

# ***The Fate of the Earth***

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On May 28, 1986, Sister Miriam MacGillis, a Dominican sister from Caldwell, New Jersey, spoke to an audience in Santa Rosa, California. Her presentation was sponsored by the Department of Religious Education of the Diocese of Santa Rosa, Catholic Community Services, Beyond War, Sonoma Action for Nuclear Disarmament, and St. Leo's and St. Eugene's Catholic parishes. This is the transcription of that talk.

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"It is no accident that we've been born in these times, that we find our lives unfolding now, with our particular histories and gifts, our brokenness, our experience, and our wisdom. It is not an accident. In talking about the fate of the earth, we know that its fate is really up for grabs. There are no guarantees as to its future. It is a question of our own critical choices. Perhaps what we need most is a transforming vision, a vision that's deep enough, one that can take us from where we are to a new place; one that opens the future up to hope. More than anything, we must become people of hope. That's what I hope this reflection will be about.

I'm going to be speaking from a context created by Thomas Berry. He is a Passionist priest and the president of the American Teilhard Association. Teilhard de Chardin was a Jesuit priest who brought together in his own psyche the insights that come out of the history of the Judeo-Christian tradition with the contemporary scientific understanding of evolution. He put both together and integrated them into a world view that has probably done more to shape the modern world than any of us yet understand. Teilhard de Chardin died in the 1950s, before the ecological crisis. He died before we had access to the image of the earth from space and before the more available perception of the earth as a living system such as made popular by James Lovelock. Thomas Berry has tried to take Teilhard's work and bring it up into the present.

Often we question the fate of the earth and the critical state in which it is now unfolding, and conclude that humanity is undergoing a kind of moral failure. It's so easy to read the signs of the times and blame ourselves for our lack of spirituality or religious fervor, or simply believe that we're just an inherently greedy, selfish, destructive species. We tend to conclude that if we could only come up with a religious revival, everything would be all right because our crisis is one of a moral and ethical nature. I'm not saying that there aren't levels of truth in that. But I think that there's really another area to consider before we make that final conclusion. That's what I'd like to suggest we do now. Thomas Berry would interpret the crisis as a crisis of cosmology. Now what does cosmology mean? It simply means that all people have stories wherein they describe how the universe was made. All peoples on the planet have such a story; it's their origin story. Western culture has a genesis story. These stories reflect people's observations and conclusions about the origin and nature of the world. At this point in time, we find ourselves in a crisis that has to do with our original story, not just a crisis of evil. When we look at it in this way, we can begin to see that the future does open up to hope. It gives us the capacity to rethink our origin story with an expanded view of it. It gives us images that are positive. We're able to live out of

those images. If our images of the future are negative because we conclude we are an inherently destructive species, or these are the end times ... if we live out of those images, we're going to bring them about. Our images of the future are self-fulfilling. It's imperative to read the signs of the times in broader ways constantly, to deal with the signs of the times and allow the pain of them to come into us, and not be paralyzed by them. Above all, we can't deny them.

There's an extraordinary short poem by Wendell Berry that has touched this for me personally.

In the dark of the moon,  
In the flying snow, in the dead of winter  
War spreading, families dying, the world in danger  
I walk the rocky hillside, sowing clover.

That kind of hope, that sense of significance of doing things for life, is what hope and meaning is about. It reminds me of a story of an old woman in the Mid-East who planted a date. When you plant a date, you know you're never going to eat the fruits of the tree, because it takes about eighty years for a date seed to grow into a tree with roots deep enough to take that scarce water and bring it up to the surface and produce the fruit. If you understand this process, you can make the commitment. You know that in the eighty-year period, date trees are buffeted by sandstorms and windstorms and all kinds of impacts on their growth. For the most part, the tree could look as if it is dying during those eighty years. If you did not understand this, if you didn't understand the process, you could easily make a judgment about the severity of its condition and cut it down. You have to live out of the image of what is going to happen, and that's what I'm talking about, living out of our images of hope. A new perspective coming out of cosmology can enable us to do that. Hope is a choice. We make a choice to hope. And once we do that, it can make all the difference in the world about what we do. So let's look at this idea of cosmology and see how it connects to our present world crisis. A people's cosmology, or origin story, predates everything else they create, their culture, religion, economics, politics, whatever. We can understand this better by way of comparison. For instance, the Native peoples who lived in this area before our European ancestors were operating out of a cosmology. Their experience of the world helped them shape an origin Story. That story gave them a sense that the Great Spirit, the Divine Creator force, lived inside the universe; lived in the earth. Because they believed that, and because they believed that the earth was infused with the presence of the spirit, out of this understanding they evolved their religious systems, their manner of worshipping and coming in contact with the Divine. They shaped their morals, their ethical systems, and their economic systems out of the same beliefs. If the spirit was inside things, they concluded that all living beings were relatives of the spirit. Native American cosmology reflected in a concrete, incarnate way the unique power of the spirit being transmitted through each creature. So, for instance, to take the feather of the eagle and to wear it was a way of being in touch with the divine power that the eagle reflected. They understood that the water and the trees were relatives, that the only reason they breathed was because the breath of the Spirit was in them. Thus, that affected the people's relationship to what was living. This explains why it was impossible for them to invent an economic concept like private property. They lived here for seven to ten thousand years and it never dawned on them to own, buy, or sell land. This understanding became a grave problem when they met the

Europeans. Each group learned to use each other's language and concepts, but their understandings of them were totally different. The Native peoples thought that the settlers who bought Manhattan Island were crazy. How could you own, or buy or sell, this womb, this earth mother that gave you birth and would take you back? It was incongruous. This group's difference of perception was not so much rooted in each one's religion as in their cosmology. Now let's look for a moment at the cosmology which has shaped Western civilization, for the difference will make some sense when we look at what's happening presently on the planet. Fundamentally, we're at a point in time where we're all shifting our perspectives about cosmology. We have new insights, with new implications. But we're living within institutions that are totally rooted in the old one. And they're inflexible. You can't make a shift within structures as easily as you can make a shift in understanding. So the ambiguity and the tension and the conflict we're experiencing is a part of the process, and there is no small pain involved in dealing with it.

Basically, the premises within Western cultures are derived from different origin stories, but there are a couple of implications in those stories that have the same sense. The first is in their perception of the Divine, or the deities, or the gods, however they were imaged. They were seen as being fundamentally transcendent to the universe; they lived outside of the universe; they were greater than and different from the universe. God was a transcendent being who had power and dominion over it, and was far greater than and different from it. Apart from it- other than it.

Secondly, there is a sense of the human as being intrinsically connected to the Divine, as having a major significance, being in union with the Divine. But in order for the human to do that, the human, too, had to transcend the world of material reality to go to the ideal world. So the locus, the meeting place, was transcendent. Finally, this left a perception of the world in purely material terms. Because the world was not involved in that process, it didn't have an inherent spiritual dimension. It was understood in totally material terms. It was a reflection of the divine, and was therefore holy, but it was not spirit, it was material. This perception enabled Western peoples to sense they were detached from the world, and possessed dominion over it. In some instances that was terribly abused, in other instances it evolved into a sense of stewardship. Stewardship was an ethic of caring for what was a reflection of the Divine. But, the world was still material.

Ironically, this sense of detachment is what enabled us to probe the world. We were observers, so therefore we could explore the world and figure out how it worked. We could look into its physical, purely material, mechanistic parts and figure out how they worked. We could use that understanding as applied technology. Whether it was as simple as creating a wheel, or whether it was the kind of technology we're shaping today, we can do what we're doing only because of the cosmology. The whole evolution of Western history is marked by this ever-broadening and deepening knowledge of the physical energies of the universe and their application in technology. It was the cosmology which enabled us to take what we thought was the last dense piece of matter—the atom—in our century, and split it open. Of course, in that event, we came to the realization that our cosmology was completely inadequate. We realized that we were living out of a set of assumptions that no longer could underpin our world or activities, because they were no longer truthful.

As we have probed the interior of the atom, we've come to see that its inner dimension is not material. It is not measurable; it has a deep spiritual, psychic, inner dimension. Likewise, as we've probed the outer universe, as we've learned its age and its unfolding nature, we've shifted our fundamental assumptions about both the universe and the earth. We've had to move from this ready-made, totally furnished, spatial universe, which we simply inherited to exist upon, to an understanding of the universe that is itself in process, which from the very beginning has had a deep, spiritual interior. This interior aspect, too, we realize has been expanding and unfolding over eons of time. Our planet and our solar system are recent manifestations, recent developments within a sequence of events that began fifteen billion years ago. We have a direct connection with that. It defines who we are, our crises, and our way of opening up into the future. At this point of our human journey, we're just beginning to grapple with a universe that has a fifteen-billion-year history, from its first emergence as hydrogen out of the mystery which brought it into being. Now, I happen to be a person of faith, and so my explanation of that origin is that it comes from a Divine source which has within it all the potential that the universe can possibly express. But whatever our understanding of its beginning, we are the first generation on the planet, at least, to have the Story in a new context of expanding time and space.

So, if we were to look at that fifteen-billion-year process, from the beginning until now, we'd see that the universe began with hydrogen. But out of the hydrogen atoms came helium. And out of the unfolding of helium and hydrogen came carbon, all those differentiated elements by which the universe unfolds to greater and greater levels of complexity. These elements have the capacity to unite, make new combinations, and become ever more complex. From the very beginning, as we're discovering, there are spaces within the hydrogen so vast that they're immeasurable. Thus their interiority develops as well. Not only does the universe begin to unfold externally, but its interior dimension unfolds, evolves to a high psychic complexity in order to realize its inner potential.

When our sun came into being some five billion years ago with our solar system, atomic elements were formed which became the heavy metals eventually forming the crust of the earth. There are the unique elemental structures within the atoms of the sun and our planet. But this is a single continuum; this is one event, one event present to itself in the unfolding of the process. If we look at our earth over the past five billion years, we begin to see an extraordinary acceleration of that complex structure. But it's the universe we are describing in the creative process of the earth. Now, I can't imagine five billion years; that number totally escapes me. You might as well say five million as five billion. Some popular scientific writers help us to image this time frame by compressing five billion years into a twelve month period, watching the process unfolding in a stepped-up speed. So let's do that. If five billion years could equal one year, then we could begin to see how the earth developed in its potential for life. From its first gaseous state, to the formation of life, it took the earth about eight months, the first eight months. The higher capacities, such as breathing, sensory capabilities, reproduction, and self-healing, took place in the last four months. But it's the earth as a subject performing these functions. It's the earth, through its inner psychic dimension, that is acting in these new sensitivities.

It would have taken the last four months of increasing complexity and diversification for the earth to unfold within itself a brain so highly evolved, a nervous system so highly organized, a skeletal structure so highly developed, that the earth became capable not only of living and breathing, moving, feeding, reproducing itself, of seeing and hearing, but now it had evolved an organism so complex that the earth became capable of thinking about itself. And that's the human. The human is the being in whom the earth has become spiritually aware, has awakened into consciousness, has become self-aware and self-reflecting. In the human, the earth begins to reflect on itself. In our deepest definition and deepest subjectivity, we humans are the earth. Conscious. You and I are the beings in whom the earth thinks . . . knows . . . comprehends . . . analyzes . . . rationalizes . . . judges . . . remembers . . . chooses . . . acts . . . decides. Of course, we're not used to thinking of ourselves in this way at all. As a matter of fact, it's rather upsetting. We don't know what to do with it. It doesn't fit into any of our categories. As Teilhard de Chardin said, the human person is fifteen billion years of unbroken evolution now thinking about itself. That's who you are. And you are irreplaceable and unrepeatable. The way the earth is thinking at this moment in you is unique. Totally. And it will never think that way again.

Let's look at the consequences of this. In this twelve-month time frame, the human, too, has been around for only one day. We're one of the youngest species, very primitive. It might be a miscalculation to say we're human; we might still be pre-human, except for some great enlightened beings who walked the planet as more fully human. But we've only been here one day, and we're very young! Now if you could take this last day and look at the twenty-four hours that we've been around, we know that the majority of that time was spent in that tribal age of which we know very little. This is where consciousness began to awaken and unfold, and our human ancestors went through the extraordinary process of learning to abstract thought, shape symbols, and create something as highly complex as language, to learn to survive in extraordinary circumstances while developing the social systems and the myths and stories which became the basis of the earliest stage of culture. But, the later civilizations which we describe as ancient history only began about thirty minutes ago. And it was in this time frame that we wrote our cosmology, our earliest science, our earliest explanation for how the universe came into being.

So you see our cosmology is relatively new. For thousands of years, it has given great coherence to our sense of purpose and meaning. It was a paradigm which provided a story of how we humans fit in the universe. This story has provided the meaning which has guided us into the present. It was not evil or wrong. It was just our explanation of reality. It was what we knew. But what's happened in the past half-hour and especially in the past few moments, in what we might call the scientific-industrial age, is that our knowledge has exploded, and our power has expanded so astronomically, that through us, and what we now know, the earth is coming to a new moment of awareness. It's learning its own story. It's learning where it came from and who it is. It's coming into a new phase. And we, who are the five and a half billion people around the rim of that little planet, we who are its thoughts, are the ones in whom, right now, the earth is coming to awareness. Our understanding has become so deepened and broadened that we are literally bringing the earth into a whole new phase in its unfolding. This is as radical as the shift from non-life to life, or life to conscious life. The shift that's happening now is that

consciousness has such a knowledge and understanding and power over its own process. It is starting to take control of the process. It's going off "remote control."

The past process of the universe and earth has come about through an "internal guidance system," for want of a better term. Now we, and therefore the earth, know how that system has been operating. And we have the power to turn it off automatic" and put it on "manual." That's what's happening. Consciousness is taking over. Now that's extraordinary. We could all walk out of here right now and just deal with that. But I want to make that specific so that we can see the depth of what it is that we're talking about. Look at the area of genetics, for instance. Since we've broken the code of DNA, we've gone inside the chromosome; we know how it works, we can figure out the genetic memory that has been accumulating and is now imprinting itself within a living cell though this whole time frame. Consciousness understands it. And our knowledge of it, our power over it, is giving us the capacity to go in and rearrange it. We can interfere with the natural process and alter it to whatever we decide we want it to be.

That's what's happening. So in a very real sense, the breakthrough in biogenetic engineering is the story of the earth coming off "remote control" and beginning to consciously shape the future evolution of its life. And, of course, the question for us, who are this consciousness, is have we arrived at anywhere near the level of integrity, wisdom, or maturity to do what we can do with the truthfulness that life had when it was on "remote control"? We're like adolescents. We have these extraordinary powers, but without the life experience to integrate the power into a large context. And the question is so profound because presently, we're preparing to release into the web of life organisms which did not preexist, which did not come out of the slow, laborious process of evolution, where at each stage all organisms worked together in a finely tuned balancing act to enable the conditions for the survival and ongoing process to continue toward life. If we err, if the finely tuned balancing act which has sustained this planet and helped it develop into the most extraordinary life community in our solar system, if this gets violated, if it goes off, or becomes totally whacked out, the only cause of that will have been its own consciousness. Without consciousness, while still on "internal control," it was moving toward life, and toward sustainable life.

And it's not even so much a question of ethics, because you have very fine, righteous people involved in biotechnology. They love their husbands Or wives and their kids. They don't tell lies. They're pure. They're good people. Their goodness isn't the issue if they're operating out of the old cosmology. This isn't a question of ethics. It can become a question of ethics. But you see, we don't have a tradition of ethics out of which to Judge this. Our cosmology created an ethical system that was human/human, or human/God, but not human/universe process. We don't have it. The indigenous peoples do, but Westerners do not. We do not relate to the earth in this ethical manner.

Here's another example. We now know that we're alive because the earth is alive. Unlike Mars, or the moon, or Venus, or the other planets in our solar system, we're a water planet. Seventy percent of the earth's surface is salt water. That's why the earth is alive. Its a fluid planet. But in our old cosmology, we call these fluids oceans. We name them . . . Atlantic, Pacific, Arctic, Antarctic. They're places. They're things. They're its. They're sniffs.

You swim in them, you fish in them, you sail in them, you own them. You own home fronts on them. And if your cosmology is such that those are just places, then it's very logical to dump wastes there, including our very lethal wastes.

But now we're beginning to understand that the oceans are the actual fluids of the planet. And everything that lives has the ocean in it. The oceans are not oceans. They are one single salt water system which flows through everything on the surface of the earth that has life in it. That's why things are alive—maple trees, bananas, or you. If we took you to the chemistry lab and had you analyzed right now, regardless of your size or weight, you would be seventy percent salt water. And it's the same salt water as if flowing through the oceans. The rest of you would be the minerals that form the crust of the earth. We're the earth, with consciousness, with soul, with spirit. We're the earth in a new form. But we are the earth! And now we understand that these fluids within the oceans are in us.

Because the oceans become the clouds and the clouds become the rain and the rain becomes the corn. And we eat the corn. And we get our minerals and our salt water replaced. And we cry the ocean. We excrete the ocean. We are just beginning to realize that the oceans are alive because over this long, painstaking process toward life, they became a community of millions of varied species and organisms, all of which are a fabric and a community of life. They are totally interdependent, all essential for each other's existence and for the well-being of the whole earth so that it can function and constantly maintain the oxygen needed by everything that lives.

As we continue to dump our toxins in the oceans, we're beginning to see gaps in the fabric. These marine organisms never evolved with the capacity to endure this sudden onslaught of poisonous new substances. Many can't reproduce. They're becoming extinct. And as one becomes extinct, the food chain gets altered. And as those toxins build up in the food chain, more complex species are becoming extinct, so that the oceans could literally die.

Jacques Chouteau says we have very few years left. If we don't change what we're doing, the oceans are going to become toxic; they will have lost their capacity to break down toxins and to keep oxygen flowing. If the oceans do become toxic, then the clouds are going to be toxic, and the rain will be toxic, and the corn will be toxic. And our children will be toxic, and their tears will be toxic. If the oceans die, that's literally the death of the planet. And if the planet dies, the only cause of it will have been consciousness, because without consciousness, the whole thing was coded toward life. Something's interfering with the process. There are dynamics happening at the most profound level which are altering the capacity of the earth to do what the universe has

mandated it to do. That is to continue to live and to continue to heal and nourish and regenerate itself.

Consciousness is violating this mandate. And that's us.

What binds all of us in this terrible crisis is the realization that through us, the earth could actually choose its own suicide, its own self-destruction. Basically, this is what we're talking about. Because our consciousness is so

young and primitive, we don't understand the magnitude of our behavior. We don't have a context adequate for what we know and what we can do. We're still unable to understand who we even are as humans in the community of life. We're still operating out of old assumptions and patterns that deal with war and conflict in totally inappropriate ways. Totally immature ways. But that pattern of behavior is now coupled with our knowledge of splitting the atom. We're fooling around with radioactive isotopes in our weapons, not cannon balls. So, the fifty thousand and more nuclear weapons that we have buried under the skin of the planet, under this living tissue, into this live organism, these are literally tumors. If they go off, they are going to spread. And like tumors, they will make the whole life fabric go awry. Atoms do not know how to behave when they've been affected by a radioactive isotope because that isotope is unbalanced, and it hits on the acorn of the one next to it, and knocks its whole genetic memory out. And there's no way to contain this. It knocks out genetic memory! We've got fifty thousand tumors in the Mother, and the only place they've come from is our imagination. An imagination at the service of a perception and understanding which are totally inadequate for what we, in fact, know how to do.

"Editor's Note: Since this talk was presented in 1986, the number of nuclear war heads has decreased significantly, but the potential for total destruction is Just as real today as then.

Each of these "nuclear tumors" is wired into a nervous system of computers and satellites and radar. If one goes off, just like in the body, it's almost impossible to contain the process. We're describing the planet's capacity to choose its own death. And if this happens, it's because of consciousness, because without our human species, this could not happen. It's a conscious choice. And what's the consciousness? The consciousness is the five and a half billion of us. The way you and I think is not irrelevant. We cannot be neutral. We're totally relevant and totally significant. It is our very consciousness which is making the decision and doing the probing. How I think affects the whole. The earth thinks as you think. The earth thinks as all of us think. And the earth is in a process of coming out of its adolescent fixation with itself and its powers, into a whole new level of maturity. And to the degree that you and I make that jump, the earth makes the jump. It's as simple and as profound as that.

Ironically, it's the physicists among us who seem to be most in touch with this as they explore the inner dimensions of space. They are touching and probing and contemplating interior realms of energy and of activity that are beyond our comprehension. It's the physicists who are beginning to speak in metaphysical language with new ethical and theological insights. It's the astronauts, too, who are becoming the mystics of this age. They are being changed by their new perspectives of inner and outer space. This is not because they happen to be morally better people, but because they've got a different view. They've got a whole other perspective into the nature of creation and it's causing a humility that is, to a certain extent, unprecedented. It's a new revelation.

Now, let's consider certain principles pertaining to why the universe has unfolded, and why our particular little planet is so resplendent with life. We now understand these principles through an empirical observation of different levels of reality. What is so astounding is that these principles do not deny or contradict the deep insights of all the earth's spiritual and moral traditions, but rather expand and complement them. The principles are extremely simple, and of course, that's why they're so difficult. What I'd like to do is try to put them into a



perspective. They're interconnected. You can't separate them from each other. They don't exist except that they go together. And they underpin everything.

The first is the principle of differentiation. Simply put, it means that the universe works because it's coded to differentiate itself toward greater levels of complexity. So, if the universe had stayed just hydrogen, it would still be hydrogen. You can only have a universe because it's coded to differentiation. Now that's an essential, integral principle. It implicates everything. So, once there is differentiation, there can be hydrogen and helium and carbon, and so on, and because there are these differences, they interact with and change each other. But, don't forget. It's all connected. The universe, even in its simplest forms, is a single event with itself. It's present to itself, not only in its external, but in its inner dimension. It's a communion. Because you have different elements, they come up against each other and cause each other to change. The changing process causes what is simple to break down. When it breaks down and interacts with the other, what is released from within itself is the potential to become more. This is a fundamental law. This is what enables complex elements to evolve. And when our earth comes into being, this process simply takes off. The earth has developed so highly, has become capable of life and of consciousness because of this particular principle.

Let's look at the earth's crust. It's essential that all those differing elements be there. Our chemistry chart describes those elements as the basic component parts of everything that is on the planet. You couldn't have a living earth made of just iron, or just calcium. It wouldn't work. It is all of those elements that become the substance of the planet and then unfold into simple organisms, and then into more complex ones. At every stage, we can see the conditions by which the whole system is working. All those differing organisms unlock the potential still within the process to become transformed into something more complex, more capable of life and consciousness. It's the law. There couldn't be a green planet if the only vegetation that existed were maple trees. It couldn't work. If the only insects on the planet were fleas, the planet would have died long ago. Within a shovel full of soil are millions of organisms and microbes, which, by the way, are the real farmers. They're the ones that produce food. Farmers don't produce food. Part of our problem is that farmers think they produce food. No. Microbes grow food. That's why agriculture is collapsing; the microbes are gone. It's just a matter of time.

So, because those essential elements are all there, this total diversification within the planet enables the next stage to unfold. That's coded in and it progresses. And the genetic coding within a particular life form continues into the future and is carried forth into the next stage. When the earth finally becomes conscious within the human, differentiation enters another level, even within its physical diversity. There is black and white and brown and red. Those differences, those racial differences and characteristics within particular people from particular geographic areas are as much coded in as the difference in oak and birch and sycamore and pine. It's the truth. They're not mistakes, they're not errors, they're not miscalculations. It's the truth. There are male and female. That's the truth. And from the moment that the universe began to reproduce itself, to regenerate life sexually, in the most primitive organisms, from that moment on the universe became sexual and the differences between male and female became the process. That's the truth.

Now if you believe in a Divine Creator, then this sexual condition for creation or regeneration is a reflection of the way the creator designs it. This is truly revelation. If the universe evolves in this way, then this process reveals the mind of the Creator, or the origin principle. We're just starting to catch on to this. But some people haven't. If their only frame of reference for revelation is through human channeling and the revelation was channeled out of an old cosmology, well, they're not going to find this revelation there. Because it wouldn't be perceived. You know what I'm saying? The truth of the universe itself is prior to what we call revelation. The differences in the universe are the truth. So then, how people consciously become aware of reality, reflect on it, and make their judgments and decisions, is also rooted in this impulse towards differentiation. Just as wrens or nightingales, robins or thrushes, are all genetically coded to a particular song, but sing differently, so humans participate in the shaping of their language. All humans are coded to speech. But because we create the symbols of speech, the languages of the earth's peoples are different. That is not a problem. All peoples create architecture. But they create architecture out of reflecting on the experience of the world around them and of the materials at hand. And though we all might create temple architecture, the temple architecture of the earth's peoples is going to be differentiated. And that's the truth.

We all mourn our dead but we sing our dirges in different languages. Yet, the dirge itself is universal. And we all reflect on reality and try to grasp and be open to the deep mysteries. But Jew isn't Hindu, and Hindu isn't Buddhist, and Buddhist isn't Aztec, and Aztec isn't Christian, and Christian isn't Mayan, and Mayan isn't Dakota Sioux. And that's the truth.

And all humans take their meaning systems and connect them with their history and their experience and their culture and their language, and their wisdom and their traditions, and they shape culture. But Polish isn't Greek. And Greek isn't Russian. And Russian isn't Eskimo. And Eskimo isn't Mayan. And that isn't Czechoslovakian. And that isn't English. And that's the truth.

Now the problem is, you see, that unlike the birch and the sycamore and the oak and the maple, we humans reflect on ourselves, and we can say, "I." "I am." Once we can say "I am," we say, "I am true." Once we claim the truth of our being, then we experience a certain susceptibility, a certain inclination to reflect on our own truth, as being in the image of the "Big Truth," out of which we've come. That's still all right. But when we see somebody come along who's different, we have this tendency to say, "I am the truth. You are different. You obviously cannot be the truth. So since you're not the truth, and I am the truth, then it's really an imperative on my part to make you conform to my truth. So you'll be all right. And if you don't want to do that, then you obviously are not the truth. And since you're not the truth, and therefore not fully human, then it's totally legitimate to enslave you or to reduce you to another level of definition which is not truth. And if you don't like that, we'll just annihilate you."

There's some strange tendency in the human stemming from our self awareness that wants to force others to conform to our criteria of truth. And we have this love-hate relationship with the tension between truth and

conformity. Individuality and conformity. It's a thing we have not finely tuned yet, perhaps because we're still so new to it. But in the last half-hour, we've recorded that we've fought over eight thousand wars with each other. I suspect part of the cause of those wars is this tendency to demand others to conform to a perception of truth as we perceive it. It has not yet occurred to us that the capacity of the human to reflect on the truth must bring about differentiation. And rather than the differentiation being a problem to solve, it's a solution to the challenges of any existence.

Just as you cannot have a living planet except with all the diversity of minerals and vegetation, so it is within the realm of consciousness. No single consciousness can totally reflect what is infinite. Ironically, it's the physicists who are warning that we'd better learn that or in spite of our being "good people" who love our kids and don't tell lies or do unethical things, we will continue to violate the very process out of which the universe has been coded by its creator. I think they are trying to help us to understand that the human is the being in whom the universe can finally comprehend the need for differences. We must grasp the differences. We have the capacity to contemplate the differences and to delight in them and celebrate them. That's the proper mode of the human! That's who we really are! We're the ones capable of delighting in the designs that came out of the process.

A second principle of the unfolding universe is that of interiority, which simply means that things are different because everything that is, is itself a truth. It has its own inner reality which makes it itself and not anything else. Hydrogen is not helium. Mary is not Fred. Fred is not Gary. Black is not white. Male is not female. And whether you're speaking of the atom in its simple substance, or whether you're speaking about a Mozart composition, this is this, each is what it is. And therefore, it's different. When we probe the interior spaces of things, we begin to understand that we go beyond what is measurable. Our physicists are coming in touch with the fact that what's at these deep interior levels is being generated as they're observing them. This means these energy patterns are coming into existence and going out of existence. They're being created in the moment. The center of any one interior is the center of all interiors. The volume of any one atom is the volume of all atoms. At its depths, it is not material. Therefore, what has come to be expressed as hydrogen, or Mozart, is a revelation of this and it's truth. This is why the universe has expanded. In human beings, the universe can comprehend this process, and out of our capacity to see the interior of the other, to see its truth. We're capable of reverence. We're capable of non-violence toward the uniqueness of the other. We're either going to learn this quickly or we're going to die. In this century alone, we will have caused the extinction of close to a million species of plant and animal life. And not even God brings back extinct species. To say nothing of the individuals and cultures that have simply been slaughtered because of their differentiation or because we didn't understand their interiority. Some groups of people with their unique culture are being pushed toward annihilation. This is totally against the laws of the universe. If their wisdom is lost, it will never be regained. The child silenced is silenced forever, and that voice will never be a revelation of the Creator that it was meant to be. Our problem is we don't understand revelation.

A third principle is that of communion, which simply means that from the very beginning the universe has been in communion with itself; that no differentiated interiority can exist alone. It can exist only because it's a member of a bonded community that has evolved in a mutually interdependent way with itself. The universe indwells with

itself. There are no empty spaces; there are no vacuums; there are no islands. So the earth has evolved as a single communion with itself, both inwardly in its psychic development and externally in the whole composition of its diverse forms. It's a single organism. If you could see into my hand you would see every atom articulated, every atom different. But every atom is bonded so that my hand operates as a whole. The universe and the earth do not violate these principles. Communion does not demand conformity. Conformity and community are diametrically opposed. Uniformity is a violation. We're beginning to understand that the human is the being in whom this can be understood with awareness and freedom. This is the meaning of love. Love is the bonding of the planet through awareness and through freedom. This is our true human destiny, to be entranced with the whole; to love it and become the ground of its being. And love is not love when it demands the conformity of the other. As we probe the depths of the inner space of the human psyche, we're starting to understand that. In other words, if you know who you are, if you know who your interiority is, your unique manifestation of life, if you're in touch with that, and you're aware of who you are, and you're affirmed in that and you know you are good and lovable, then you are not threatened by me if I'm different. If you know who you are, you have the capacity to delight in my differences. And the more you delight in me, the more I can dig into fifteen billion years of energy and keep pulling out all kinds of treasures. If you affirm me because I have different tastes than you, I'll develop that. I'll become a poet. You affirm me, I'll become a playwright, I'll become a musician, I'll become a computer analyst. You become the ground of my being, and the more you affirm, the more I'll bring out. I will even become, at your rejoicing, capable of compassion, and mercy, and gentleness, and justice, and integrity, and peace. So that you bring out of me, you activate in me the deepest mysteries of the universe. That's love.

And you can do it without liking me! And it's this the physicists are saying to us. We've got to learn it, it's got to become internalized, and it's got to become the inner core of our institutions and culture. You know, when you put these principles together with the discoveries in human intuition over the past half-hour, you begin to see that we were shaping a way to touch the deep inner mysteries of existence. Our religious stories express how we were grappling with the deep force of the universe all along! But we didn't have the evidence available to see as we do now. We were attuning to the medium of the spirit.

We can trace this through any of the religious traditions. But to reflect on my own, which is the Judeo-Christian, is to open up new understandings. For instance, when Israel as a people evolved, when through Israel, the earth came to a new moment of consciousness, they conceived of God as one, not many, as faithful, not arbitrary. God was simple and loving and life-giving. When such a consciousness evolved in the Hebrews, then that was a moment of breakthrough. Israel understood that it was to participate with that life-giving God in a very real way and to bring that energy and that spirit into time and into history. So, if Israel was faithful as God's creature, adhered to a covenant relationship with the Creator, if she was obedient, then though her life and the work of her hands, she was bringing the energy of God into time and place. It was based on the notion of a covenant. She had to be obedient to the law as revealed through Moses in the Ten Commandments. That law is really an articulation of the three aforementioned principles of the universe. Likewise, Jesus carried the same Hebrew consciousness and expanded it to another realization. He reduced the commandments to two. The first one is, be conscious in your humanness of who you are; be conscious with your whole heart, mind, soul, and

strength; adhere to the Creator in whose image you're made. Then out of that, hold everything in communion. Love it as yourself. His breakthrough in consciousness was to be aware of and choose the communion of everything.

One of the most significant realizations within the process of the universe is the vital dynamic of change. Because these principles are functioning, there has to be change. The universe cannot remain static. As soon as there are different components interacting on one another, each has to break down and change. They enter into chaos. They have to let go of being what they were, and in that chaos, that breaking down, they breakthrough to a new level of being. Thus, there is the event of energy, of breakdown, and of breakthrough. When that dynamic emerges within the realm of human consciousness, it becomes the life, death, and resurrection cycle which is at the heart of all of our spiritual traditions. This dynamic plays itself out in a unique way within consciousness. It means that when the human deals with some one or some thing that is different, it calls for a new exercise of power, not power over the other, or a power that causes conformity or annihilation. Rather it is a power to enter into a relationship of dialogue or communion, wherein chaos is experienced. Both pass into change. And then out of that comes a deeper wisdom which is a transformation. This life, death, and resurrection is out of levels of fear and ignorance and prejudice and hostility. It brings about the clarification of the deeper self and it is totally congruent with the health of the universe. As a matter of fact, it is the way to choose life. Otherwise, we choose death. Personal and collective.

Let me end finally with two implications. This new cosmology, which is our connection to a fifteen-billion-year process, causes us to do two things. One is to come home. We've got to acknowledge our identification with the earth and with the spiritual dynamics of the universe. We are literally stars dunking about themselves. This is the context of our true existence. We can't have our life, or nourishment, or learning except as it comes out of the earth, which is our very body. And the earth as a body is a communion and a community. At its deepest level, it's in communion with itself, and in its external manifestation, it is a community of all the beings who share existence on this planet, from atoms of oxygen to the most complex organisms. And if this earth is sick, we will be sick. We have to come home. We've got to leave the dualisms of the past and become members of the community of home. I mean home now in terms of the literal sense of where we actually live on this planet. We live in a particular region. Long before humans ever came into it, this region was marked by a unique geological history, a unique temperature, unique water systems, unique climates, and macroclimates. These were the actual conditions that evolved over time, and determined the kinds of vegetation that could exist there. Over long eons of time, a unique community of vegetation worked out a balancing act wherein all could coexist in total obedience to a principle of differentiation, interiority, and communion.

All species that came into the community had to abide by these laws or they got kicked out fast. They went into oblivion. Only the ones that could cooperate in this balancing act survived. Only the fittest survived— those who could fit in with the whole. So, the insects, birds, fish, and animals who learned to cooperate became the integral community of life. Unless we learn that this community is the source of our health and our nourishment and our governance, our human cultures are not going to make it. We've got to come home to the prior community

because the community is sick. Our water is sick, our air is sick, our soil is sick, our vegetation is sick, and they no longer even inspire our souls, our poetry, our children, or our understanding of God. Thomas Berry asks the question, "How will we baptize our children with toxic water and tell them about God? How will we give pills and medication out with toxic water, and hope to make people well? How will we eat contaminated food, and think that we will be nourished?"

We've got to come home in a new humility. And become members of the community, or else we're simply going to be a bad experiment on the planet, and get kicked out. Secondly, we've got ourselves organized into a hundred-and-fifty-some-odd nation states, and we still think that the best way each nation state can secure its survival is to compete against the other hundred-and-fifty-odd nation states. And so we continue to mobilize all our internal resources to produce the nuclear tumors and to compete against each other. And that very competition is what is causing the death of the air and the soil and the water and the whole bit. For the first time, we're in a new place. We have a new revelation. We are literally the first humans to go off the planet, to go out into space, look back, and look in the mirror. With the image of the earth in space, we have a new image of who we are and what our destiny is: the beauty of it, the magnitude of it, and the silence in which it finds itself!

Let me end finally with a favorite reading that I have on hope. It comes from a Brazilian theologian by the name of Ruben Alvez, who wrote "Tomorrow's Child." He said:

What is hope? It is the pre-sentiment that imagination is more real, and reality less real than it looks. It is the suspicion that the overwhelming brutality of facts that oppress us and repress us is not the last word. It is the hunch that reality is more complex than the realists want us to believe. That the frontiers of the possible are not determined by the limits of the actual. And that in a miraculous and unexpected way, life is preparing the creative events which will open the way to freedom and to resurrection. But, the two, suffering and hope, must live from each other. Suffering without hope produces resentment and despair. But hope without suffering creates illusions, naiveté, and drunkenness. So let us plant dates, even though we who plant them will never eat them. We must live by the love of what we will never see. This is the secret of discipline. It is a refusal to let our creative act be dissolved away by our own need for immediate sense experience. And it's a stubborn commitment to the future of our grandchildren. Such disciplined love is what has given saints, revolutionaries, and martyrs the courage to die for the future they envisage. They make their own bodies the seed of their own highest hopes."