulnerable to happenstance, bad judgment, shortsightedness, greed, and malice. Though divided by nation, tribe, religion, ethnicity, language, culture, and politics, we are co-members of one enterprise stretching back through time beyond memory, but forward no further than our ability to recognize that we are, as Aldo Leopold once put it, plain members and citizens of the biotic community. This awareness carries both an imperative and a possibility. The imperative is simply that we ought to pay full and close attention to the ecological conditions and prerequisites that sustain all life. That we seldom know how human actions affect ecosystems or the biosphere gives us every reason to act with informed precaution. And, because of the scale and momentum of the human presence on Earth, it is utter foolishness to assert otherwise.

There is, too, the possibility that in the long gestation of humankind we acquired an affinity for life, Earth, forests, water, soils, and place, what E. O. Wilson calls “biophilia.” That is more than a defensible hypothesis—it is the best hope for our future that I know. For real hope, as distinguished from wishful thinking, we ought not look first to our technological cleverness or abstractions about progress of one kind or another, but rather to the extent and depth of our affections, which set boundaries to what we do and direct our intelligence to better or worse possibilities. The possibility of affection for our children, place, posterity, and life is in all of us. It is part of our evolutionary heritage. It is embedded in all of our best religious teachings. And it is now a matter of simple self-interest that we come to realize the full extent of the obligations that arise from an alert, thorough, and farsighted affection.

Perhaps biophilia helps to explain the rise of something that is beginning to look a great deal like a worldwide ecological enlightenment. The global transition to wind and solar energy systems has begun in earnest. Sustainable agriculture and forestry are gaining ground. The art and science of energy-efficient building is flourishing. The possibilities for transforming manufacturing and technology to mimic natural systems are revolutionary. The science of ecological healing and restoration has made significant progress. And the most exciting career opportunities that I know add the word “environment” to fields such as design, planning, medicine, business, law, journalism, education, agriculture, and development. Small nongovernmental organizations such as the Rocky Mountain Institute,

the Center for Ecoliteracy, Schumacher College, Ecotrust, the Jane Goodall Center, and Ocean Arks are influential worldwide. The Internet is opening new possibilities for citizens of the world to cooperate, spread ideas, and hold governments accountable. Still, I think H. G. Wells had it right when he said that we are in a race between education and catastrophe. This race will be decided in all of the places, including classrooms, that foster ecological imagination, critical thinking, awareness of connections, independent thought, and good heart.

For its part environmental education is becoming well established in nonprofit organizations, public agencies, schools, colleges, and universities. The words “environmental education,” however, imply education about the environment, just another course or two, a curricular outbuilding to the big house of formal schooling where the really important things go on. We will have to aim toward a deeper transformation of the substance, process, and scope of education at all levels. The term “ecological literacy” identifies that goal, which is built on the recognition that:

- The disorder of ecosystems reflects a prior disorder of mind, making it a central concern to those institutions that purport to improve minds. In other words, the ecological crisis is in every way a crisis of education.
- The problem, as Wes Jackson once said of agriculture, is one of education, not merely in education.
- All education is environmental education...by what is included or excluded we teach the young that they are part of or apart from the natural world.
- The goal is not just mastery of subject matter but making connections between head, hand, heart, and cultivation of the capacity to discern systems—what Gregory Bateson once called “the pattern that connects.”

An ecologically literate person would have at least a basic comprehension of ecology, human ecology, and the concepts of sustainability, as well as the wherewithal to solve problems. Taken to its logical conclusion, the goal of making all of our students ecologically literate would restore the idea that education is first and foremost a large conversation with technical aspects, not merely a technical subject. Whatever the state of our pedagogical research, the life of the mind is and will remain a mysterious and serendipitous process only somewhat influenced by formal instruction (sometimes to no good effect). As a large conversation, we would restore to the subject of education the importance that every great philosopher from Plato, through Rousseau, to Dewey and Whitehead assigned to it. Education, as they knew, had to do with the timeless question of how we are to live. And in our time the great question is how we will live in light of the ecological fact that we are bound together in the community of life, one and indivisible.