

from Holmes Rolston, *Conserving Natural Value*
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5. MANAGING THE PLANET?

It is all very well, in philosophical moments, to muse over Mother Earth; but—comes the protest—in practice, when we really come down to earth, we humans have got to manage the planet, especially from here onward. William C. Clark writes, in a *Scientific American* issue devoted to “Managing Planet Earth,” “We have entered an era characterized by syndromes of global change that stem from the interdependence between human development and the environment. As we attempt to move from merely causing these syndromes to managing them consciously, two central questions must be addressed: What kind of planet do we want? What kind of planet can we get?” (1989:47–48). Those questions do not preclude nonanthropocentric answers, but, coupled with the “management” intent, they strongly suggest that humans are being asked what they want out of the planet, and the planetary managers will figure out how to get it for them. That puts humans “at the center of concerns,” consciously manipulating the planet’s future. The root of *manage* is the Latin “manus,” hand. Humans will handle the place. Now this does begin to sound like the end of nature, the replacement of spontaneous nature with a new epoch of deliberate control, humanizing the Earth.

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This urge to manage may be coupled with doubts about Mother Nature. Once we had visions of a Mother Nature that was "sensitive, efficient, purposeful, and powerful," but now, thanks to science, we know the cold truth: "Mother Nature cannot keep the environment in tune because she does not exist." So claims Frederick E. Smith, a Harvard professor of ecology. Though this is spaceship Earth, "in the final analysis nothing is guiding the ship" (1970). No wonder, then, that human-introduced changes, when they reach levels of global significance, unsteady the Earthship all the more. The only answer is to take control. *Homo sapiens* is the professional manager of an otherwise drifting, valueless world.

We live in a new age, continues another Harvard professor, Emmanuel G. Mesthene, director of the Program on Technology and Society. Because of our power and our conscious management, "our age is different from all previous ages. We are therefore the first age that can aspire to be free of the tyranny of physical nature that has plagued man since his beginnings." "Nature is coming increasingly under control as a result of restored human confidence and power" (1966:482, 491-492).

While the UNCED Earth Summit was meeting in Rio de Janeiro, 218 scientists, including 27 Nobel laureates, issued an appeal to the 118 heads of state gathered there to "beware of false gods in Rio."

We want to make our full contribution to the preservation of our common heritage, the Earth. We are however worried, at the dawn of the twenty-first century, at the emergence of an irrational ideology which is opposed to scientific and industrial progress and impedes economic and social development. We contend that a Natural State, sometimes idealized by movements with a tendency to look toward the past, does not exist and has probably never existed since man's first appearance in the biosphere, insofar as humanity has always progressed by increasingly harnessing Nature to its needs and not the reverse. We fully subscribe to the objectives of a scientific ecology for a universe whose resources must be taken stock of, monitored and preserved. But we herewith demand that this stock-taking, monitoring and preservation be founded on . . . Science, Technology and Industry whose instruments, when adequately managed, are indispensable tools of a future shaped by Humanity, by itself and for itself, overcoming major problems like

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overpopulation, starvation and worldwide disease. ("Beware of False Gods in Rio," *Wall Street Journal*, June 1, 1991, p. A12)

There is an almost religious fervor here, indicated by the warning against false gods, against irrational romanticism, and by capitalizing Science, Technology and Industry. But the trouble is that we can also idolize the latter too, and humanity by itself and for itself may be only another irrational romanticizing, now of the human place in the world.

Now we have turned almost 180° from the view we had before, even though both views pretend to come out of science. "Managing the planet by and for ourselves" commits the opposite error to "the Gaia hypothesis." The one view is managerial: the earth is inert like the clay on a potter's wheel, worked by the potter's hands. Science is said to teach us that. The other view is mythical: there is something spooky about the planet, best caught by echoes of an ancient goddess, and this can be demythologized and verified by hard atmospheric and biological science. The planetary manager is still a Cartesian at heart, with a dualist worldview: the objective planet out there, matter in motion, contrasted with the self-conscious, human subject, the "I" collected now into a "we" who manage. The image is of a driver in an automobile, of a mind in a body, with humans the minds who manage the otherwise-managerless and often recalcitrant world. The Gaia view is of a world that can manage itself, and has done so for several billion years.

Well, all that is philosophically interesting. But let's face the facts. Humans now control 40 percent of the planet's land-based primary net productivity, that is, the basic plant growth that captures the energy on which everything else depends (Vitousek et al. 1986). The whole point of the worry that we have reached "the end of nature" is that humans have affected everything; there is no pristine nature anymore. Those effects are, the would-be managers worry, more often than not detrimental. We intervene ineptly. Robert Goodland, in a study for the World Bank, found that 35 percent of the Earth's land now has now become degraded (1992). Surely our only option is to intervene more intelligently—to manage the planet.

Now certainly no one wishes to oppose more intelligent intervention, and we have everywhere in our argument advocated culture in

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 harmony with nature, both remaking landscapes and fitting in, relatively, with the natural givens. We want a sustainable society, with its health and integrity, superposed on a natural world, also with its health and integrity. But we are not so sure that managing the recalcitrant planet is the apt paradigm, besides which all the other ideologies are backward romanticisms. Why not, for instance, think of ourselves as authors who are writing the next chapters, or residents who are learning the logic of our home community, or of moral overseers who are trying to optimize both the cultural and the natural values on the planet? Is our only relationship to nature one of engineering it for the better? Perhaps what is as much to be managed is this earth-eating, managerial mentality that has caused the environmental crisis in the first place.

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 Penultimately, management is a good thing; but, ultimately management is no more appropriate for Earth than for people, because it only sees means not ends. The scientific managers still have the value questions on their hands. On planetary scales, and even on continental and regional scales, it is not so clear that we really do want to manage the environment; rather we want to manage human uses of the environment so that they are congenial to letting the planet go on managing itself. We do say of an Iowa farmer who plows and plants his fields that he is managing his land, but when the sun shines and the rains fall, and the seed grows in the ear, the farmer is fitting his operations in with what is going on over his head and outside his managing hands. We do not just conserve natural value by managing it; we manage ourselves to let natural values continue to flow.

Managers do not really dwell in an environment; they only have resources, something like the way in which bosses, as such, do not have friends, only subordinates. Even the most enlightened exploiters, *qua* exploiters, do not live as persons in a community; they are not citizens of a world, only consumers of materials. They reduce their environment to resource and sink. The environment, of course, must be this much, but it can be much more. But proportionately as the development ethic increases, the environment is reduced to little more than exploited resource.

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 Let us envision a greatly accelerated management of Earth. Keeping people well fed seems like a good thing, as does the cure of human diseases—but if and only if we can manage ourselves to keep popula-

tions within the capacity of their landscapes. We will need to manage our soils, to keep irrigation systems in repair, and so on. But after that, do we want more rain here and less there? More rainforest and less desert? Do we want to modify the climate, and have our weather programmed by the meteorologists? Or by national policy? Would we like to have more summer and less winter, or the other way around? More spring and less fall? Less wind? More clouds? More or fewer islands? Mountains? Plains? Canyons? Volcanoes? We want more lakes, apparently, for we often build them. But do we want more rivers? Do we want different species of fauna and flora, or here more and fewer there? More birds? Fewer snakes? Bugs? We want fewer earthquakes and hurricanes, presumably, but do we want fewer forest fires? Snowstorms? Would we like to have nature less spontaneous and more orderly, or more spontaneous and less orderly? More diverse? Less complex? Should we leave these decisions to the planetary engineers?

We are not so sure; it is already a rather congenial home planet. We cannot take nature ready to hand, but we can remake it for the supporting of agriculture, industry, culture. After that, perhaps, on the larger planetary scales, it is better to build our cultures in intelligent harmony with the way the world is already built, rather than take control and rebuild the planet by ourselves and for ourselves. Donald Ludwig, Ray Hilborn, and Carl Walters say, rather provocatively, "It is more appropriate to think of resources as managing humans than the converse" (1993:17). We worry a little about those who would play God—not that we should not intervene in nature's course for our own good. But there is indeed a danger of false gods, and an overweening trust in "Science, Technology, and Industry" may result in too little trust in "Mother Earth" after all.

If the symbol of "Mother Earth" still seems unscientific, we can use our alternate vocabulary: the aim of the planetary manager is to have human genius manage the system, but there is already a considerable "genius" in the system. Is man the engineer in an unengineered world? The word *engineer* comes from the root *ingenium*, an innate genius, an inventive power, and hence our word *ingenious*, "characterized by original construction." Etymologically again, *nature* and *genius* (and hence *engineer*) come from the same root, *gene (g)nasci, natus*, to give clever birth. In that sense there is ample inventive and engineering

power in nature, which has built Earth and several billion species, keeping the whole machinery running, with these species coming and going, for billions of years.

Who built the engineers, with their clever brains and hands, with which they propose now to manage the planet? Isn't building people out of protons a rather ingenious natural achievement? Maybe we should reconsider our models. Nature is not the antithesis of engineering; it is the prototype of ingenuity. Engineers and managers cannot know what they are doing until they know what they are undoing. We ought to spend adequate effort making sure we know what a place is, especially if it is the only home planet, before we decide to remake it into something else. Hands are for managing, but hands are also for holding in loving care.

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6. BALANCING GLOBAL NATURAL AND HUMAN CULTURAL VALUES

We began with ten principles to help achieve a balance of culture and nature (see chapter 1, sec. 9); as we close our inquiry, we expand those to ten more.

1. *Conserving natural value is a fundamental principle of international law.* The first ten principles of international law are all humanistic and nationalistic, understandably so, since relating people to people, nation to nation, has been the chief task of ethics. That imperative continues. The eleventh principle is novel because it moves outside the human and national sectors to the natural history that makes human life possible. Before, people and nations hardly had any duties at the global level, because they hardly had any powers to act for worse or better. But now they do; and that is why, during our lifetimes, protecting the natural environment is becoming a new, fundamental principle. Protection of the environment, which is the last, because the most recent, should be the first, because most fundamental international interest. The fate of the Earth is more important than nation, or sovereignty, or rights, or freedom, or democracy, or economics, because it is foundational to them all.

2. *Emphasize global nonrival cultural and environmental values.*

We began with this principle and met it again with ecosystem health (chapter 1, sec. 9; chapter 3, sec. 6). Now we apply it at the planetary level. Viewing Earth from space, there really is no doubt that nature and culture have entwined destinies. There are two truths to be kept in tandem: culture is a radical emergent from spontaneous nature, and culture forever requires the support of spontaneous nature. We cannot be free from our environment, only free within it. The oceans, the ozone layer, the atmosphere, the waters, the continents, shorelines, islands, landscapes, the world heritage of biodiversity, the wildlife, species, germplasm lines, the universal right to an environment with integrity—none of these can, from here onward, be compromised without deep, long-term cultural loss that outweighs any modest, short-term gains. On global scales, no nation, no culture, no people really win when the whole Earth loses. With the goalposts in the right place, no evil comes to those who care for the Earth.

3. *Foreign affairs are domestic affairs in a global Earth ethics.* If the issue is saving the Earth we do not have any foreign policy, because Earth is not a foreign country. If a particular action affects the Amazon, that is Brazilian domestic policy, but it is inseparable from the domestic policies of the other eight nations whose boundaries include the Rivers Amazon. And, since the Amazon drains nearly a quarter of all the freshwater runoff on Earth, and since the photosynthesis in the Amazon is significant on global scales, and since a disproportionate percentage of the Earth's biological richness is at stake there, what happens there is really domestic policy for Earthlings in the United States. Voting as Earthlings is more important than voting as Americans, Brazilians, or Germans.

4. *Common natural resources are more fundamental than national and private resources.* The health and integrity of the global environment are not values that people or nations should let themselves become rivals about because they are not national or private resources. We need to think of these as world resources that belong to us all, even though nations and persons may legitimately control access to propertied natural resources. On global scales, nations are almost as ephemeral as persons. The common natural heritage is only temporarily to be appropriated as national property, under the constraint of its conservation for the good of the whole planet. In a fundamental sense, Earth, and its richness, is something