CHAPTER 1

Introduction

Ethics, University, and Environment

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THE EARTH SUMMIT IN CONTEXT

Siting the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, was a stroke of genius. Brazil is home to the Amazon basin—the heart and soul of "environment." And it is a "developing country," with mining, manufacturing, industrial agriculture . . . and pollution, deforestation, and a huge foreign debt. Subtly symbolizing the conference theme, moreover, Brazil's most famous city, Rio, is beautifully integrated into its physical setting. Its several precincts nestle into expansive coves and valleys lying between towering mountain ridges that reach right down to the sea. The Tijuca National Park—admittedly but a tiny remnant of South America's once vast Atlantic coastal rain forest—is accessible by municipal buses. Unlike New York, Paris, or Beijing, the city does not dominate the landscape. Indeed, quite the contrary. Physically, Rio palpably embodies the ideal of sustainable development.

Of course, "sustainable development" means different things to different people. For neoclassical economists, it may mean little more than sustaining "growth" and inventing artificial substitutes for exhausted natural resources. Most profoundly, "sustainable development"—the watchword of the Earth Summit—signifies the rediscovery by postmodern global civilization of a truth so well understood by premodern peoples that hardly any of them bothered to articulate it: The human economy is embedded in nature's economy—in local and regional ecosystems and ultimately in the whole Earth's biosphere. Hence, all human economic activities are limited by ecological exigencies. To be choice-worthy, therefore, any development scheme must be ecologically as well as economically feasible. Rio's natural setting is irrepressible, symbolizing the futility of the distinctly modern dream of dominating nature by means of human artifice.

Today, however, Rio de Janeiro is a city on the brink of socioeconomic collapse. A gradual but massive shift from small-scale, subsistence farming to large-scale, export-oriented agriculture has driven Brazilian peasants off the land and into the cities. In theory, that's fine. A relatively cheap urban labor force is supposed to help spin the wheels of industry. The conventional economic growth scenario—in which sufficient urban manufacturing jobs materialize to employ the displaced rural population—somehow did not happen in Brazil (as, for that matter, in many another developing country). Thus, unemployment and desperate urban poverty are rampant. Slums grow like malignant tumors on the steep slopes around Rio's affluent seaside neighborhoods such as Botafogo, Copacabana, and Ipanema. Abandoned children, hungry and homeless, prowl Rio's streets like wild predatory animals. And they are occasionally shot down as vermin by assassination squads hired by irate shopkeepers. This too is symbolic. Sustainability implies social as well as ecological health and integrity. To be choice-worthy, any development scheme must be socially feasible in addition to being economically and ecologically feasible.

The timing of the Earth Summit during the quincentenary of Christopher Columbus's maiden voyage of discovery is also significant. Columbus is no less a paragon of modernity than are his contemporaries, Francis Bacon, Galileo Galilei, and the other oft-named founding figures of the period. The Columbian quincentenary was greeted on the Atlantic Rim with mixed emotions—at best. Indeed, for many peoples indigenous to the Americas, Columbus materialized as a hated harbinger and symbol of colonial oppression, and the five-hundredth anniversary of his voyage became something to lament not to celebrate. The coincidence of the Earth Summit and the quincentennial of cross-Atlantic cultural contact and conquest marks a passage: the passage from nationality to globality and from modernity to postmodernity.

In retrospect, the Earth Summit may appear to have been a dismal failure. At preconference negotiations, the United States, under the Bush administration, gutted the global climate agreement by insisting on the elimination of targets (such as 1990 levels of carbon emissions) and timetables (such as by the year 2000). And George Bush defied world opinion by flatly refusing to sign the biodiversity treaty. The United States added insult to injury by cynically promoting a forest convention. To halt global deforestation is certainly a laudable goal. But many suspected that the U.S. negotiators were insisting that the South conserve its forests to serve as a sink for unrestrained CO_2 generation in the undisciplined industrialized North. (The Bush administration seemed untroubled by the inconsistency of its foreign forest policy with its domestic forest policy of clear-cutting old growth temperate rain forest in the Pacific Northwest of the United States.)

Of course, the South must share part of the blame for a disappointing Earth Summit. Conspicuously absent from the Rio agenda was an agreement to curb human population growth—the ultimate cause, in the eyes of many environmentalists, of all Earth's ecological woes. The role of the Vatican in keeping human overpopulation off the negotiating table has probably been exaggerated. Halting population growth involves much more than making birth control devices and abortion universally available. Turning the tide of human population increase implies social security, in the broadest sense of the word, and the emancipation of women. For far too many people, children are their only investment in the future and their only hope for a secure old age. For far too many women, children are their only source of social- and self-esteem. In the South, effective population control might involve land reform; improved education, especially for women; improved sanitation and health care; and, in general, more equitable access to resources, including economic opportunities for women. These are all incendiary cultural and political issues, quite unmentionable in the polite company of many Southern ministers of government. When the human population problem was squarely confronted in 1994 at the United Nations Conference on Environment and Development (UNCED) follow-up conference in Cairo, some governments boycotted the proceedings.

Soon after his inauguration as President of the United States, Bill Clinton signed the UNCED biodiversity convention. But in our opinion, as philosophers, the details of the treaties, and whether they were signed by all parties to the negotiations, will fade in importance. Of lasting importance will be the monumentality of the event itself and the institutionalization of an idea. In June of 1992, in Rio de Janeiro, virtually all the world's heads of state met for the first time—ever—not to create or dismantle military alliances, not to discuss currency and banking reform, and not to set up rules of world trade, but to try to agree to care for the planet's biosphere. And the idea that was ratified, however little agreement was achieved on how to implement it, is this: Environment and development are inextricably linked. Human economies are subsystems of natural economies. Hence, genuine economic development—sustainable development—cannot be achieved without safeguarding the environmental infrastructures in which human economies are embedded.

THE PORTO ALEGRE PRECONFERENCE

As head of the department of philosophy at Brazil's Federal University of Rio Grande do Sul in Porto Alegre, one of us (da Rocha) seized the opportunity presented by UNCED, soon to be held in his country, to convene a select academic preconference that might put the Summit in philosophical perspective. The purpose of this preconference was twofold: first, to celebrate and to influence the historic meeting in Rio de Janeiro; and second, to nudge philosophy and university education onto a new course. The preconference theme was to be clear and straightforward: Ethics, University, and Environment. In addition to the usual volume of proceedings, this preconference was to have another product: a statement of consensus, composed and signed by the principals, to be entered into the UNCED record. It is included as an appendix to this collection of papers.

Environmental philosophy had emerged simultaneously and independently in Australia, Europe, and North America during the early

1970s. At first, it was professionally ignored as an ephemeral fad in the (now passé) rush to curriculum reform in the name of "relevancy." But the environmental crisis—which had wakened many a complacent modern from dogmatic slumber—persisted, and its perceived gravity increased with the discovery of a hole in the atmospheric ozone layer, the imminence of rapid global warming, and the threat of abrupt massive species extinction. And, as the environmental crisis settled in to become a permanent (however unwelcome) fact of modern life, the challenge it posed to the fundamental assumptions and tenets of the modern worldview grew ever more apparent. Environmental philosophy, no less than the environmental crisis, was here to stay and could no longer be snubbed by the mandarins of academe.

In Europe, German, French, and Spanish philosophers had joined, by the early 1990s, their British and Scandinavian counterparts in addressing the new environmental problematique. Also by then, in Latin America, a strong environmental current was running in the International Development Ethics Association (IDEA). Thus, a genuinely international and multilingual Atlantic Rim preconference on Ethics, University, and Environment could be convened on the eve of the Earth Summit. With the help of Peter Madsen, a friend and colleague at the Center for the Advancement of Applied Ethics at Carnegie Mellon University, da Rocha invited leading environmental philosophers from the United States, Canada, Great Britain, France, and Spain to come to Porto Alegre, a Brazilian city about a thousand kilometers south of Rio de Janeiro, in late May of 1992. To represent his own country, da Rocha also invited Brazil's beloved but controversial Environment Secretary José Lutzenberger. But by the time the preconference was convened, Lutzenberger had been fired—rather than commended—for exposing corruption in his department and for having had the temerity to suggest that Brazil might be wiser to refuse economic aid from the North rather than accept it. Thus, Lutzenberger speaks here as one of us, a private environmental philosopher, not as an official representative of the Brazilian government.

TOWARD AN ATLANTIC RIM RECONSTRUCTIVE POSTMODERNISM

The Pacific Rim has lately received a lot of attention. The emergence of Japan as an economic giant; the bid by Taiwan, South Korea, Hong Kong, Singapore, and Malaysia to compete commercially in the same region; the economic liberalization of China; the shift in the cultural balance of power from the East Coast to the West in the United States—all these and many other phenomena of the late twentieth century have diverted the spotlight of world attention from the Atlantic basin to the Pacific. In response to this "Pacific Shift," one of us (Callicott) coedited (with Roger T. Ames) a volume of essays on comparative environmental philosophy, *Nature in Asian Traditions of Thought*, for this Press.

With the spotlight cast elsewhere, intellectual development on the Atlantic Rim seems to have stagnated or sunk into decadence. After Ordinary Language Analytic philosophy peaked at midcentury in Britain, what exciting new development has come out of Oxbridge? After the decline and fall of the Soviet Union and the unsavory mix of totalitarian authority and capitalist entrepreneurism in China, who in France or Spain can take the drab Marxist visions of an industrial utopia as serious social, economic, and political goals? When one thinks of contemporary Atlantic Rim philosophy one cannot help but think of Poststructuralism or Deconstructive Postmodernism. But what is that except a sophisticated and convoluted form of cynical nihilism?

There is, however, a fresh intellectual breeze beginning to blow around the Atlantic basin. The raucous and debauched wind of Deconstructive Postmodernism has all but drowned out a more responsible and creative movement on the Atlantic Rim, Reconstructive Postmodernism. As conceived by Frederick Ferré and David Ray Griffin, among others, Reconstructive Postmodernism is not content simply to criticize Modernism and declare that there will be no new master narratives—no new *New Organon*s, *Meditations* or *Principia*s to set the course for generations to come. Rather, Reconstructive Postmodernism aims to create a new worldview that is consistent with the still ongoing scientific revolution that commenced at the beginning of the twentieth century—just as the modern worldview accommodated the mechanistic scientific revolution of the sixteenth and seventeenth centuries. Perhaps not all domains of contemporary science are pregnant with profound religious, metaphysical, and ethical implications. But quantum theory and general relativity in physics and the theory of evolution and ecology in biology certainly are: Quantum theory will eventually alter forever our foundational concepts of both reality and knowledge; general relativity will, just as permanently, alter our equally basic concepts of space, time, and motion; evolution will alter our sense of what it means to be a human being; and ecology will alter our understanding of terrestrial nature—revealing an experiential world as dynamic, interrelated, and whole as the microcosm beyond the reach of our human senses and the macrocosm beyond our powers of imagination.

This volume contributes to the Reconstructive Postmodern movement on the Atlantic Rim. The twentieth century's environmental crisis is terrestrial nature's implacable critique and rejection of the modern paradigm. A genuine and lasting environmental philosophy will, therefore, necessarily be postmodern. And it will necessarily be cast in the reconstructive mode of postmodernism. From its inception, environmental philosophy has responded to the challenge posed by the environmental crisis to rethink the fundamental assumptions of Modernism that the environmental crisis has called into question. There is no more survival value in nihilism than there is in pessimism. If we believe that we are doomed, then we have no incentive to act to forestall our fate. Only if we believe that we have some hope of success will we attempt to reconstruct a worldview—a cognitive framework for living in the world—that is more accommodating and adaptive. Similarly, if we believe that the environmental crisis, along with everything else, is just a socially constructed phenomenon, then we can hardly take it so seriously as to propose painfully reconceiving and reorganizing unsustainable and debilitating human relationships with the natural world. A transfer of power from the human haves to the human have-nots is all that most deconstructive postmodernists demand. But the environmental crisis is no more a socially constructed malaise of the planet Earth than are AIDS and lethal hemorrhagic fevers socially constructed afflictions of the human population. A reconstructive, not a deconstructive approach to its solution is the only adequate intellectual response.

Pacific Rim environmental philosophy is comparative along a temporal as well as spatial axis. The varied and quite disparate and diverse Asian traditions of thought about nature are severally compared with contemporary Western scientific ideas in the manner pioneered by Fritjof Capra in the *Tao of Physics*. Comparison, in other words, runs not only along the East-West axis, but along the past-present axis, as well. Capra, of course, only blazed the trail; his now classic study has been supplanted by more focused, refined, and critical discussion. But nearly all Pacific Rim environmental philosophy is turned toward the past as well as the East and hopes to recover the environmental wisdom or proto-ecological insights in the classical texts of Asian philosophy and religion.

Atlantic Rim environmental philosophy, on the other hand, is generically Western, with specific variations flowing from linguistic and historical affinities—French, Spanish, German, and English, the last divisible into North American and British subspecies. And Atlantic Rim environmental philosophy remains essentially forward-looking, though it may occasionally turn to its rich intellectual heritages for inspiration and conceptual resources, and draw, as occasion suggests, upon Rousseau, Ortega, Spinoza, Hegel, Hume, Whitehead, or Dewey. With the problematic exception of the pre-Socratics, past Western philosophers are not assumed to have articulated some more recently forgotten environmental wisdom or to have cryptically encoded some proto-ecological insights. Indeed, quite the contrary. The assumption is, rather, that Western traditions of thought are more a part of the problem than the solution. And the goal is to raze the old structures, just as Descartes conceived his own project, and to rebuild from the foundations. In the present case, however, the modern worldview that Descartes and his contemporaries fashioned is the decaying conceptual architecture scheduled first for demolition and then for replacement by something new. Since, in this period of transition, we are not quite sure what form the new intellectual construct will take, we remain cautious and call this interregnum "postmodernism" while we wait for something more definitely and certainly characterizable to take shape.

The preoccupation with traditional Asian thought in Pacific Rim environmental philosophy distracts attention from contemporary economic and political realities and their cognitive foundations in Asia, Australia, and the North American West Coast. As attention is drawn, for example, to Lao Tsu's *Tao Te Ching* or to Dogen's *Shobogenzo* one may be led to ignore, as philosophically uninteresting or temporally parochial, the unregenerate instrumentalism and industrialism of the (non)Marxist regime in contemporary China; the virtually manneristic capitalism of Japan, Taiwan, Hong Kong, Singapore, and South Korea; and the metamorphosis of Los Angeles from the city of American dreams-come-true into a congested, polluted, drug-ridden nightmare. And on the Pacific Rim—since such Asian economic "tigers" as Hong Kong and Singapore lie in tropical latitudes and New Zealand and Australia, two well-developed countries, lie farthest to the south—the North-South struggle, which was so evident in Rio, is blurred and muted.

Atlantic Rim environmental philosophy, on the other hand, being generically Western and utterly contemporary, is quite alive to current political and economic questions. Except in India (if India counts as in the Pacific ambit), modern industrial development is only implicitly challenged by East-West comparative environmental philosophers. On the Atlantic Rim, as in India, however, what counts as development and just who benefits and suffers from different conceptions of and approaches to development and environmental conservation are hotly debated. Such political and economic concerns are as intimately tied to the principal project of Atlantic Rim environmental philosophy—to reconstruct the Western worldview—as concern about the impact of modernity on nature.

This positioning of reconstructive postmodern philosophy on the Atlantic Rim in reference to comparative environmental philosophy on the Pacific Rim is not intended to be invidious, only informative. The Earth Summit was a global event, drawing representation from South, North, West, and East. The philosophical response to the worsening environmental crisis must be equally multifaceted. That we value the contribution of comparative environmental philosophy on the Pacific Rim is attested to by the fact that one of us has facilitated the development of that movement and contributed to it. Rather, reconstructive postmodern philosophy on the Atlantic Rim is intended to complement the strengths of comparative environmental philosophy on the Pacific Rim. And both should be regarded as but partial philosophical contributions to the solution of global environmental problems. The contribution of indigenous thought—that of Australian aboriginal and American Indian peoples, for example—is not especially well integrated into either Pacific Rim comparative environmental philosophy or Atlantic Rim Reconstructive Postmodernism. The current environmental crisis calls for an intellectual analogue of the global ecosystem—a variety of approaches that, though apparently competing, are, more deeply, complementary.

THE PORTO ALEGRE PAPERS

The lead chapter of this volume by José Lutzenberger exemplifies all the characteristics just mentioned of Atlantic Rim environmental philosophy; and it artfully unites them with the purpose of the Porto Alegre preconference—which, again, was to link environment and ethics through university education and research. As a shaper of Brazil's domestic environmental policy and a negotiator of bilateral and international environmental agreements, Lutzenberger is keenly aware of both the convergences and divergences of interests North and South. He is also well aware that the prevailing global political and economic ambience is deeply embedded in the modern worldview and that that worldview is intellectually bankrupt and ripe for revolutionary reform. One of the most pleasant surprises of these Porto Alegre papers is the philosophical acumen exemplified by a once high-ranking minister of government. Lutzenberger is for Brazil in the 1990s what Stewart Udall was for the United States in the 1960s—a deep ecologist with formidable political influence. We philosophers welcome him as one of us, and he finds himself quite at home in our company.

Particularly insightful are Lutzenberger's reflections on the difference between ancient and modern technologies. The former were open to understanding by the uninitiate; they were "transparent." The latter are so sophisticated that only experts have the vaguest clue how they work; they are "opaque." Thus they render laypersons dependent, and they invest a subtle power and control in "technocrats" who serve plutocrats. Lutzenberger's critique of technocrats, the economic system they serve, and the system of education that serves them is profound and devastating.

On the other hand, many of us who are schooled in philosophy may find some of Lutzenberger's claims about the difference between technology and science, the value-laden assumptions characteristic of each, and the commitments and methods typical of each to be unoriginal and a bit over-drawn. As an amateur (in the literal sense of the word) environmental philosopher who has uniquely struggled to translate contemporary philosophy of science-technology-and-society into policy, however, Lutzenberger's originality lies in the way he synthesizes his several abstract themes and reifies them by means of illustrations drawn from his extensive personal experience on the front lines of the battle for the preservation of nature and for genuinely sustainable development. Moreover, professional environmental philosophers may take comfort, as well as find renewed inspiration, in the way Lutzenberger, primarily a person of action and public affairs, reasserts—innocently, but boldly—the problematique of environmental philosophy as it was originally set out by Lynn White, Jr., in 1967: The deepening environmental crisis is anthropogenic, but it is not a collection of isolable problems, each with its own technical solution. Rather, it reaches to the bottom of human culture—to philosophy, ethics, and religion. If we are effectively to address it, we must submit our inherited (and often much cherished) moral, philosophical, and religious assumptions to critical discussion, reject those that ill serve us, and create alternatives that better accord with contemporary knowledge and experience—however painful and daunting a process that may be.

In short, Lutzenberger makes an impassioned case for a vigorous philosophical response to the environmental crisis. He sounds a clarion call for us academic philosophers to devote all our professional training and cognitive skills to the task of addressing the most profound challenge that the human species has ever faced. The chapters by the philosophers that follow are a response to Lutzenberger's summons.

Nicholás Sosa's response emanates from both the other side of the Atlantic and the other side of the equator. Sosa reiterates Lutzenberger's general claim that the environmental crisis is less amenable to a technical than to a philosophical approach. At bottom, he agrees, we are challenged to shift our "perspective" (or worldview by another name) as a condition for reconfiguring our ethics so as to reach environmental concerns adequately. With regard to environmental ethics, of which he is the leading Spanish exponent, Sosa critically assesses and rejects the dominant, narrowly anthropocentric approach, especially as manifested in utilitarianism, in favor of a weak anthropocentrism. He asserts that an adequate environmental ethic, moreover, must retain certain formal (and, as usually understood, mutually inconsistent) features of classical and modern ethics in the Western tradition.

Sosa adds more substance as well as support to Lutzenberger's already well-illustrated critique of so-called conventional development and the associated conventional economistic measure of human well-being: per capita average income. And he insightfully suggests a way that the concept of development might be expansively redefined and measured: by beginning with the *needs* and present lifeways of local peoples and asking how they may be satisfied and augmented, not how they may be replaced with advertising-created *wants* and modern methods of indulging those wants. Sosa, no less than Lutzenberger, offers sharp insight into the way the modern technological establishment facilitates the control of existing political and economic power structures over the lives of ordinary people. But he goes beyond Lutzenberger in suggesting, as Heidegger and Ortega before him have done, that industrial technology is less an adjunct or product of Modernism than its very essence. For what is modernity if not the reduction of all natural beings in all their diversity to the status of resources, raw material to be transformed into products for human consumption? In a startling contradiction of conventional wisdom, he asserts that your typical modern analytical technocrat is the epitome of an *ir*rational person—because he or she insists on treating entities and processes that are essentially interrelated as if they were essentially separable and self-contained. Drawing on sources as disparate as Jürgen Habermas and John Rawls, Sosa sketches an ecological ethic of solidarity: in the human community, between rich and poor, North and South; and in the environing biotic community, between human beings and other forms of life.

Peter Madsen begins his chapter by asserting the Socratic/Platonic proposition that right thinking is key to right livelihood: In this case, broad collective "environmental awareness" is the key to evolving a socially accepted and sanctioned environmental ethic. Indeed, Madsen believes environmental awareness to be so fundamental that he provides a three-stage "phenomenological description" of it. Between the social atom and the social whole lie a number of intermediate corporate entities, some of which are so big and influential that their voluntary policies and actions can have a significant impact on environmental quality. One such institution is the university.

Madsen, not surprisingly, suggests that a major responsibility of universities is massively to reorganize themselves so as to promote environmental awareness.

That suggestion brings to the fore an issue much debated by contemporary education theorists: affective education—teaching "values" as well as "facts." If universities promote an environmental ethic, then won't they be indoctrinating rather than educating? But, as Madsen points out, value-free education is a modernist myth. Universities, at the very least, putatively value the creation, perpetuation, and dissemination of knowledge itself. There is, moreover, a hidden curriculum of values in even the most abstract and arcane science, to say nothing of such subjects as economics and engineering. And most universities, especially those that are publicly supported, exist to serve the commonweal. A few right-wing extremists may try to convince wishful thinkers that the "environmental crisis" is a phony scare concocted by the enemies of free enterprise and that the commonweal would be better served by teaching what they imagine to be the "Christian values" of intolerance, repression, and dogmatism. But most people in most countries do not deny the testimony of their five senses as well as that of the international scientific community. Potable water and breathable air are scarce, forests are disappearing, deserts are expanding, atmospheric carbon is rapidly increasing, stratospheric ozone is thinning, and biological diversity is imperiled. Therefore, we cannot go on with business as usual—no more in university education than in government and commerce.

Environmental philosophy—whether on the Pacific Rim or the Atlantic, whether Australian, North American, or European—has been largely preoccupied with theory: with, as here noted, metaphysical and ethical reconstruction. Madsen, by contrast, is an *applied* environmental philosopher. As such, he provides a close and thoughtful scrutiny of the several practical fronts on which universities might join the fight against environmental degradation. In addition to the obvious—curriculum reform, redirected research, and outreach—he suggests that universities might use their considerable brain power to redesign themselves as models of environmentally well-adapted and well-integrated physical plants, and they might invest their considerable endowments and wield their considerable purchasing power in such ways as to reward environmentally responsible corporations and punish those that are not.

The next chapter is by Andrew Brennan, who now heads the department of philosophy at the University of Western Australia but was formerly a member of Stirling University's philosophy department in the United Kingdom. And his paper here is critical, among other things, of the British government's response to the environmental crisis.

Directly addressing the Porto Alegre preconference theme, Brennan begins by noting that currently universities are devoting more of their research and pedagogical efforts to solving practical problems than they used to. But to think that the shift in higher education imagined by Madsen is beginning, according to Brennan, is "pure fantasy." The problems that universities are actually addressing are not those collectively called the environmental crisis. Rather, universities generally support the modern mania for economic growth and greater industrial production. While Lutzenberger, Sosa, and Madsen assume that our tendency to ignore the greatest challenge our species has faced during its brief tenure on the planet is essentially cultural—and thus remediable by education and political and economic reform—Brennan suggests that human nature itself may be to blame. If that is the case, of course, there is little hope that we can implement an effective environmental ethic. Brennan reminds us that Aristotle identified a human foible that he called *akrasia* (weakness of will), and Jean-Paul Sartre one that he called "bad faith," or self-deceit. Although we seem genuinely to believe, as public opinion polls all over the world consistently indicate, that protecting the environment is good, and we wish such a good to come about, we obviously do not actually behave accordingly. That's *akrasia.* And, although the environmentally ethical response that we do find ourselves able to mount (such as recycling newspapers and aluminum cans, and burning lead-free gasoline in our automobiles) is patently inadequate, we successfully persuade ourselves that we are, thereby, effectively addressing the environmental crisis. That's bad faith.

Although *akrasia* and bad faith are endemic, Brennan may have overlooked a peculiarity of environmental ethics that might give us greater hope that we can rise to the challenge of the environmental crisis. Both Aristotle and Sartre were concerned with the anomalies of *individual* moral choice. In the social arena, individual moral choice may be all-important. If, for instance, one person saves another's life, something of great value—to the beneficiary, at the very least—will have been preserved. But individual commitment to an environmental ethic is futile, unless most others are committed to it as well. If, for example, one refuses to drive a private automobile to one's workplace, and walks or bikes instead, one will have done nothing at all effective to save the Earth from global warming unless most other people forgo driving as well. Thus the ardent environmentalist who very well knows that automobiles contribute to global warming, but who drives one anyway, may not be simply guilty of *akrasia.* He or she may realize that his or her sacrifice will be meaningless, unless and until private automobile use is banned by law, thus compelling everyone's compliance with this eminently ethical response to one of the most ominous and ubiquitous dimensions of the environmental crisis. In democratic societies, of course, effective environmental legislation—mutual coercion, mutually agreed upon—depends upon an enlightened electorate. Hence, our ardent environmentalist may well decide that his or her energies might be more effectively spent, as Lutzenberger and Sosa seem to think, in an effort to bring about broad public awareness of environmental problems and the radical social changes necessary to meet them than in self-gratifying, but ineffectual, personal moral gestures.

Catherine Larrère's chapter flows counter to the current in which most of the other chapters in this collection run. One might almost say, indeed, that Larrère flirts with a Deconstructive Modernism, if that is not an oxymoron. She declares that nature per se "does not exist," that "Nature is only the name given to a certain contemporary state of science." And she claims that the "danger," the apocalyptic menace, allegedly posed by the environmental crisis, is not a matter of science, which "records and does not judge," but "a matter of law and power." These pronouncements seem very much in the spirit of the fashionable French Deconstructionists, Michel Foucault and Jacques Derrida. But in the Reconstructive Postmodern rejection of the Galilean-Cartesian-Newtonian paradigm in science and the Baconian paradigm in technology, which "concentrate rationality so well," Larrère discerns an ominous "opening to the irrational." Such a worry among Europeans (and perhaps especially among the French), who remember all too vividly that nature romanticism and reactionary antimodernism were conspicuous elements of Nazi ideology, is quite understandable.

But Larrère's chapter is by no means an apology for modernity. She is, rather, quizzically and critically responding to Michel Serres's *Le Contrat Naturel*, the book that marks the introduction—or, better, reinvention—of environmental philosophy in France. These new French environmental philosophers, curiously, seem, up to now at any rate, to prefer to work in greater isolation from the international environmental philosophy community than their Spanish and Latin American colleagues. Sosa, for example, carefully locates his own position in relation to the literature in *Environmental Ethics*, the principal international journal of environmental philosophy, and Lutzenberger, as already noted, echoes Lynn White, Jr.'s seminal "Historical Roots of Our Ecologic Crisis." Serres, in his book, and Larrère, in her chapter for this volume, on the other hand, are exploring a brand new approach to environmental philosophy that so far remains only tangentially related to the international dialogue that has been growing in volume and precision for nearly a quarter-century. Therefore, as the new stream of French environmental philosophy inevitably mixes with the main currents—as, for example, it does in this book and in the heated critical discussion of Serres's book in France—it should prove to offer wonderfully novel insights. We can only note a couple of these here.

First, Larrère, interpreting Serres, highlights the unprecedented "globality" of our contemporary human relationship with nature. "Think Globally/Act Locally" is a bumper sticker cliché in the United States, but these French environmental philosophers remind us how novel global thinking really is and explore some of its implications. One profound implication is this: A central tenet of the epistemology of modern science articulated by Descartes—to solve a complex problem, divide it into its simple elements, and sum the solutions of each—must be inverted in the new global environmental sciences, such as climatology. Therefore, not only is a new postmodern holistic metaphysics emerging, so is a new postmodern holistic epistemology. Larrère suggests that such an epistemology may be beginning to be expressed in systems theory and chaos mathematics, while Serres calls, principally, for an integration of previously disparate scientific disciplines and, indeed, an integration of science and politics. Second, Larrère argues that in the Baconian metaphors—now institutionalized in Modernism—of a human war on and eventual conquest of nature, may lie, ironically, the cultural foundations of the natural contract sought by Serres. As Rousseau noted, war is, after all, a form of agreement among the belligerents—an agreement to fight—and war is routinely conducted according to "conventions" that are mutually accepted, even if only tacitly. Another bumper sticker seen in the United States—this one inspired by baseball—observes that "Nature Bats Last." The human war on nature, we all now know, is unwinnable. Hence, we human beings had better sign a cooperative accord while we are still ahead.

The chapter by J. Baird Callicott explores, in some detail, a North-South issue little pursued at the official meetings in Rio, though it was eloquently broached by Indian environmental philosopher Vandana Shiva at the simultaneous NGO conference in Rio called the Global Forum: an appropriate conservation paradigm for the South. Callicott suggests that well-intentioned conservationists from the North have been no more reflective in their approach to the South than well-intentioned developers from the North have been. In the North, conservation has generally meant either the wise use of natural resources or wilderness preservation. The concept of "natural resources," however, is tendentiously anthropocentric and the concept of "wise use" was wed to the obsolete, pre-ecological, modern scientific paradigm (to say nothing of its perversion by the contemporary North American antienvironmental organization headed by Ron Arnold, the "Wise Use Movement"). Thus, according to this conservation paradigm, conservation in the South might involve "harvesting" the "senescent" trees of tropical rain forests and replacing them with fast-growing, even-aged monocultures of eucalyptus. The concept of wilderness, although its critique has been less well-advertised, is equally obsolete, Callicott argues. It perpetuates the flawed Cartesian separation of "man" from nature; it overlooks the changes imposed on nature virtually everywhere by aboriginal peoples; and it suggests that ecosystems will remain unchanged if only we human beings will refrain from interfering with them.

Callicott, characteristically, repairs to the seminal environmental philosophy of Aldo Leopold in his search for a way between the horns of the lock-up-and-preserve or use-and-necessarily-degrade dilemma. Leopold quietly defined conservation as a human harmony with nature. If people are a part of nature—as certainly we are from a biological point of view—then, a human presence does not *by definition* compromise the health and integrity of ecosystems. However, although all anthropogenic changes are perfectly natural, surely not all of them are good for nature. Surely, indeed, almost all recent ones have been bad. But if we may no longer appeal to the incoherent wilderness concept as a standard of conservation, against what other norm may we evaluate the changes human beings impose on their environments? A new medical-like norm, "ecosystem health," Callicott answers, is currently being articulated in ecology to substitute for the now-discredited wilderness ideal. In the past, many human societies lived as well-mannered, cooperative, and law-abiding citizens of their biotic communities—just as today some scattered traditional peoples still do. Perhaps we can find our own postmodern ways of doing so as well.

Holmes Rolston, III, has the last word in this book. Appropriately so. He is the dean of North American environmental philosophy; and he is renowned throughout the world. The central sections of Rolston's chapter not only rehearse the extension of ethics—from the unproblematic human realm to the community of sentient animals, then to plants, then species, and finally ecosystems—familiar to readers of Rolston's earlier work, these sections also artfully apply this familiar progression to university education. At the beginning and end of his chapter, however, Rolston envisions a new and comprehensive next step. Views of the Earth from space and the recent Earth Summit mandate that we move from a "land ethic," à la Leopold—which morally enfranchises a plurality of "biotic communities" (or ecosystems) and their members severally—to a global and more universal "Earth ethic." Supporting this call for an Earth ethic that would cut across divisive national boundaries, we might observe that the environmental crisis today has a much more global quality than it had when first publicly acknowledged in the 1960s. Then, concern focused mainly on oil-fouled beaches and smog-filled air. Today, we are more profoundly concerned with the threat our civilization poses to the global ocean, the global atmosphere, and the very diversity of life on planet Earth.

Rolston's chapter also weaves the various themes and points of view of the foregoing contributors into an integrated philosophical panorama of breathtaking proportions. He joins Lutzenberger in the multifaceted task of "paradigm overthrow." With Sosa he seeks an ethic that respects human rights while respecting plants and nonhuman animals. Indeed, Rolston points out a glaring irony in human chauvinism and narrow anthropocentrism: If, as human chauvinists claim, we are the only moral species, how feeble and niggardly our ethics must be if they must remain anthropocentric, self-servingly excluding all other forms of life. Doesn't human chauvinism with its narrow anthropocentrism make a mockery of the human claim to superiority on the ground, implicit in Kant and his legions of followers in contemporary moral philosophy, that we are the only ethical species? Rolston echoes Brennan's complaint that applied research and pedagogy in contemporary university education is misdirected and often exacerbates the environmental crisis, rather than contributing to its amelioration. And he reinforces Madsen's claim that a value-free science objectively knowing a value-free nature is a modern myth. Although Rolston still finds the wilderness idea useful and regards human beings as not wholly natural, because we are also uniquely cultural, in his endorsement of the concept of the "home planet," he agrees with Callicott's view that people have a legitimate claim to be a part of nature, and he agrees that ecosystem "health" as well ecological "integrity" are appropriate measures of the adaptation of human cultures to their natural environments. He also amplifies Larrère's emphasis on globality and its epistemological and political significance.

Rolston, never a slave of intellectual fashion, does not call himself a postmodernist—however engaged he may be in paradigm overthrow. He has called himself, rather, a "maverick" and steadfastly goes his own way. Aldo Leopold did not call himself a postmodernist either. The term, of course, had not been coined during Leopold's lifetime. But Leopold did explicitly criticize modernity, as the long quotation from *A Sand County Almanac* at the end of Rolston's chapter nicely shows. And Rolston apparently endorses Leopold's dissatisfaction with things modern. Here, moreover, Rolston takes a firm stand on one of the defining distinctions between the deconstructive and reconstructive modes of postmodernism. Deconstructive Postmodernism celebrates difference or *différance* (to use the term coined by Derrida to characterize his version of it). Cultural diversity, Rolston notes, complements biological diversity, and both are good things. But, as Larrère also suggests, there is a dark side to unmitigated cultural diversity. That dark side currently manifests itself in the former Yugoslavia and the former Soviet Union, in Africa and the Middle East, in New York City and Southern California, and, unfortunately, in so many places around the world that it is impossible to name them all. Bloody ethnic conflict is the end point of the "politics of difference" in a thoroughly deconstructed postmodern world. Rolston has the courage to challenge the contemporary shibboleths of cultural diversity and pluralism when they go untempered by a complementary and countervailing principle of ecological unity. That principle of ecological unity comes in the epistemology of globality, the politics of consensus and cooperation, and the Earth ethic that he here envisions.

John Lemons is not a professional environmental philosopher, nor was he a participant in the Porto Alegre preconference to the Earth Summit. But he has given extraordinary attention to the preconference theme—the integration of ethics, university, and environment—in light of the United Nations Conference on Environment and Development. In the afterword to this volume Lemons explores the various approaches to curriculum development that universities might choose actually to implement the ideals that the philosophers here represented envision. And he reports that there are some positive signs that universities are beginning to come to grips with redesigning themselves to meet the most important challenge of the twenty-first century.

Lemons notes that two basic conceptions of "environmental literacy" have evolved—one emphasizing the natural sciences, the other the social sciences and humanities. And he carefully distinguishes between crossdisciplinary, multidisciplinary, and interdisciplinary approaches to achieving depth of disciplinary knowledge, breadth of knowledge across disciplines, and the integration of knowledge forthcoming from a variety of disciplines. Lemons also discusses the advantages and disadvantages of the university adminstrative structures that environmental studies programs have assumed. And he goes on to summarize several reports that have evaluated the problems encountered, the successes achieved, and failures experienced by various university environmental studies programs.

POSTSCRIPT

We offer these Porto Alegre papers as only the opening gambit of a Reconstructive Postmodern environmental philosophy on the Atlantic Rim. Many eligible voices are not represented here. Especially conspicuous is the absence of African voices—from Morocco and Algeria to Angola and South Africa. And, of course, other Latin American and European perspectives might also have been represented. But the Porto Alegre preconference to the Earth Summit did bring together a group of environmental philosophers, male and female, on the eastern, western, northern, and southern perimeters of the Atlantic Rim, thereby inaugurating a constructive dialogue that will, we hope, spread much more widely.

Further, most discussion of environmental education is focused, for better or worse, on primary and secondary schooling, not tertiary education. And most of the discussion that is focused on higher environmental education is not philosophically grounded. But again, we do not claim that these papers on the topic of ethics, university, and environment represent more than an invitation to other academicians to think through the issues and, more importantly, to undertake experimentation. The greening of university education is a work in progress. To assist that ongoing task, we have included a selected bibliography of allied literature.