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Anthropologist Alfred Kroeber (1911)

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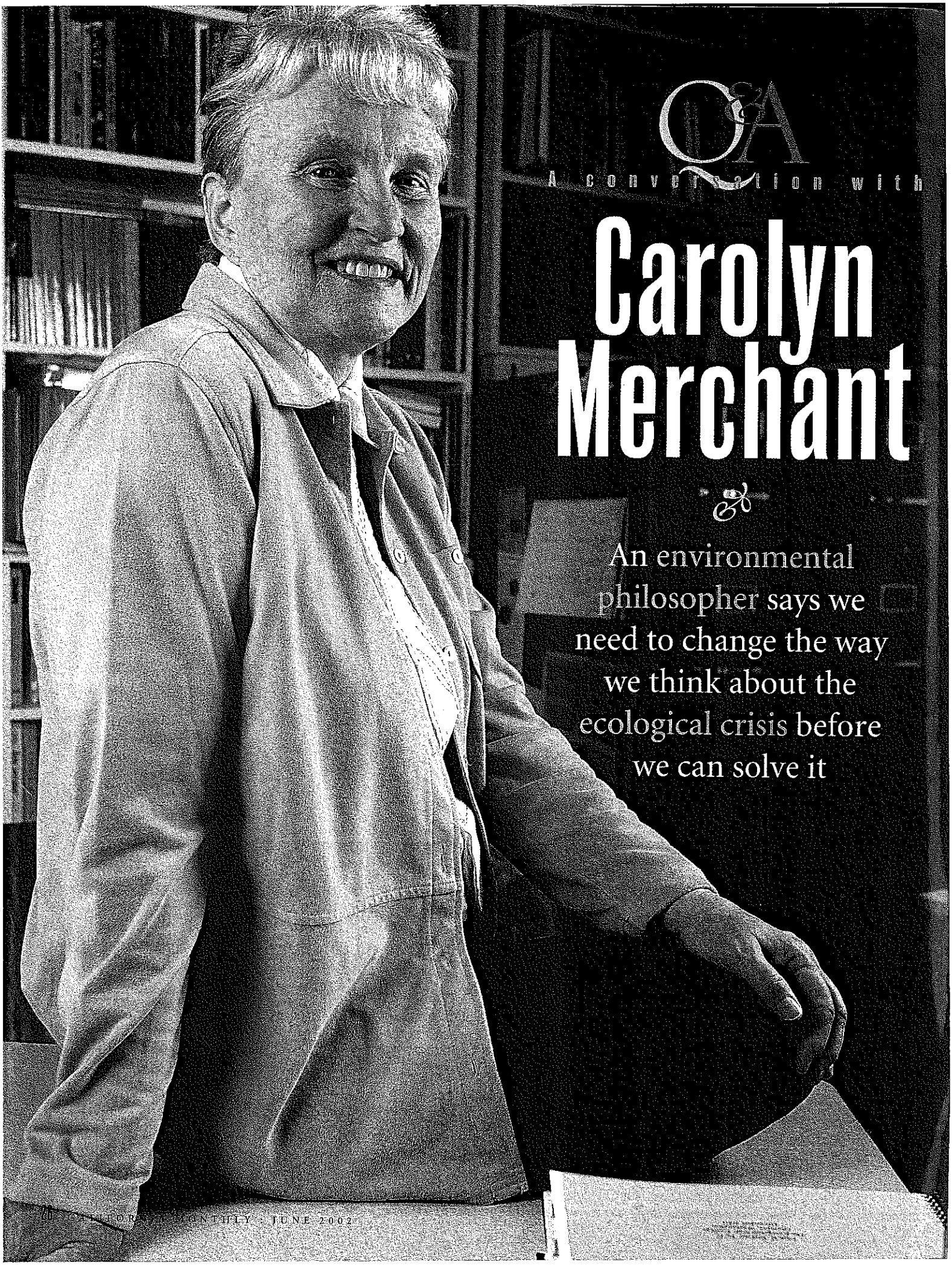


Q&A

A conversation with

Carolyn Merchant

An environmental philosopher says we need to change the way we think about the ecological crisis before we can solve it

Leading environmental historian Carolyn Merchant had a shocking introduction to ecology. She calls it

"a baptism by fire." In Madison, Wisconsin, in 1959, on their first date, the man who would become her husband drove her out to a prairie, took out a book of matches, and set fire to the place. Why on earth? "Well," she recalls, "he wanted to burn the weeds and aspen that were threatening to crowd out the native prairie plants, which are adapted to fire. The next spring, we went out there, and it was just a beautiful carpet of prairie wildflowers."

Merchant, now one of the world's leading environmental writers, is author of the path-breaking and influential *The Death of Nature* (it has no relation to that prairie incident), her first book, published in 1980. Her ninth and most recent work, the *Columbia Guide to American Environmental History*, came out last month. Current president of the American Society for Environmental History, she is the Chancellor's Professor of environmental history, philosophy, and ethics at Berkeley, where she has taught for more than two decades.

Merchant was born in Rochester, New York, and raised in "a household of strong women," she says, after her parents divorced when she was 8. "Women who could do things and make things and craft things," she adds. Early on, a tomboy on a bicycle, she roamed the Rochester environs, collecting insects, bird nests, and animals.

Her interest in science expanded when a relative gave her an old microscope. "This opened a whole world of living things," she says, "and I read a lot about science in the library, which was just down the street." Her 10th-grade biology teacher suggested that Merchant turn her microbial observations into a Westinghouse Science Talent Search project. Using her high school's much better microscope on weekends, she completed her project, which was selected as one of the top 10 in the country, earning her a Westinghouse science scholarship.

Merchant followed her mother's example by attending Vassar College, where she majored in chemistry and also studied philosophy. She decided that the history of science would best combine her interests in science and philosophy, and, after a year of graduate work in physics at the University of Pennsylvania, she headed for the prairies of Wisconsin, where she earned an M.A. and Ph.D. in the history of science.

In 1967, after her first marriage had ended in divorce, Merchant and her two children moved west at the suggestion of her sister, who had earned a Ph.D. in astronomy at Berkeley. Her first job was at the University of San Francisco, where she spent 10 years teaching the history of science as well as a class on science and society. She also taught at Berkeley in 1974–5, the first year of the experimental Strawberry Creek College. There she met the man to whom she is now married, Charles Sellers, who is professor emeritus of history at Berkeley.

Merchant was hired to teach here in the new field of environmental history in 1979, the year before the publication of *The Death of Nature: Women, Ecology, and the Scientific Revolution.* A 1998 symposium on *The Death of Nature* called it one of the most influential books in several fields (including environmental history, philosophy, and feminism), a book that introduced women into the ecological equation and helped launch ecofeminism.

Merchant's next book was *Ecological Revolutions* (1989) which carries an unusual dedication: "To the memory of my ancestress Mary Barnes, convicted of witchcraft" (in Hartford, Connecticut, 1662). Other books include *Radical Ecology: The Search for a Livable World* (1992) and *Major Problems in American Environmental History: Documents and Essays* (1993), the field's most extensive textbook.

She describes her latest book, the *Columbia Guide to Environmental History*, as "my perspective on how American environmental history has developed from colonial times to the present. It's my synthesis after teaching environmental history at Berkeley for two decades." Her course, "American Environmental and Cultural History," which won the campus' Educational Initiatives Award for 2000, is available on the Web at www.ecohistory.org.

Her next book, which has earned her a Guggenheim Fellowship and is scheduled for publication on Earth Day 2003, is called "Reinventing Eden: Western Culture as a Recovery Narrative." Western culture as a recovery narrative? In the following interview, Carolyn Merchant explains that concept and also discusses women, nature, capitalism, the global ecological crisis—and what's needed for an ecological revolution.

By Russell Schoch

PHOTOS BY ROBERT HOLMGREN

When did you first become interested in the environment?
Like a lot of people, this came for me in reading Rachel Carson's *Silent Spring*, in 1962. This was a watershed moment of consciousness: the idea that there is a problem we could now identify as an environmental crisis.

The next year, Betty Freidan's book, *The Feminine Mystique*, came out. And that was my entré into thinking about feminism, into questioning the role of women in society. The two books in one sense were not connected until the 1970s, when women started asking questions about women's relation to, and identification with, nature.

What is that identification?
The identification of women with nature has been very close in most of the history of western culture, and in other cultures, with the idea of nature, or *Natura*, as a feminine noun in many Latin and Romance languages. The idea, for example, of Mother Nature or the Virgin Earth.

By the Renaissance, the end of the 16th century, right before the period of transformation that was the scientific revolution, nature is conceptualized as female. The earth is a mother. The earth has physiological systems, circulation systems such as the tides and the movement of clouds forming and then pouring rain back on the earth, and so on. A lot of this goes back to Greek and Roman ideas as well, ideas recaptured in the Renaissance.

The cosmos is alive. And the earth is alive. It's a living organism. It has a body, soul, and spirit. Metal and stones are alive; it's a very animate earth. And nature is God's agent—God acts through nature as *Natura*, as female, bringing about punishments and rewards in the mundane world.

Bringing forth abundance.
Or withholding it, in the form of famine or drought. So, in terms of women and nature, there are a lot of very strong connections in the Renaissance.

The scientific revolution changed all that. It conceptualized matter as dead. Atoms are hard, glassy particles; they're inert, with no spirit or vital forces within them. They're simply moved about by external forces: momentum and energy. God puts the motion or momentum—mass times velocity—into the world at the beginning, and it's simply exchanged among particles. That was Descartes's conception.

"My argument is that the mechanistic wordview—the ideology of capitalism—gives permission to exploit and dominate nature."

And this is what you call "the death of nature."
Yes. And the ethic therefore changes. If nature is dead, and humans are external, humans are engineers, and the image appears of God as a mathematician and engineer. Then people can manipulate and manage nature, without having to propitiate nature, and without nature retaliating.

My argument is that the mechanistic worldview, which has become the dominant view of industrial capitalism—in a sense, the ideology of capitalism—is a framework that gives permission to exploit and dominate nature. The results are seen in the ecological crisis.

Is there an ecological crisis?
I think there is, yes.

But some people don't. We hear "science" on both sides of the issue of global warming, for example. Why is this?
Well, it's partly the set of assumptions that go in to answering the question, and it's partly the state of the science itself and the character of proof and what is accepted as evidence.

What convinces me that global warming is real is what I know from environmental history. As urban environments have increased and as industrial processes have continued to process fossil fuels and turn them into various forms of pollution, including carbon dioxide emissions, the growth of these industries—not only in the First World but increasingly globally—is putting increasing amounts of carbon dioxide into the atmosphere. And this is being coupled with the decimation of forests—which could be a mitigating factor against carbon dioxide.

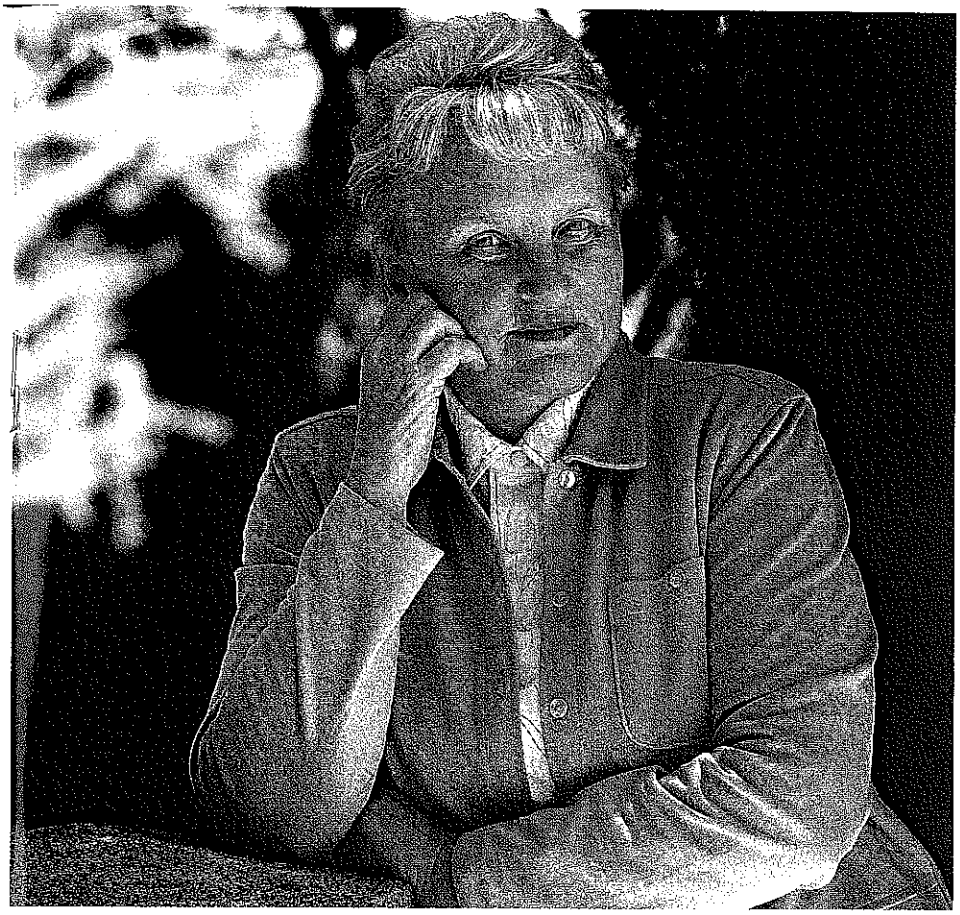
Do you see global warming as the chief problem for the environment in the 21st century?
I see the chief problem as a whole set of complexes that I call the global ecological crisis. This includes population pressures on the land; global warming; ozone depletion; endangered species; deforestation; the threats to wildlife and wilderness habitats; toxic buildup in the waters and air; and industrial pollutants that contribute not only to toxics but also to other forms of air and water pollution.

What should we do?
One thing we need, and this I'm spelling out in my next book, "Reinventing Eden," is a new narrative.

What's the narrative that needs replacing?
Since the scientific revolution of the 17th century, the mainstream story of western culture is that humanity can recover the Garden of Eden through science, technology, and capitalism by remaking the whole earth into a garden. By cutting down forests and making the desert blossom as the rose, and by creating farms on the land—and ultimately agribusiness and then shopping malls and gated communities. All of this is part of a "progressive" narrative that technology can be used to interact with and to dominate and control nature.

Was this explicitly stated in the 17th century?
The clearest expression of it comes from Francis Bacon, who says that we can "recover" that "right" over nature which was lost to humanity.

We had that right?
And then we lost it, in the Fall from Eden, caused by Eve. Eve is the one who exhibited the first curiosity—one might say she's the first "scientist"—and who then tempted a reluctant Adam, bringing about the Fall from Eden. So, to recover what was lost, Eve now represents fallen nature, and Adam represents the labor that must be used to refurbish the earth, through agriculture and ultimately industrial capitalism. Science, technology,



and capitalism come together in the 17th century to allow a secular version of the reinvention of Eden on earth.

This has a positive outcome in the sense that much of life can now be improved, for many, many people. But it also has a cost that is borne by wage-laborers and women, by nature, and by the lower classes, so that some people end up in poverty to the benefit of the middle and upper classes. In its mainstream version, however, this narrative is a source of optimism, one of the sources of the Enlightenment of the 18th century, the beginning of a secular vision that the planet can be transformed.

Are such narratives important to us?

Yes! Narratives are important to us because they shape our lives. I think we each act out our part in a larger narrative, a narrative we're often not even conscious of. In particular, I think many of us in American culture have been shaped by this meta-narrative of recovering Eden, even though we might not recognize it. My goal is to name the narrative so that we can see how we all have been players in it, enacting it, for the last three centuries.

How were you shaped by this "recovering Eden" narrative?

I was born and raised in the Protestant church with the idea that hard work and good grades and a college education would be the way that I could have a good life. Science, too, was part of my upbringing. This narrative is built into the "get ahead" mentality of capitalist culture into which we're all socialized.

Didn't the women's movement offer a critique of this path?

The women's movement allows us to make a critique of patriarchy and of mainstream values. The radical movements of the 1960s allow us to make a critique of capitalist culture; and the environmentalist movement allows us to make a critique of the costs to nature and to the environment of this same mainstream narrative.

These counter-narratives emerged at the same time that we were becoming aware of the power of the recovery-of-Eden narrative itself. Many people in environmental history began to think of environmental histories as being declensionist histories, rather than the progressive histories of the mainstream narrative.

What are "declensionist" histories?

At the end of the 19th century—think of Theodore Roosevelt and the conservation movement—the "recovery narrative" becomes joined with one that speaks of conserving the environment: the land has been damaged, the forests have been cut down, the waters polluted. The conservationist narrative becomes part of the recovery. That is, we can replant the forests and conserve nature by long-term wise use. That will keep the progressive story of the middle and upper classes intact.

So both stories are about "recovery," but they start from different points and use different paths to get there?

Yes, and they merge. The meta-narrative, the over-reaching story, is one of recovery. Both stories are recovery narratives, but there are two different plots. The mainstream or "progressive" narrative is of a precipitous fall from Eden at the time of the Bible and then a long, slow recovery, up to today. The dissident or declensionist narrative, which is told by environmentalists and women and minorities, is that there was an Eden in the past—in the Pleistocene—where everything was wonderful: plants and animals had evolved but had not yet been despoiled by human intervention; since then, there's been a long, slow decline until we begin to get the beginnings of conservation—and now we need a rapid recovery to save humanity and the planet in the 21st century.

Were you a declensionist in* The Death of Nature*?

I think one could say that both that book and my *Ecological Revolutions* (1989) have declensionist sub-plots.

So you've changed?

I've changed a bit. Many people in the field began to think of environmental histories as being declensionist narratives; and some of them now call themselves "recovering declensionists."

"Hello. My name is Carolyn, and I'm a recovering declensionist!"

[Laughs] Yes.

Give me an example of "declensionist" thinking.

Take the idea of the desert as wilderness. The idea of turning the desert into an irrigated garden is part of the mainstream recovery story; but environmentalists see it as salinated, dessicated, and polluted with chemicals. Appreciating the desert in and for itself marks a change in valence, from wilderness as negative to wilderness as positive. The desert was the bad wilderness, to be transformed; now it, like the mountains and the forest, is seen as part of the positive wilderness, to be appreciated.

I can see myself, out appreciating the desert, not realizing that something has changed in the narrative that has made me want to do that.

Yes. You're living the narrative! And I can see myself as living a

narrative, without knowing for a long time what it was.

The progressive narrative?
Yes, but I'm part of both narratives. I've been shaped by coming out of the '50s and '60s. I was socialized into the mainstream narrative of recovery, but I then became very aware that I'm also part of a movement to restore nature that has come out of the "decline of nature" narrative, or the declensionist narrative. I've lived it. I've written about it. And, as an ecofeminist, I see myself as part of a movement to restore nature to, in a sense, that original Eden.

So both narratives are real, and many of us are part of both of them. That makes it the overarching, meta-narrative of recovery.

You said your goal is to name the old narrative. But what would a new narrative sound like?
I don't think any of us is capable, singlehandedly, of writing a new narrative. Because I come out of an elite western culture, I don't think I can name a narrative that is going to be something for people all over the world, including those who are in poverty, in different social positions, and so on.

What I can do is to suggest advances beyond mechanistic science and the ethic of dominating nature, which came with that science.

You've written about chaos and complexity theory. How would such new scientific thinking help?
Chaos and complexity theory suggest that we can no longer assume that we can predict, therefore control, and therefore dominate, nature. The domination of nature is predicated on the ability to solve linear differential equations and predict the outcome; that means we can then control nature in small, closed systems.

What chaos and complexity theory are suggesting is that only in unusual cases—where, say, we're building a bridge or using closed mechanical systems—can we solve problems and control nature. Chaos theory says that we can't predict and can't control most of the domain out there, and therefore we can't dominate it, and therefore we have to give up the ethic of mechanistic science that led to the death of nature.

Are there other roadblocks to change?
The most difficult problem we face is what to do about global capitalism.

Why is that?
Because capitalism is depleting both nonrenewable resources and potentially renewable resources. Structurally, it's a system that depends on growth; and as it depends on increasingly global monopolies and huge global corporations to achieve that growth, it becomes more and more difficult to transform, or even to envisage alternatives.

What do we need instead?
Something that will give us the basic needs of food, clothing, shelter, energy, healthcare security, and security in old age. These kinds of basic human rights, fulfilling basic human needs, are the ideal that I think is the essence of democracy and of the quality of human life. These are compatible with environmental integrity and sustainability.

That's the ideal. The question is how to do it in a way that preserves humanity and also preserves the environment. And, as an environmental philosopher, that's what I'm trying to get at with a new ethic, what I call a "partnership ethic."

Please explain this.
A partnership ethic recognizes that men and women can be partners and that humanity can be partners with the earth. So it doesn't entail a gendering of the earth as female; and it doesn't blame men for causing all the damage.

But didn't men cause much of the damage?
Historically, yes. A partnership ethic recognizes that there's a history that is pertinent to dominant western culture, a history in which men have been the leaders in most political, economic, and social institutions, and that in fact this constitutes what we call patriarchy.

What it doesn't do is to blame individual men living today for all the sins of the past and for all the institutions that have evolved historically.

Which ecofeminism did?
Yes. A partnership ethic means that women and men can work together as equal partners; it means that nature is still active and a subject, but in equal interaction with humanity. It tries to bring the pendulum back to a dynamic that's rooted in the relationship between people and the environment, between men and women, between minorities and whites.

I believe that a partnership ethic is one way of getting to where we need to be. A new narrative that is not the death of nature and not mechanistic science but one of a sustainable partnership with nature and between human groups is part of the social reconstruction that is required. Over the next half century, I think we're going to see something new emerging.

We're in a global ecological crisis now, which has been apparent for at least the last quarter-century. My hope is that by the middle of the 21st century, we will have a different set of assumptions about production, reproduction, ecology, and consciousness that will constitute a global ecological revolution.

What would this involve?
A lot of things: Green political parties; sustainable development or livelihood; the earth summit and attempts to reach things like biodiversity treaties; and efforts to identify and do something about global warming and ozone depletion. There are the new ideas of radical ecology, deep ecology, and social ecology. There's also organic agriculture, *in situ* conservation approaches—a multitude of approaches that people are trying out. Some of them are going to work; some are being criticized as not feasible. So it's a process of fits and starts and transformations, of leaps ahead and backslidings. But I think it's a process that will take place and eventually give us a different world.