Introduction

Flying on Faith

I always worry that I won't return alive when I travel by plane. At 37,000 feet it was a little late to consider alternatives. Patricia seemed comfortable one row back, except for intermittent shallow coughs.

We were returning from two weeks in Europe, one in Bavaria and the other in Salzburg, where we attended the World Uranium Hearing. At the hearing indigenous people from around the world explained how commercial-industrial cultures ruin native societies. Powerful images of native life being destroyed challenged assumptions of progress that permeated my education. I came to see the Holocaust, the deliberate killing of six million Jews under Nazi control, not as an aberration, but as expressing persistent aspects of our culture's approach to reality. As these ideas flooded in I took notes hoping to make sense of them later. The results of subsequent thought and reading are before you.

I take challenges to my views seriously because I know most beliefs are just articles of faith. How do I know this flight is safe? Hundreds of people and tons of metal move through thin air at 500 miles per hour more than seven miles above solid ground. How is this safe, or even possible?

From what I remember of science the story seems to be this: The air is composed of molecules, which are particles too small for anyone to see, but scientists know that they are there. If the plane moves fast enough through these particles, the curve of the plane's wings causes particles underneath to push up on the wings, resulting in flight.

Of course, I cannot verify that this is how planes lift off and usually arrive without mishap at their appointed destinations. I can say only that this is what people in my society accept as the explanation. And planes do fly, even crowded planes such as the one that carried Patricia and me.

I often wonder how we know what we think we know, especially when what we know seems to violate common sense. Galileo "proved" at the dawn of modern science that the earth travels around the sun, and that the alternations of day and night are caused by rotations of the earth on its axis.

This implies that the earth's surface is moving at almost 1,000 miles per hour where I live, in Springfield, Illinois. Yet I feel no movement and the old medieval story that the sun, moon, and stars do the moving seems obviously true, at least as judged by what we all see everyday. (I've checked it out.)

I do not think Galileo was wrong. After all, people traveled to the moon using these scientific theories. But my acceptance of them is based primarily on faith in authority.

I grew up during the McCarthy era when people were afraid of communism. There was great controversy about whether oaths of political allegiance should be required of teachers, other workers, and students. I realize now that a more fundamental loyalty oath went unchallenged—the confession on science exams of belief in molecules, electrons, and gravity.

We are all in the same position, even scientists. For example, geneticists using an electron microscope or a mainframe computer to map a species' genetic code are unlikely to be experts in subatomic physics, engineering, or computer science. They must rely on experts in these fields to justify using accepted tools of research.

Everyone's acceptance of our society's view of reality is based largely on faith in authority.

I become aware of my faith when doubt creeps in because things do not add up. We were told that school was encouraging us to think for ourselves and that Western science differs from religious, superstitious, and primitive beliefs because it is based on empirical evidence rather than authority. My experience belies both those claims. Our society's self-concept that belief is based on personal experience is simply not true. This puts me on notice that much of what I accept warrants careful scrutiny. Perhaps progress is different from what I was told.

All of my beliefs could not be wrong, however. Planes fly, Americans landed on the moon, and the earth rotates on its axis. At least I think so.

A Call to Hear

The trip to Salzburg was confusing from the start. I spent six days hearing indigenous people talk about their lives. Why me?

I was in my office one morning in the middle of May when, shortly before I was due to start teaching, I received a telephone call from Wendy Moen in Munich, who invited me to the World Uranium Hearing to be held in Salzburg, Austria, from September 13 to 19. She told me the hearing was designed to give indigenous people around the world the opportunity to explain the impact of uranium on their lives and communities. Uranium is mined largely in areas designated for indigenous people, such as on Indian reservations in the United States; nuclear weapons have been tested on or near their land and nuclear waste may be stored there as well. At the hearing indigenous people would speak for themselves and there would be lectures on related legal and scientific topics. Because I had written a book, *Environmental Justice,* I was asked to join the Board of Listeners, whose job was to publicize what we would hear.

People against Nature

Many indigenous people whom I heard speak in Salzburg challenged the belief, common in our culture, that nature (meaning in this context everything nonhuman on earth) exists to serve human beings. This belief comes to Western industrial people (us) from several authoritative sources. The Bible's Genesis story includes the command by God to "be fruitful and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth." Many people interpret this to require using the earth exclusively for human good.

Ancient Greek thought is also influential in our culture, and the Greeks thought people were of particular value because people alone possess reason. Aristotle, for example, thought that God was pure reason. Because people are the only beings on earth with reason, they are the most godlike, so the rest of nature should be used to serve human beings. The ancient Roman Stoic, Cicero, believed similarly that because animals lack reason, people owe nothing to them.

The German philosopher Immanuel Kant maintained that because animals lack reason, torturing them is wrong only because "he who is cruel to animals becomes hard also in his dealing with men." Practicing kindness toward animals has as its sole object fostering kindness toward people. Animals do not count at all for themselves.

This view is well represented in the twentieth century and is often referred to as "anthropocentrism," the centering of value on human beings. John Passmore, an academic philosopher from Australia, concludes in *Man's Responsibility for Nature* that the only reason to avoid harming nature is to avoid hurting people. An implication is that when people are protected, nature may be harmed. On this view, saving the spotted owl *for itself* is no reason to restrict logging old growth forests in the U.S. Northwest.

William F. Baxter is an economist who favors free market approaches to environmental issues. In *People or Penguins: The Case for Optimal Pollution*, he writes, "every person should be free to do whatever he wishes in contexts where his actions do not interfere with the interests of other human beings." So if DDT damages penguins, but not people, there is no problem. "Penguins are important because people enjoy seeing them walk about on the rocks." They are not important for themselves. Furthermore, Baxter contends, "No other position corresponds to the way most people really think and act—i.e., corresponds to reality."

This view is debatable. Near the beginning of our century Henry S. Salt, a pioneer of ethical vegetarianism, questioned the biblically inspired view that animals were given to people for human use. He claimed that he had looked, but was unable to find the receipt. In our own day Australian philosopher Peter Singer questions anthropocentrism in the name of animal welfare, endorsing what he calls "animal liberation."

Others take a broader approach. They reject anthropocentrism in the name of nature in general, not just animals. This was the view of the many indigenous speakers in Salzburg who advocated respecting all of nature, and offered prayers to Mother Earth. Their view resembles Aldo Leopold's land ethic and the deep ecology movement, which accord moral importance to all of nature, not only to individual human beings or other individual animals.

I find this attractive: People should respect nature for itself, not just use it for the good of human beings. But how can I convince others? Maybe some people see intrinsic value in nature and others do not, the way some people see a point to golf and others do not, or the way some people like chocolate and others do not. This would explain the apparent stalemate in modern culture on this matter. Individuals with opposite views seem unable to convince one another and philosophers are enjoying little success distinguishing this issue from one of individual preference or taste. How can progress be made?

An Indigenous Perspective

Help came during the second day of the hearing from an indigenous person, Lorraine Rekmans of the Anishinabi Nation of northern Ontario, who told a story to illustrate the perspective she wanted us to share. Her six-year-old son had a science project for school, growing grass in a small container to learn what factors affect its development. The project seemed to be going well. But one "morning he had a very concerned look on his face, and he said, 'Mom, I have to go water my grass because I can hear it screaming.'"

Screaming grass! Was this childish fantasy or profound insight? Perhaps people who can hear the grass scream are reluctant to mow it down, tear it up, and genetically alter its seed. On the other hand, those who consider grass to be at our disposal may be led by degrees to similarly view insects, mice, cattle, and deformed human beings, connecting our culture's anthropocentrism to the Holocaust.

African, Canadian, Indian, Ukrainian, and many other witnesses pointed out at the hearing that people who are not oriented, as indigenous people are, toward reverence for the earth, people who cannot hear the grass scream, are likely to miss human screaming as well. Those who think it is their right or duty to subdue the earth tend to subdue other people in the bargain. This was the perspective that promised a philosophical breakthrough.

I think indigenous people at the hearing were directing their comments at European-inspired commerce and industry—*our* culture—because it is our culture that spawned the use of nuclear and other technologies that disrupt their lives. I think they were saying that our culture subdues people along with nature.

This is strange, because our culture often justifies manipulating nature as a means of advancing human well-being. Nevertheless, I came to realize our culture inevitably oppresses people in the course of manipulating nature for the good of humanity.

This led me to question alternatives. Are there societies that oppress people less than we do? Indigenous people at the hearing suggested that many tribal societies that use simpler, less powerful

technologies are less oppressive than ours. Although some are violent, such as the Yanomamö of northern Brazil, who regularly ambushed and killed men from neighboring villages, other tribal people, especially foragers (hunter-gatherers), oppress people much less than we do.

Is it possible to live an attractive, truly human life in such societies? I was taught that people naturally want as much material comfort as possible and manipulate earth maximally to achieve it. Indigenous cultures with simple technologies that affect nature minimally seem pitifully poor and unattractive. However, Lorraine Rekmans and other indigenous speakers at the hearing maintained that many native people enjoy riches that industrial people cannot understand. Indigenous life in societies with little human oppression is desirable.

I wondered how nature is viewed in these societies. Do people there reject anthropocentrism and does this rejection support low levels of human oppression and high levels of cultural riches? Yes. People in these cultures have a social conception of relationships between people and other natural constituents, both animate and inanimate. They include all constituents in their concept of community and view consideration, respect, and reciprocity to be appropriate in all dealings with fellow community members. This view pervades these cultures, affecting the treatment of both people and nature.

According to author Jamake Highwater, "When the Indian potter collects clay, she asks the consent of the river-bed and sings its praises for having made something as beautiful as clay. When she fires her pottery, to this day, she still offers songs to the fire so it will not discolor or burst her wares."

Ms. Rekmans, after telling the story of her son hearing the grass scream, introduced her Ojibwa name, Peh-sheh, which means robin. "I am all things that the robin is," she said.

> This is significant because it recognizes that animals have characteristics, and this is how I find my place in the universe by identifying

with one other being of nature. This is how I always remember that I am not superior to the other beings and living things on this planet.

Indigenous people typically consider themselves "only part of the intrinsic circle of life."

Another native speaker, Esther Yazzie, concurred. She attended the hearing with her husband Robert and teenage daughter Darnell in order to share a Navajo perspective. Coming from the four corners area of the United States, she found it easy to relate to the Austrian Alps. "Mountains are made by Mother Earth," she said. "Mountains were brought up by the center of Mother Earth. They are the grandparents, and we are the grandchild." She concluded with a poem expressing a social view of nature:

The new way to exist on Earth
may well be an ancient way
of steadfast lovers of this particular land.
No one has better appreciated Earth
than Native Americans.
Whereas to the White Man,
only the white attains full human status,
everything to Indians are a relative,
everything was a human being.

Can we profit from knowledge of such indigenous cultures? Given our historical, cultural, economic, and technological contexts, we certainly cannot replicate such cultures and become indigenous ourselves. We must face the future from where we are, sitting behind computers eating fast-food lunches. Even if some indigenous cultures with a social conception of nature fulfill human aspirations and treat people better than we do, it is unclear whether hearing the grass scream is even possible, or helpful, for us.

The Paradoxical Thesis

Reading and reflecting since the hearing has led me to the paradoxical conclusion that, in our cultural context, *attempts to master nature in the human interest result in human oppression.* This is my

paradoxical thesis. Its corollary is this: *A necessary component in changes that reduce the human suffering caused by our society is adopting the perspective of some indigenous cultures insofar as they value nature for itself.* When we try to serve only people, our historically evolved ideas, practices, and institutions influence us to oppress many among us. Paradoxically, the harms that our culture inflicts on people result largely from our culture's exclusive orientation toward human good.

Suppose for a moment that this is true. Then the debate between those who believe the earth exists exclusively for human good and those who respect the earth for itself can be concluded. If the people who value only human beings were convinced that the only way, in our cultural context at least, to serve people well is to respect nature for itself, they would endorse such respect. In other words, if the paradoxical thesis is correct, the terms of debate would have to be altered because opposition between people and nature would misrepresent the options available. The option of respecting both people and nature would exist, and be superior.

The situation would resemble the opposition between leisure and work for workaholics. Whereas many people work hard to be able to afford leisure activities, some people enjoy their work so much that leisure activities are not desired. For these people it would make no sense to speed up, move, or in any other way alter their work to have more time to enjoy their leisure, because their work activities are the most enjoyable they know. Isaac Asimov, for example, an extremely prolific writer, quipped that he wrote so much because he was too lazy to get up from the typewriter. For people like this, the opposition between leisure and work would not be helpful. Similarly, the opposition between people and nature would not be helpful if it turned out that, paradoxically, the best way to serve people is to avoid trying to serve *only* people. The debate between "people first" and "nature above all" advocates would be concluded not by one side convincing the other, but by depriving the disagreement of any point.

A comparison with people's love of their children may be helpful. I remember seeing an ad when I was a child for pairs of rabbits for breeding. It recommended raising rabbits "for fun and profit." There was a clear distinction between people and rabbits. The rabbits were the means toward the goal of improving the lives of people. But we do not typically think of children that way. We ideally think of children as ends in themselves. We have children, raise them, educate them, and are kind to them because we love them *for themselves*. Of course, interacting with children in these ways can be, and often is, fulfilling, meaningful, and fun. At other times it is frustrating, annoying, and inconvenient. The point is that even when childrearing is fun, the fun depends on the relationship being guided *not* by the prospect of fun or fulfillment, but by love of the children for themselves.

There are people whose choice to have children is guided by their own needs for fulfillment. Those who remain fixated on their own needs, whether for fulfillment, variety, or fun, are likely to be disappointed. This is the paradox: It is self-defeating to think of children as the means toward the end of parental fulfillment, even though raising children is often rewarding for parents. Similarly, it is self-defeating to think of nature as a means to achieve human welfare, even though nature does serve human welfare.

A spiritual dimension may be important as well. Indigenous people at the hearing had a sacred (as well as a social) view of nonhuman nature. Ms. Yazzie said that the Navajo people consider their mountains to be sacred and because they are sacred, "The Navajo people place their offerings on . . . mountain tops" and address the mountains with prayers, songs, and ceremony. Ms. Rekmans spoke in a similar vein:

> I would like to explain to you the significance of the sacred circle as told to me by my grandfather. As children, we were taught to respect Mother Earth, all animals, trees, birds, and water. We were taught to take from Mother Earth with reverence and offer gifts and thanks to show our appreciation for the life-giving things earth had provided.

People in our society could benefit from the spiritual attitude of those people who revere the earth, in whole and in its various parts, as sacred. People with this religious attitude do not try to subdue nature. If the paradoxical thesis is correct, the result in our cultural context would be the better treatment of people. This is a secular reason (based on the value of respecting people) for a religious attitude toward nature, an attitude that is compatible with any of the world's great religions, including Christianity.

The paradoxical thesis supports a position quite different from Immanuel Kant's. Kant opposed cruelty to animals to avoid cruelty to people, but he rejected valuing nonhuman animals for themselves, as we regard human beings. By contrast, I advocate valuing nonhuman animals and other parts of nature for themselves. So long as we (in our cultural context) view nature the way Kant viewed animals, i.e., merely as a *means* to promote human well-being, human oppression will result. Consequently, nature should be valued for itself to the point of developing a spiritual or religious attitude of reverence.

The Intellectual Journey

Why should anyone believe anything so paradoxical as the claim that our culture's dedication to the service of people results in human misery, whereas some cultures that value nature for itself, and revere it spiritually, are more likely to treat people better?

The answer lies in history. I do not know if I would have realized this if the hearing had not been in Europe, where people are surrounded by evidence of the history that has shaped Western industrial cultures. But in that setting it came to me that if the paradoxical claim is true, it should be evident in the continuing influence of historically important ideas, movements, and practices that were infused with the idea that only human beings are ends in themselves. Four of these strike me as most significant. They are, roughly in the order of their historical appearance: Christianity (just one, particularly influential, version), commercialism, industrialism, and modern bureaucracy.

I describe individually each idea, movement, or practice, but emphasize their joint and continuing influence on our society. If each description can be compared to a picture, then I intend the picture to be like a series of transparency overlays in a medical text. Each is made transparent because a better picture of the entire organism is given when the individual pictures can be viewed simultaneously as well as individually. Similarly, although each idea, movement, or practice will be discussed individually, I hope that a concept of contemporary Western culture will emerge as the simultaneous consideration of these practices yields composite understanding. Altering the analogy from medical texts to textiles, each of the four types of influence is treated here as an individual strand in the fabric of contemporary society. I want to expose the pattern that results from the strands' interweaving *in contemporary society*.

The general pattern includes five interrelated elements: 1) people conceive of themselves as essentially separate from nature; 2) people think they are in some kind of jeopardy; 3) subduing nature is undertaken to reduce the (perceived) danger, but usually augments human jeopardy; 4) because people are increasingly in (perceived and often real) jeopardy, they form increasingly centralized and powerful concentrations of force; 5) they use this force *against people* believed either to precipitate danger or to inhibit its reduction. I call this the five-part pattern.

The historical narrative is designed to highlight twentieth-century manifestations of this pattern. I pay special attention to the plight of indigenous people and to the Holocaust, which I find related both to one another and to enduring features of Western civilization.

The second half of this book includes information gathered at the World Uranium Hearing about the cruel irrationality of our mining, use, and disposal of uranium. Because the inhumanity of killing people with nuclear weapons is obvious, I discuss primarily the use of fission to produce electricity. The development and use of nuclear power illustrates the same five-part pattern. Begun as an attempt to gain more for people from nature, the production of nu-

clear power results in human oppression. The words of victims who testified at the World Uranium Hearing are grave and powerful. My account ends with reflections on the Gulf War of 1991.

I then discuss indigenous cultures in which people are less oppressed than in our own and life seems culturally rich and generally fulfilling. I show that integral to these cultures is a social and reverential attitude toward nature that rejects increased mastery in the human interest.

The final concern is whether consideration of these indigenous societies can help us to improve our own. Frankly, I do not know. I am sure that we cannot fruitfully imitate, and so become, indigenous people. If we incorporate into our culture some insights gained from the study and appreciation of indigenous cultures, including a social conception of and a spiritual attitude toward nonhuman nature, we will create something new, rather than return to some mythical golden age.

Improving our society requires rejecting some widely held assumptions of our age: That a growing economy helps people, that increasing world trade improves standards of living, that genetic technologies are worthwhile, and that family values can thrive alongside commercial growth.

Good reasons are needed to justify working toward a society that rejects many of our cherished beliefs. These reasons must be based on other beliefs that we hold. Conclusions drawn from radiometric data, for example, will not convince a creationist that the earth is many millions of years old, unless the creationist accepts a host of beliefs about radioactive particles, half-lives, measurement techniques, and so forth. Similarly, reasons to reject anthropocentrism in our culture must employ other beliefs *in our culture*. The present work features beliefs about history, the current state of human welfare, the desirability of reducing human oppression, and the importance of promoting family values and genuine human fulfillment. Unless we start valuing nature for itself, human oppression will increase. But if we adopt this value, we *might* realize improvements in personal security, interpersonal relationships, and human fulfillment.