

to one of these rallies, read the placards, then put the messages to content analysis and let's see what we get," and we get zilch, each and every time. So what's the problem? I don't know what the problem is. I can easily say it's a metaphysical problem. I can easily say that, and that's the nearest that I can come to it at this point. It's a way of receiving the world that we are taught--not taught, forced--to accommodate ourselves, we must receive the world in a certain way. And if that's the definition of metaphysics, then the problem is metaphysical, and everything else flows from that. I think this is what it's about.

David Cayley

Do you have some sense of where the origin of the problem is?

John Livingstone

I put the origins back a couple of millions of years. I believe that we are a domesticated species. The other domesticates that we have around us were made that way by genetic manipulation. We contrived in that way to make them just like us. We evolved this way. We were domesticated by let's call it ideology. I think that ideology is our domesticator and it's composed mostly of technology. "How to do it" governs all of our lives, all of our thinking. It doesn't matter whether it's abstract logic. There are rules of logic, there are "how to do it's" of how to do the most abstract problems. I think that we are the domesticated critter of "how to do it" or technology, and I believe we got that way very, very long ago.

David Cayley

Is this because we're slow and hairless and clawless?

John Livingstone

Well, our dependence on tools and weapons of course was the very first thing, and onward and upward. And of course the way the brain evolved itself, with the emphasis on, first of all, vision and secondly abstraction, is that we became more and more and more the creatures of abstracting "how to do" things and we became less and less attuned to the natural world. Now, that does not mean that we don't have it in us still, because I believe that we do because we are not genetically manipulated into being domesticated beings. It's the way of life into which we've drifted, and it is as though ideologies and belief systems were prosthetic devices that take the place of natural behaviour modes that we see in every other species in the world, and we've isolated ourselves in that way, I do believe, and felt ourselves quite comfortable with the supportive crutch, this prosthesis, which in simple terms is ideology, and ideology governs everything that we do, everything.

David Cayley

Livingstone's idea that belief systems are substitutes for natural forms of behaviour has made him wary of the quest for what is sometimes called "an environmental ethic," a quest that's been going on at least since Leopold issued his famous call for a land ethic. For Livingstone, ethics are part of what he calls "the prosthetic paradigm," the technological

and ideological crutch which blocks participation in nature. Extending ethical rights to nature, which has no need of them, would only extend our control, it would not help us to re-learn participation.

John Livingstone

I can't think in environmental terms. I don't know what it means and I'm not trying to stickhandle around it. I no longer know what "environmental" means. If you say "interspecies," then I will understand a little bit better what we mean. I think I would like to do away with the notion of "ethic" and behave as our genetic material would have us behave. I know that I can with other beings who don't happen to be human and I know that they do with me, and I don't think it's necessary to have let's say a rigidified formula or a code or a ten commandments about how to behave because how to behave is in there, it's in my bone marrow. I know it. We did evolve as social beings with a very complex social order, as did many, many, many other species. I think there is something in our numbers that forced us to adopt an artificial way of dealing with social organization when we got past a certain point of density and when our technology became so powerful.

David Cayley

Can you tell me what you mean by saying you know how to behave with other animals?

John Livingstone

My tendency with other animals is to listen and I sometimes feel that I know that there's communication that I share, certainly with my dogs, absolutely with them, but with other wild animals also. I think that they can read you very quickly. Animals can read you awfully quickly, whether you're tuned into them, as it were, or whether you're not aware of them, or whether you have some aggressive intentions toward them. I believe all that, certainly.

David Cayley

What would be an example from your experience?

John Livingstone

Well, where I live, we have animals that come and show no fear at all, either of the dogs or of us. I mean, and nobody has done anything overt to cause that to happen, it's simply that everybody knows everybody else, I think. I believe that there are social orders across species, for certain. I believe in interspecies social relationships and interspecies communication, and so forth. I know this, I think, from just seeing the way animals behave without articulating what they're about to do next. Our school system, all of our ideologies, whether they're theological or what, are concentrated so much on the infantile individual self that I think therein lies a great deal of our problem. I believe there is a group self, certainly there is, in the type of social structure out of which we evolved. I'm sure that is so. I think there is even a community self, a cross-species self. I think that a community is aware of itself and the participants therein are aware of themselves as the community, just as

you are aware of yourself as your child. There's no difficulty with that. I have no difficulty with my dogs because they're large ruffians, as big as I am, and it's easier that way. But certainly my wife is me and certainly the animals outside beyond my dogs are me also. I have no difficulty with that at all. This is what enables natural communities, I mean multi-species communities, to function, is the fact that they have a shared awareness of themselves as community, which we have not lost because it lives in us, but we have deliberately shelved it and filed it away in the interest of the human enterprise, of the consumption of what we call resources and what I call nature.

David Cayley

There are many examples of what Livingstone calls "interspecies social orders." One which he has cited in his writing comes from Barry Lopez's book, *Of Wolves and Men*. Lopez argues that the natural act of predation involves something he calls "the conversation of death." The prey, in effect, offers itself, and a mutual decision as to whether the predator will attack seems to take place, "as if," Livingstone says, "there were some ancient interspecies pact arrived at over thousands of years of joint evolution." But there are other, less lethal examples as well.

John Livingstone

We were under a coral reef one time and we noticed, my wife and I, we noticed that there was a cleaning station around, you know, a car wash. Large fishes line up and they literally line up tail to nose, and they go through a little place where there are very many small fishes, big as my finger, and these are usually the young of larger species, but they come and pick all the parasites off. They pick off all, everything that's on the sides of that fish. The fish moves on, the next one moves into place, and they clean him up. And so we just lined up, and there were the little things, biting away at us and getting--I don't know that I have any parasites, but they were picking at our skin anyway, as we went through, and then we moved on and a big grouper or parrot fish came in behind and sat there.

David Cayley

Really?

John Livingstone

Yes, wonderful. Wonderful.

David Cayley

And your sense is that you're simply accepted there as another species.

John Livingstone

Well, sure, I'm there and part of it, you know, there's no self-other. I don't believe in self-other. I think that self-other is as much of a problem as any other kind of dualism or dichotomizing. I think it invites the same kind of dichotomy that infests our particular Western culture. "Other" is eliminated at a community consciousness level. Self is community, there's no more "other." The community is "me" and "you" and "you" are "me." I think "other" is a very big

problem, although many people try to make it work for us and feel it is a positive thing, and I do not. I do not like it. It's dichotomizing. I don't think that the cardinal chasing other cardinals is "other." They're just playing. I think that "other" is a terrible stumbling block to participating consciousness. It must be removed or one isn't there. And I doubt very much that the lion sees "other." You watch a lion come and hit down a big wildebeest or something, a terrific crash and bang, and you say my lord, if there ever was a vicious self-other situation, it's that. But it's the same thing as an oriole neatly, sharply picking up a caterpillar, you know, there's no difference, and I think he is what he eats. I think he gears down into a simplified self-other configuration for the few seconds it takes to catch the wildebeest or the caterpillar and then gears back up again to a more mature, more developed level of self. I think this is what it is. There's intentionality, but only for seconds. I think the predator has to assume that mode, gear down into low, low, low self-other--I see self-other as very low--and do his act, catch his rabbit or whatever he's doing, and then gear back up again to the group self and trot off home with supper. I do think this is what happens. You can see a change in the animal's demeanour.

David Cayley

So play would be in the higher mode.

John Livingstone

Oh, yes. Play would be in a higher mode, and I think practically all territorial chasing that's written up in the books as competition and aggression is play.

David Cayley

Well, can we talk for a minute about the changes in scientific perspective that underlie your view as to what nature is?

John Livingstone

I know of very few in biology. Biology is still an economic body of theory, as is evolutionary biology, ecology, both. I see no changes there at all. I mean, territoriality is still sacred, competition is still sacred. There's no question about that. The only people that are beginning to break this down a little bit--and I'm not totally up to date, I insist--are some of the primatologists, mostly women. And if you look at the work of Linda Marie Fedigan, if you look at the work of Donna Haraway, if you look at the work of Shirley Strum, and others and others and others, they're getting an altogether different look at the thing, and the old patriarchal male-dominated science of primatology is never going to be the same again. It is quite wonderful. You're seeing words like "reciprocity," you're seeing words like "mutualism," and you're seeing all sorts of things, and "dominance" is shrinking and shrinking into the background. It's just a wonderful thing to see, but I'm only seeing it in primatology--I ain't. It's all I know about.

David Cayley

So ecology, biology and mainstream ethology, you think, are

still based on these old models of hierarchy, dominance, competition.

John Livingstone
Absolutely, they are.

David Cayley
Which in your view are drawn from human society and applied.

John Livingstone
Well, it's Adam Smith. The invisible hand in the market place of nature. It's exactly the invisible hand, but it's still invoked in practically all respectable ecology and ethology. But it ain't natural. I don't believe in domination as a natural phenomenon. It's a pathological situation when you see domination.

David Cayley
John Livingstone is confident that he knows what nature is not. He will offer certain confident statements about what nature is, that nature is whole, for example. But when it comes to trying to penetrate the metaphysical dome and prescribing for human society, he grows more tentative. It's hard enough, he says, even to understand what's wrong.

John Livingstone
I'm in the business of problem definition, and that's the business that I am in, period. I'm not in the business of solution offering because I'm not confident that I have a sufficient grasp of the problem. It sounds like a cop-out, I know, but the currency of the technocratic society is solutions and everybody has got a hard briefcase stuffed with solutions to throw at problems, and if the problem doesn't fit the preferred solution they will trickily redefine the problem to fit the preferred technocratic solution. This is what the World Conservation Strategy is about. It's what the Brundtland "Our Common Future" is about. They never tell us what sustainable development is, by the way, besides an oxymoron. They don't tell us, ever, what it is. So the currency is solutions, the language is solution oriented. Nobody, it seems to me, is after problem definition. I think it was Ivan Illich who did say that "I'm in the business of problem definition," and once we get the problem straight, it will take cadres of people to work out the solutions, and this is the way I feel, I have always felt, as a teacher.

David Cayley
Well, I can certainly understand that you're a step ahead if you're not trying to solve the wrong problem. But I do think, I mean, we all have to live day to day and make decisions, and it seems to me, for example, just an immediate reaction, that out of what you're saying one could easily draw a priority for children, let's say.

John Livingstone
Oh, absolutely.

David Cayley
Now that has many social implications.

John Livingstone
I anticipate if--if it is true, and I believe it to be true, that children need the bonding or imprinting experience on non-human beings at a pre-adolescent time, I agree with this entirely, then the implications of that in our school system are cataclysmic and the implications of that in all of our other received institutions and patterns of belief are cataclysmic. The enormity of the adjustment that has to be made, if we even agree with that, because, see, urban kids are not just undernourished in the sense of not having enough access to the heterogeneity of nature--and "heterogeneity" is the magic word--not only undernourished in not having that access, they are absolutely malnourished through cultural conditioning, and malnourishment is a hell of a lot worse than undernourishment. And so we are domesticating our little ones in the school system and in the home system and everything else to be good, willing servants under the metaphysical dome and never giving them the opportunity to experience the multi-species heterogeneity that their being longs for, and we must provide this.

David Cayley
Why is "heterogeneity" the magic word?

John Livingstone
Because no critter of any kind can fully individuate and mature in a mono-specific context, he just cannot. He just cannot. It must explore and experience, and my magic word at the moment is "experiential nutrition." I believe that our children are undernourished and malnourished experientially because they do not--nobody lets them eat the worm. The worm is dirty. You get your clothes dirty out in the conservation area. We get them in preschool computers and the computers don't dirty their clothes or muddy their fingers, and so we get them domesticated at an even earlier age than we used to. This is appalling.

David Cayley
What domesticates is the whole range of techniques? Television domesticates?

John Livingstone
The essence of domestication is dependence. That's the essence of it. So the human being is a domesticated being by being utterly and totally dependent on storable, retrievable, transmissible technique in a human oriented context, and without heterogeneity, without the experience of how other animals live, how other animals feel, how other animals communicate, real problem. You've got really a person of arrested development, as Paul Shepherd says in *Nature and Madness*, and a society of arrested development. Now, if we could just arrest urban industrial development, we'd be all right.

David Cayley
Given these explorations of the last ten years or fifteen years,

how do you see environmental movements today and the discussions that go on within environmental movements?

John Livingstone

I'm sympathetic, I suppose, to all aspects of the so-called environmental movement, but environmentalism, I don't identify myself as an environmentalist. I will not. I'm a naturalist. And since 99.9 per cent of environmentalism is dedicated to the human interest, I simply can't buy it. I can only buy that part of the environmental movement that is working in the trenches of problem definition, and that part, of course, I'm very much interested in. I'm a little worried that there are so few naturalists involved. Practically all of my colleagues in environmental philosophy, or whatever you want to call it, are not naturalists. There are two or three of us, and that's all. I worry about it becoming a very abstract, very abstruse philosophic enterprise that has less and less to do with the living, breathing, bleeding world.

David Cayley

Could you tell me what you're seeing that creates this alarm?

John Livingstone

Yes, I think when it's all done in the abstract, it's not much, it's no better than any other classical intellectual enterprise and it's got to involve a sense, an identity--an identity with the heterogeneity that is the living world. And if it simply becomes an argument amongst professional philosophers, well, then I turn the page and go on to something else. As far as the environmental movement goes itself, most of that is how to conduct business as usual and get away with it. Resource conservation has always been prudential. It was always, if you can't be good, be careful. Always resource conservation was that, and that's what sustainable development turns out to be, again. It's just a re-run, with new slogans, of the same old advancement of the human interest and getting away with it.

David Cayley

I think it's probably fruitless to try and pigeonhole you in any way.

John Livingstone

I think you shouldn't.

David Cayley

But do you have a sense of where you "fit" in the current discussions?

John Livingstone

I'm not even sure I do. I'm not even sure I do fit in, except that I'm satisfying myself by asking the questions that I enjoy asking, and I try to ask them through beings who are not human beings. But I am committed to understanding what it is that causes the belief structure to be so immobile and so resistant to penetration. I do not understand that, because we're reasonable people all and we have nice conversations and we have very, very profound conversations often, but nothing happens. And I think that nothing happens because

the overwhelming majority of us did not enjoy that preadolescent identification with nature, and if you didn't, it's simply academic talk.

Lister Sinclair

The Age of Ecology continues tomorrow night on IDEAS. Heard on tonight's program were John Livingstone of York University and David Ehrenfeld of Rutgers University. The program was prepared and presented by David Cayley.

* * * * *

Lister Sinclair

Good evening. I'm Lister Sinclair and this is IDEAS on the Age of Ecology.

Father Thomas Berry

I think it's the greatest failure of Christianity in the total course of human history that they are not able to deal with the ecological crisis and they don't even understand it. The Pope's statement on New Year's Day was terribly disappointing. It just takes a rather pragmatic, moralistic approach to the subject. This has to do with the very quintessence of religion. If we lose the natural world, we lose the sense of the divine. Religion comes from this astounding brilliance of the natural world.

Lister Sinclair

Father Thomas Berry is a Passionist priest and a furious critic of his fellow Christians. He believes that Christianity has been so preoccupied with the human drama of fall and redemption that it has become tragically insensitive to nature, deaf to its voices, blind to its beauties and ignorant of its revelations in what he calls a kind of autism. Father Berry describes himself as a "geologist" rather than a "theologian," and he has devoted a lifetime of teaching and writing to trying to reawaken religious sensitivity towards nature. He thinks that the greatest challenge of our time is cosmological, to incorporate the scientific narrative of the origins and development of the universe within a religious framework. He calls this narrative "The New Story," and he is currently collaborating with physicist Brian Swimme on a book about it. Tonight, in the third hour of our series, The Age of Ecology, we present an interview with Thomas Berry. Now 76 years old, Father Berry lives in the Bronx in northern Manhattan, in a religious retreat secluded from the city. The house sits beside an ancient red oak in a small park with a panoramic view of the Hudson River. David Cayley called on him there and recorded this conversation.

David Cayley

The book, the collection of your essays that the Sierra Club published was called "The Dream of the Earth," and I thought perhaps that would be a starting point. Why "The Dream of the Earth"?

Father Thomas Berry

That had to do with how we understand the universe. There are some people that see the universe as a very ordered affair, some as chance and total disorder. My proposition is that no matter how you look at the universe, it's a fantastic world, so that there's a strong element of fantasy in the universe. You get the smell, the variety of colour and shape of flowers--it's just fantastic--and the way in which the stars are splashed above, across the heavens, the amazing proliferation of the microbial life forms. No matter where you go or what you see, there is an element of fantasy. So since our fantasy or imagination is mostly within our dream life, then I figured that whatever the ultimate explanation of existence, there's a strong element of dream, of fantasy. So when I say "The Dream of the Earth," I'm not thinking of a human dream of the earth but of the earth itself as subject dreaming or the universe as dreaming, so that's one way in which to tackle things.

David Cayley

And what does that say about us?

Father Thomas Berry

Well, it says that if we want to be very much alive or to be very much into the game, we need fantasy, we need dream. And that's where all the trouble comes from, trying to establish order into the planet and to take over the dispersion of life and then put it all into agricultural rows, mile after mile after mile, and that's the travesty of monoculture.

David Cayley

I was thinking also it suggests that we're being dreamed, if it's the earth that's dreaming.

Father Thomas Berry

Oh yes, absolutely. And that's also why the force that functions at the deepest level of our own lives is our dream life, and this discovery by Carl Jung and to some extent by Freud is one of the greatest of our human accomplishments, I think, to understand that our lives are expressed at their deepest and are controlled by a depth of understanding that gives expression to itself in our dream configurations.

David Cayley

It's an impossible and probably even presumptuous question, but when and how did you begin to become aware of this? You call yourself a "geologist." Was there a time when you were a theologian?

Father Thomas Berry

Well, I'm not sure I was ever a theologian, but I was a dreamologist from the beginning of my life, from the time I was 7, 8, 9 years old, in my dream life. I dream not necessarily at night, but all day. I have two phases to my mind, and so my dream life and my waking life are not too different moments, they are simultaneous processes. So I dream and I think maybe most people do, we are constantly energized by our dreams, and it's the dream that guides and

energizes. That's why again, to get back our problems now, we have to dream a new type of a universe, a viable universe. We're victimized now by this industrial dream. That's why all advertising is kind of, well, it's the dream world that's presented to us, a world of blessedness, but it's the dream illusory vision of heaven world, and anything can take us there in a consumer society. They'll say here, in your deprived state, take this bar of soap and you'll get to paradise, or buy this automobile, it'll take you to paradise. So that all advertising is wonderworld advertising, and our dream world, wonderworld, is that illusion that's held out to be fulfilled by all our mechanical contrivances. And what we're really getting is waste world rather than wonderworld, but we still are going by this type of an illusion. A person wonders how much longer the thing can continue because it's gotten so hysterical now that I don't know where it can go.

David Cayley

So the way you're using the term "dream" now, you're shading it towards vision and then towards what you've called functional cosmology or story.

Father Thomas Berry

Yes, that's right. The story of the universe is a story of the unfolding dream of the universe, a person might say if a person stays with this type of terminology, because the evolutionary process is the narrative of this sequence of true wonderworlds that have emerged from the original flaring forth of the energies of the universe, the articulation and then in the supernova explosion, the constellation of the 90-some elements, and then that fantastic shaping of the solar system, the planet Earth, out of stardust and so forth. It's just staggering in its magnificence.

David Cayley

Where, in your view, does the wonderworld story come from?

Father Thomas Berry

Well, it comes to a large extent from the millennial vision of the prophets. Well, it's not too much the prophets. They had the Day of the Lord, the prophets, when there would be justice and peace and abundance, and this was taken up in the apocalyptic literature of Daniel and culminated in John's Book of Revelation, where in those last chapters, particularly from 17 to 22, he gives us this sense that history is going to find within history fulfillment, where humans would reach a state beyond the human condition as we ordinarily conceive it, and where there would be the reign of the saints for a thousand years. The dragon would be chained up and this wonderworld would come. Now that wonderworld vision of John was transposed in the 16-17th century from a spiritual, divine type fulfillment to a fulfillment that humans would bring about themselves, through science and technology, and that's why Francis Bacon is so important. He was the first person that began to envisage that we ought to torture nature until nature gave up its secrets and we could establish this wonderful mode of being within the temporal order through our own efforts. And so this vision that he proposed is taken

up into the idea of progress later on by Fontanelle and then on into the Enlightenment period of the 18th century, and then on into the 19th century advances in technology, and then into the 20th century, and then when we went into the petrochemical age after the Second World War, then everything exploded. That vision is just tearing everything to pieces. It's a pathology. So we have two visions that are functioning now: what I would call the pathological vision of those who think we can get to a state of blessedness through our technologies and through our mechanisms and through our consumption and those that insist that we have to deal with the earth within the limitations that the earth imposes on us. We have to deal with the earth on its terms. The earth's not going to deal with us on our terms, that's certain, and we're seeing now how much damage we are doing by not listening to what the earth is telling us.

David Cayley

Doesn't the view that the ecological crisis comes out of this dysfunctional story, just coming of the Judaeo-Christian tradition, doesn't that run into the objection that other societies with quite different stories have been equally hard on the earth, even that, as one writer said in a volume I read recently, pollution begins in prehistory? Can it really all be tied to this one Judaeo-Christian narrative?

Father Thomas Berry

The contemporary phase of it can be tied into the Western narrative, and although there was from the Neolithic period a certain amount of human stress on the planet, that was within certain limitations. It's true also that China, with the finest philosophy of human-earth relations, has devastated its continent. They began in the Neolithic, they did their agriculture and then they started cutting down trees and they never stopped, and now the Chinese mainland is being washed into the sea. They have come to some controls over it, but it's still just a ruined continent to such a large extent. Plato complained in his time that the wooded areas of Greece were already devastated, that the springs had dried up and so forth. So the human does not have a good record in the post-Neolithic period, but there wasn't exactly that mystique of consumption that came in with our Western world or with that technological expertise so that we have stepped up the whole process a thousandfold. So merely to say that others didn't do very well themselves doesn't remove that judgement of the West that we are the geniuses at it and we really started disturbing the chemistry of the planet. These other countries didn't disturb the chemistry or the atmosphere and they didn't soil the sea waters and they didn't have these great driftnets 40 miles long and 40 feet deep to scoop up everything in sight. They couldn't touch the ozone layer, they couldn't build up this carbon dioxide layer in the air that possibly would give us a kind of greenhouse effect, and they couldn't put all the pollution into the earth with fertilizers and pesticides. So we are functioning in very different ways, more deadly ways than everybody's ever done.

David Cayley

If we're doing this as a result of a cosmology, a story, then presumably the antidote is another story, a new story you've said.

Father Thomas Berry

That's right, a new story. That's my proposal and I think we have a new story, a new sense of the universe that we know by our empirical observations. It's given us the story of an emergent universe that has gone through a long sequence of transformations and it's given us a wonderful world. The difficulty is that the scientists have presented it to us in a meaningless way, as mechanism, as chance, and so that the religious people have been turned off as regards this so that they can't see this as their sacred story. What is needed is to tell this story that we know now as both a sacred process as well as a physical process that is both spiritual as well as material. There's no such thing as matter devoid of spirit, all patterning is psychic/spiritual. Matter by definition is indeterminism. Pure indeterminism is an impossibility. So that anything that can be understood must have intelligibility and intelligibility is a psychic dimension. We can also see that we ourselves come out of this process. We know that we have a psychic dimension to our existence. Where did it come from if we are not activating in a very special way the psychic dimension of the universe itself, particularly of the planet Earth. The one other aspect of this that's enormously important is subjectivity and the need to see the world around us as subject, not simply as object to be acted on, but as subject revealing itself and revealing the deep mysteries of existence, speaking to us. As soon as we become autistic and don't hear the voices, then we're in trouble. If we don't hear the voice of the mountains or the rivers or the trees or the flowers or the birds or the butterfly or whatever, then we've closed ourselves off from the quintessence of existence and nothing can have very much meaning, and if nothing has very much meaning, then we're going to smash it. So that this process is either going to be deadly because of its meaninglessness, or if we're going to revere it and have a certain awe, a certain veneration, even a certain worship of the world about us in its manifestation of the divine.

David Cayley

How does this "autism" take hold, in your opinion?

Father Thomas Berry

The decisive moment, I think, was with Descartes, when Descartes was the first person professionally and philosophically to deny subjectivity of the outer world, so it's since his time. But he could do that because, to some extent in the Western world, we were never that sufficiently in communion with the natural world. The natural world did function as a scripture up until the 16th century because Christians always mentioned that there were two books of revelation: one the natural world, the other the Bible. So the natural world has the status of divine manifestation, for St. Thomas, in this wonderful selection of the Summa Theologica, in the first part of it, in question 47, article 1, where he talks about the great diversity of the universe. It's

a question of why are there so many diverse things. Well, he answers, because the divine could not mirror itself in any one reality, it created the vast differences of things so that the beauty that was lacking to one would be supplied by the other, and the whole universe together would participate in and manifest the divine splendour more than any single being whatever. So that there did exist in the Christian world the sense of the natural world as having an intimate role in relationship to the human, in relationship to the deepest aspects of human spirituality. But then I think at the moment of the Black Death, I think that this was the traumatic experience. I don't want to say that that single event, traumatic as it was, when perhaps a third of the people of Europe died, I don't want to put the whole of later history on to that single incident, but it was a stupendous experience for the Western world. They had no explanation of the Black Death, had no sense of germs, they had no explanation of illness. They could only conclude that the world must be in a decadent phase, that it was being judged as evil by the divine, being punished, and that's when in the art you began to get these judgement scenes in the art of Europe. The naturalism of Giotto in the early 14th century was diminished. The Black Death came in at 1347, at 1349, and the art was changed at that period and a person begins to see some of the changes in the art. In the 15th century, you get the Dance of Death, you get the morality plays and the sense that nothing is worthwhile that you can't take with you when you die. The only things you can take with you when you die are your virtues or your spiritual things, and so the natural world begins to lose some of its qualities. And then you get this devotionism throughout the 15th century, this background of the Reformation period of the 16th century. You get this intense devotion, this intense experience of faith, that you're saved by faith and not by works, and the whole Christian appreciation of the natural world I think is profoundly dimmed at this time, and that's where the pathology comes in, in my estimation. And what is the pathology? The way I describe it is this, that particularly in the modern times, there is in the Western psyche a deep, hidden rage against the human condition, that we are not going to accept the human condition. Now, religious people want to deal with this by establishing a faith transcendent to the human condition and a blessedness that they look forward to in some future world. The others are determined to challenge that and say we can transform this planet if only we have the courage to take control of it to transform it, and that's what I think we're doing. We are ready to take the entire planet to pieces because we are not going to accept the human condition, we're not going to accept life on the conditions under which the earth gives us life. And so we are in this plundering phase, and the more technology we get, the more scientific development takes place, the less respect we are going to have for the planet and the more we're going to tear it to pieces and to I don't know what. It's obvious now that it's self-defeating, that we're causing ourselves infinitely more misery than we're healing, and so there's some big questions.

David Cayley

So you see the materialism, the frenetic materialism of our own time, as a kind of demonic parody of a redemption theology.

Father Thomas Berry

Absolutely, it is. Let me give it to you this way, in my three sentences that I repeat endlessly. The first sentence: In the 20th century, the glory of the human has become the desolation of the earth. Second sentence: The desolation of the earth is becoming the destiny of the human. Third sentence: All human institutions, professions, programs and activities must now be judged primarily by the extent to which they inhibit, ignore or foster a mutually enhancing human-earth relationship. Now that has to be the norm. Whatever we do, it has to be mutually enhancing. It has to be a relating to the outer world as subject, not as object to be as exploited but as subject to be communed with. If we lose that communion capacity, as I think we have, then we are going on endlessly in this pattern that we've established. I'd say of my generation, and I've lived--I was born in 1914--I've lived almost from pre-industrial to post-industrial in the sense that, as a child, I lived in a world that was only beginning to be taken over by the industrial process. I was astounded as a child to find out how inadequate people were in their rapport to the natural world and what they were willing to do to it, to build roads and to increase the automobiles and all that, and I was amazed to see what happened to the streams, the meadows and the woodlands of the area where I lived. Now I go back there and there's just extensive devastation. There are all kinds of shopping malls and parking lots and headquarters of corporations and industrial parks, and it's the world of desolation. I've just come from talking at three campuses of the University of North Carolina in Greensboro, Asheville and Boone, and I took up the question of the destiny of North Carolina. What's this got to do with our destiny? We should be able to create an internal economy. We have the mountain area, the Piedmont section, the coastal plain, the estuary region. We have all these splendid resources and why can't we have our own internal economy and build our culture here? Are we so dumb that we can't structure our own music, our own poetry and schools and educate ourselves, not to compete with this industrial world but to be ourselves? If the whole community, the state got together with its creativity, it could create something, it could be something. Now it's dissolving into nothing. It may have a better GNP, gross national product, but the gross earth product there is certainly terribly diminished. So given what we've paid in terms of the land and the vegetation and the life systems and the integrity of existence there, it's a total imbalance.

Lister Sinclair

Tonight on IDEAS, you're listening to an interview between David Cayley and Father Thomas Berry, part three of our series, The Age of Ecology.

David Cayley

I'd like to explore with you for a few minutes what this

means for the Christian tradition. I remember a few years ago when I first met you, you counselled putting the Bible on the shelf for a few years and reading the scripture of the natural world. I've thought about it ever since, and every year it seemed to me a worse idea in a certain way, because it seems to me that there are resources there for re-understanding this relationship. But anyway, I'm not telling you what to think, I'm asking how you now see this question.

Father Thomas Berry

Well, there are resources in the scriptures of the world, the different scriptures. The reason why I say that ultimately is because the Genesis story in this sense is not our story. We have a new story. We don't see the world as just put there, as in the Genesis story. We experience the universe as being something like 14 billion years old, as an emerging process, and we see the earth as coming into existence at a certain phase. We see the life systems develop, and this is our personal story. There's something unreal about trying to situate ourselves simply in the Genesis context. What we need to do is to deal with both of these. We do need to deal with both, and both are valid in their own context, their own way. But I think the story of the universe as we have it, to envisage that as a sacred story is the most powerful thing we have available to us. I think it's a new revelatory experience. It's a qualitatively different revelatory experience. It's not the same as the other scriptural experiences, but there is a great difficulty between a spatial mode of consciousness and a time developmental mode of consciousness. This is probably the most extensive change in human consciousness, certainly since the Neolithic, maybe in the last 60 or 100,000 years, which is the period of modern humans, the humans from which we are descended. Now, until we come to deal effectively with this new account of the universe as a sacred story and can appreciate that this is our personal story, this is our universe story, our earth, the life story, we are not going to realize that everything in the universe is cousin to everything else, it's genetically related. We're genetically related to everything that exists. We come out of the same life process that the trees come out of, the flowers or the birds, or whatever. We are relatives, blood relatives in that sense, and this gives something that we don't get from the biblical story. And the reason why I say put the biblical story on the shelf for twenty years, I want to take that away, not because it's not helpful but because we are not going to be serious about this other story until we somehow can get to some extent detached from this fixation on the biblical story.

David Cayley

But isn't there something just as essential in the biblical story, from your point of view?

Father Thomas Berry

Well, certainly it's essential. It's not that it's not essential, that's not the point. The point is that it's inadequate to deal with the problems of our times. It can contribute, but it can't really deal with them because it was not given in the first place to deal with these problems. These are different problems that we are dealing with, and as a manifestation of

this, a person can see that none of the traditional scriptural traditions are able to deal with the crisis we're in at the present time. Look at the Christian churches. They're not doing anything substantial. So why? It doesn't concern them. The world can come and go and they will get their redemption. What they're interested in is redemption, not in how to live in this world but how to get out of it.

David Cayley

How do you see the figure of the Christ and the doctrine of the incarnation then?

Father Thomas Berry

Well, we need to have a new sense of the Christ reality, particularly the Christ of St. Paul and St. John. In St. Paul, particularly in the first chapter of Colossians, he says that in Christ all things hold together, and so forth. This is the Christ image or the Christ archetype or the Christ reality in its cosmological dimensions, as the Logos, as the ordering principle of the universe. So that the Christ reality is not simply Jesus of Nazareth as a human individual and that special mode of divine presence that's there, but also a way of talking about the universe in its sacred dimension. So what we need to understand is that there's a Christ dimension to the emerging universe from the beginning, just like there's a spiritual dimension, there's this numinous sacred aspect of the universe from the beginning, and for the Christian it's the Christ dimension. The Buddhist would say there's a Buddhist dimension. And both are valid in their way and they accentuate different things, and they're qualitatively different experiences, they're not interchangeable. But the validity of both can be sustained. So that I want to have a Christ, emergent Christ that's intergal with the emergent universe.

David Cayley

Does that make the idea of an historical incarnation in a certain place, in a certain people, that makes that pretty well a stumbling block, doesn't it?

Father Thomas Berry

No. It's simply that the universe articulates itself in specific instances. The universe is not just vague and generalized, so that for a single individual to bear a special relationship to this process is totally understandable in this context. But to think that the specific individual can replace this larger sense of things would be to say that St. John, when he wrote his Prologue, was just dreaming up something fantastic. Now, Teilhard de Chardin, that's one of his great contributions, is to read the emergent universe in these larger terms of John and Paul, and that's what we need. Now, as long as we are preoccupied with textual discussion and with redemption processes, we are not going to have the energy and we are not going to be that concerned with the world about us, and that's my serious concern, that certainly with the Catholic Church, which I am associated with, it's total disaster. I think it's the greatest failure of Christianity in the total course of human history that they are not able to deal with the ecological crisis and they don't even understand it. The

Pope's statement on New Year's Day was terribly disappointing. It just takes a rather pragmatic, moralist approach to the subject. This has to do with the very quintessence of religion. If we lose the natural world, we lose the sense of the divine, because religion comes from this astounding brilliance of the natural world, and to diminish the natural world is to diminish divine manifestation. We have a wonderful idea of God because there's so much beauty in the natural world. As that beauty is diminished, our capacity to have a divine rapport diminishes. Now, there is this thing that I've said a number of times. If we lived on the moon, our sense of the divine would reflect the lunar landscape. Our imagination would be as dull as the moon, our sensitivities would be as empty and our intelligence would be almost nothing. In other words, our total interior life, not only our sense of the divine, but all our interior spiritual faculties would be profoundly crippled. And for religious people not to say that the assault on the natural world is an assault on their sense of the divine, it just baffles me, and why religious people, and why in our universities, why in our seminaries, why in our preaching, why in our bishops' conferences, why the Vatican can't deal with this issue, well, it just stifles me.

David Cayley

Is your sense of the divine entirely immanent? Is there room for transcendence in your philosophy?

Father Thomas Berry

Well, the divine certainly is transcendent, but what access do we have to the divine except through the manifestation? St. Thomas says there's nothing in intelligence that was not first in the senses. In other words, why do we have senses? We're not angels, if there are angel spirits that may have some immediate access to the divine, if they as such exist, that's something else. But we function this way. Why do we have an incarnation in the first place? It's because we can see and deal with a specific individual relationship. So why is this great wonderful world what it is? St. Thomas tells about it clearly. It's because the divine participates itself, as he says, and goodness communicates itself, so that divine goodness overflows in its creation and sharing of itself with the multitude of creatures, and so it's something of a rejection of the divine to reject the creation.

David Cayley

Let's presume that the new story can establish itself and it's then time to take the Bible back down from the shelf because it no longer reinforces our addiction to a certain dysfunctional story. Am I paraphrasing you okay? What then would be the proper relationship between the new story and the traditional stories which presumably we will continue to tell and keep?

Father Thomas Berry

Well, you could tell these two stories in relationship to each other very simply, I think. In fact, I am doing something now where I take ten or twelve of the basic religious orientations in their traditional context and show how to read these in

this context. For instance, take the doctrine of the Trinity, which is one of the most difficult of Christian doctrines to talk about but which is central to Christian belief, as many of the basic divisions of Christianity would maintain. The Bible gives us the family model of father, son and spirit. St. Augustine uses the psychological model of thought thinking on thought, that is, it's a more psychological type sense of the Trinity. And then there is the social model of the self, the other and the community. I propose the cosmological model. The father would equate with the emergent universe, as always, the creative principle, the son equates with the articulation, the intelligibility of things, and so the inner articulation of things would be the son, and then the bonding, the holy spirit. Now this is a perfect model of the Trinity and a very effective model. Now take baptism. This story would enhance the baptismal formula this way. In contemporary baptism, we introduce the child or the person to be baptized to the divine order and to the human religious community. We do not introduce the child to the natural world or the person baptized to the natural world. But there is a ceremony coming from the Omaha Indians where the child is introduced, a newborn child is presented to the four parts of the natural world, to the heavens. And they have a phrase, "Oh ye, sun, moon, stars, oh ye in the heavens, I bid you hear me. Into your midst has come a new life. Consent ye, we implore, make its path smooth that it may pass beyond the first step." And then the clouds and the rain and the winds and all that, I bid you hear me into your midst, and so forth, a new life has come. And then to the vegetation, the trees and the animals, and finally to the insects, and then to the whole of the universe, a new life is here. Now, just think how important something like that could be, because otherwise any religious ceremony can be alienating rather than communicating or identifying with.

David Cayley

You've said in one of the essays that's published in *Dream of the Earth*--I can't remember which one--you've called for a new shamanic personality. What do you mean by this?

Father Thomas Berry

Well, the shamanic personality is different from the prophetic personality. Some people say we need prophetic types. It's not prophetic types we need. The prophet talks to God and God talks to the prophet, and I don't know if either one of them talks to the natural world. But the shamanic type is the person that goes deep into the mystery of the universe and brings back power and direction to a society. It brings back healing, because the power is frequently healing power but supportive power. But the main thing about the shamanic personality is that it's dealing more with the powers of the natural world. We are not accustomed to dealing with the powers of the natural world. To us, that's a kind of idolatry or something like that. The prophetic message was to take care of the poor, that the divine worships not ceremonies but justice to the poor. And at the present time, religion is so overwhelmed by the pathos of the human and efforts to take care of people that are isolated, that are suffering and so forth. Well, there's so much concentration on that that

taking care of the natural world looks like a luxury and an elitism that a serious person doesn't bother with.

David Cayley

Isn't this dichotomy in practice a real one? Aren't people apt to face to real decisions along those lines as to which to prefer?

Father Thomas Berry

Well, I'm not sure. It may seem that way, I'm not sure, because I think that peace among peoples and the welfare of people can only be achieved through the earth, through the ecosystem, and the whole ecosystem is the sacred community with the humans as a part of it. Now, there was in 1980 a study made by over 700 scientists from over 100 different nations as regards this question of the future of Third World countries, and it was very clear in their statement. It came out in a remarkable statement called "Strategy for World Conservation and Development," and it was clearly stated there that peoples have no future except through their environment, through their ecosystems, and if those ecosystems are diminished or wounded, the people are at an impasse. So these come together and I frequently say "peace among peoples through peace with the earth." I don't think that our political problems are ever going to be solved by facing each other. I think that we both need to be looking at the same issue and participating in the wellbeing of the planet. As we do this, I think our antagonisms will be diminished because we'll have a common concern for the fact that the air and the water and the soil and the sunshine, that these are a common heritage, they are commons for the whole of the earth community, and it takes the whole of the earth community to preserve it in its integrity. So that to spoil the air of another people, another country or another community of any kind is to do the worst possible thing for them. So I don't see these as opposed, I see these as very closely related. Take this country, that is, the North American continent. We've probably lost, in the U.S. at least, a third of our topsoil. We're probably losing four to six billion tons of topsoil every year. That's one of the most serious estimates. How can you continue losing that much topsoil and hope to feed people and hope to take care of the poor? It can't be done. So it's the heritage of people that's being destroyed. It's their religious heritage, it's their cultural heritage, it's their physical heritage, it's their only hope for food or shelter or clothing or any type of wellbeing. We have no wellbeing, just as we have no existence, apart from this. Humans are an abstraction in this sense because, what are we without the earth we stand on and all these things that surround us, the air and the water, the soil? We're nothing. So that to constantly talk about the human doesn't make sense.

David Cayley

Can you speak finally of the earth as a context for religious celebration?

Father Thomas Berry

Well, the whole of the natural world has been the "Great

Liturgy," I call it. It's the universe liturgy more than the earth liturgy, and peoples have generally had their rituals based on the great liturgy of the universe. The seasonal liturgies, the death-rebirth symbolism of the different seasons, the religious buildings are related to directions, the directions of the universe or to some sacred spot that geographically has become a sacred place of reference. So the religious ceremonies are fixed into that. The creation narrative is associated with the natural world and the creation narrative is what is recited at all sacred moments, particularly initiation moments, and with Christians the Holy Saturday liturgies, the Easter Vigil liturgies begin always with telling the story of creation. Out of the darkness and the light, the candle is lit out of natural forces and it's carried into the darkness, and this is a re-experiencing of the whole creation process. So the symbolism of religion would be impossible without the concurrence of all these natural phenomena. It has developed more in a spatial mode of consciousness, where time moves in seasonal cycles, rather than in developmental time. The developmental time gives us new liturgies, like we should celebrate not merely the coming of the flowers of spring, we should have the celebration of that moment 100,000 years ago when the flowers first came. That was a great spiritual moment. The supernovas, and this explosion of the first generation stars that created the 90-some elements, that was a great spiritual moment. You couldn't have spirituality without those elements that were created then. You couldn't have any of this unless you had, say, that wonderful moment when oxygen came to be breatheable. Originally it was a poison, but then there came a new type of life that could enter into that phenomenon. These are all great spiritual moments and there is need to enter deeply into this process, and the more we do it, the more wonderful the religious expression will be. Life is celebration. What do the birds do? They celebrate, they fly in such wonderful soaring cycles. What do the fish do? They celebrate, they're so colourful, and the flowers and the grasses and every living form celebrates, and the human simply has to know how to celebrate. Life is not having a job, life is knowing how to celebrate creatively in a florescent universe.

Lister Sinclair

Tonight on IDEAS, David Cayley presented a conversation with Father Thomas Berry.

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Lister Sinclair

Good evening. I'm Lister Sinclair and this is The Age of Ecology on IDEAS. In his 1949 inauguration speech, U.S. President Harry Truman put a new word into general circulation. The word was "underdeveloped," and he used it to describe the countries of Asia, Africa and Latin America which the U.S. proposed to aid. Development was conceived as a one-way street to a modernized, market-driven society. Forty years of hindsight shows it to have been an ecological

catastrophe. Development disintegrated social structures and disrupted traditional patterns of subsistence without producing a livable alternative. Local communities lost control of the forests, soils and waters they had once husbanded. The new emphasis on production for world markets led to soil erosion, water problems and epidemic deforestation. Often, the main sufferers have been women. It is women who have to walk further for water, fodder and fuel when subsistence breaks down, and women who are marginalized when modernization destroys traditional powers and prerogatives based on gender. Tonight, in the fourth program of *The Age of Ecology*, we examine the link between women, development and ecology. The series is written and presented by David Cayley.

David Cayley

Environmentalism in North America has often been portrayed by its opponents as a kind of middle class indulgence, a concern only the well-to-do can afford. The charge is unfair, but it does reflect the fact that for most North Americans environment is an abstract category. We may worry about topsoil loss, but we don't depend on a particular soil to subsist. If the avocados from California don't look nice today, there's always the melons from Israel or the kiwis from New Zealand. Things are otherwise in the countries of the south, whose soils are often the source of our luxuries. There, environmentalism didn't begin as what we'd call environmentalism at all. It began with people defending their own subsistence and therefore defending the environments in which they subsisted. One such case was the Chipko movement, which appeared as a protest against deforestation in the early 1970s in the Himalayan region of north-eastern India. It was a movement of village women who adopted the tactic of embracing the trees, which is what "chipko" means, as a last-ditch defence of their own safety and subsistence. The Chipko movement is one of the subjects taken up by Indian writer Vandana Shiva in a book called *Staying Alive: Women, Ecology and Development*. Vandana Shiva lived in Canada in the 1970s, taking a PhD in quantum physics from the University of Western Ontario. She then returned to her native Dehradun, in the same part of India that Chipko arose, where she established the Research Foundation for Science, Technology and Natural Resource Policy. Chipko was then at its peak and she was quickly drawn to activism as well as scholarship. Recently, she taught for a term at Mount Holyoke College in Massachusetts. I met with her there and recorded the following interview. She told me first about the period in the mid-'70s when Chipko confronted the Indian state.

Vandana Shiva

In 1976, the private contractor system had been brought to a halt because of Chipko, because the first demand of Chipko was there's too much of logging for profit, for private profit. The government was very smart. They got rid of the private contractors and set up a public sector corporation to do the same job. So there was no more private profits, it was now national revenue, and in '77 it was a government contract being operated on by a labour contractor that the

local women started to resist. Now because it was directly the government involved, there was far more militarization. It was the first time the police were brought in to ensure that logging could take place, and that's when the women basically ran tree to tree, and they were arrested too. But they didn't stop, just newer and newer villages, the women kept pouring out and coming on to the site. And it went on for days and new things kept happening, all kinds of things kept happening. They had ceremonies to tie sacred threads around the tree, which is the sacred thread ceremony we have where sisters tie threads to their brothers, and it's a relationship of love and protection, and had all kinds of ceremonies. Daily there was a new ceremony taking place in the forest.

David Cayley

Is this when the lanterns were brought?

Vandana Shiva

Yes, this was also the location where the lanterns were brought. And when the forester asked them why the lanterns in the daylight when they knew it was bright, and they said this is for you to see the light. And that's also where that interaction that created the slogan happened, where the forester said, "You're blocking revenues, you're blocking timber. Forests mean timber, resin, and revenue," and the women said, "No, the forests mean soil, water and pure air." And that slogan then became kind of the alternative perspective on first forestry and then nature at large, and that slogan got carried all over the country and started Chipkos all over.

David Cayley

Why was Chipko a women's movement? What made it a women's movement?

Vandana Shiva

What made it a women's movement is the fact that in Garhwal it is the women who do all the work related to the forest, and to do that work on a sustainable basis they have always had their belief systems built around the fact that the forest is the source of all survival. So they have songs about it, they have regulations, communal regulations to block overexploitation. They have rituals that remind them that the trees are the source of life for the field. But when they start losing out on water, when the fodder sources and fertilizer sources start getting scarce as the forests start disappearing, it's the women who can sense how the agriculture productivity is falling, and they know why it's falling because they have the knowledge of what maintains it. And when they have to walk further for water, it's their legs that have to walk further. So they have in every sense a multiple experience of what deforestation is about and what the forests support in the hill areas.

David Cayley

What are the consequences of deforestation? What were they reacting to?

be a hermit and be a practicing Jew. You have to have to have a community.

David Cayley

I'd like you ask you finally about what I'll call environmentalism for want of a better term, meaning all those persons who are concerned with this. And this is a movement which seems divided in many ways but which ranges certainly from a managerial perspective at one end, an attitude which is confident that sustainable development is possible, that you can have growth and environmental protection, however it's phrased, and at the other end one has a biocentric perspective, let's say, descending from Leopold's famous saying that we should be only a "plain citizen" of the biotic community. It seems to me that coming out of your Jewish roots, you take a different view, neither one nor the other.

David Ehrenfeld

Yes, let me try to answer your question by describing the Jewish attitude towards work and the Sabbath, which I think is the ultimate, for me at least, the ultimate way of stating this problem. In Judaism, you're supposed to work six days and rest on the seventh. On the seventh day, on the Sabbath, which for us is Saturday--or it actually starts Friday evening at sundown, you are supposed to stop working and there's three things you have to do if you are going to observe the Sabbath correctly. You can't create anything. I mean anything. If you get an idea for a book, you cannot write it down on a piece of paper. That's very painful for an author and it happens to me all the time, and I wonder, will I remember this till after sundown on Saturday, and sometimes I do and sometimes I don't, and I have stopped worrying about it. If you're a gardener, you can't plant a seed. That's a creative act. You can't do it. You also can't destroy anything. That's the second thing you can't do. Again, if you're a gardener and you see a weed growing in your garden, you can't pull it up, you can't kill an insect pest, you can't shoot a rabbit, or anything of that sort on the Sabbath. The third thing that you're supposed to do is a positive injunction, which is to celebrate the Sabbath and celebrate the fullness of the earth that was given to people to live in, to work in and to enjoy. So you have this prohibition against creating or destroying, which means you cannot be a manager, you can't be a steward even in any sense. You've got to leave it alone, and it will continue all by itself. It's a wonderful lesson. You also have to learn how to enjoy it, and that's the other part of the lesson. People were told you had to have the confidence, in a sense, in the earth and in the creator of the earth that says I'm going to just rest for one day, I'm going to leave it alone. Now, I think that stewardship without the idea of the Sabbath is bound to go wrong. Without the idea of the Sabbath, without some idea of a built-in restraint, then the steward eventually becomes very arrogant. Hence my title, *The Arrogance of Humanism*. The stewards says I'm really the king. You know, the late J.R. Tolkien, in his book, his wonderful Ring trilogy, *The Lord of the Rings*, has this dilemma of a steward who says How long do I have to stay a steward if the king doesn't

show up? When do I become a king? And the man who asks this question is told by his father, who is the steward, Even ten thousand years wouldn't be enough, and essentially there is never a time when a steward becomes a king. Well, I think that there's a great temptation for stewards to want to play king, to want to play God, and without some kind of a restraint that's built in at a regular basis, a kind of constant reminder you're not running the show, you can't run the show. You don't know enough to run the show and you never will and you're only going to mess it up if you have that attitude. Without that idea, then I think that stewardship is bound to go awry, to go amiss. I think that the idea of the Sabbath, for Jews, and perhaps for Christians too, introduces this idea of restraint which is so essential to keep stewardship on the right track. So I think that stewardship is the only hope, but I think it has to have some kind of restraint built into it.

David Cayley

David, thank you so much.

David Ehrenfeld

You're welcome.

David Cayley

In 1980 a book appeared which I think of as a kind of sibling to *The Arrogance of Humanism*. It was called *The Fallacy of Wildlife Conservation* and it was written by John Livingstone, a lifelong naturalist and a professor in the Faculty of Environmental Studies at York University. It was a book, Livingstone once told me, written in blood--his life's blood. After a lifetime of arguing for wildlife conservation, Livingstone took apart the arguments he himself had made and found them all wanting. Everything seemed to come back to what David Ehrenfeld calls "the doctrine of final causes," the idea that the end to which something can be put is the cause for which it was created, the idea, as Ehrenfeld says, that gravity exists in order to make it easier for us to sit down or that rain forests should be saved because they may contain undiscovered medicines. Species and places with no obvious economic usefulness become recreational amenities, prized for their aesthetic value. All arguments circle back on humanity. None can penetrate what Livingstone calls "the metaphysical dome" which encloses human society and cuts us off from the living world. In the light of *The Fallacy of Wildlife Conservation*, John Livingstone began, in effect, a second career, searching for a way out of environmentalism's utilitarian bind, trying to put a retractable roof on the metaphysical dome. We spoke recently in his office at York.

John Livingstone

If I have a technique, it has been, I think, to ask the question that my colleague, Reg Lang, always asks: What is the problem to which this is the solution? So what I've done mostly is critical analysis, I think, of the statements of the so-called conservation movement, the so-called environmental movement, and so forth. Nobody seems to want to reveal what the problem is that is being addressed by all the environmental placards. I like to say to my students, "Go out