

# Quaker Earthcare Witness

## Earthcare for Friends

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### Unit 17

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#### The Great Story

by Mary Coelho

#### Purposes of this unit

1. To bring about a Copernican-like revolution in our thinking, arising from the New Story of the evolutionary universe and the new understandings of the nature of matter.
2. To help us move out of the dangerous objectification of matter that many of us learned in our studies, and to find a spiritually based foundation for changing our relationship with the earth.
3. To show that people are creative beings within a creative universe. This is basis of hope that we can create a sustainable future in this unique time.

**M**ANY OF US, because of our Western education, have unexamined assumptions that alienate us from the earth. The New Story of the evolutionary universe has radical implications and revelations that are explored in this unit to help us move toward an urgently needed change in our understanding of the earth and human identity.

In an evolutionary universe we are not helpless before the ecological crisis, because there can be an evolution of human consciousness and human behavior. It is a creative universe, in which the person is an exponent of the creativity of the whole. This is the basis of a tenuous confidence that humanity can discover and build a culture in which we will live in a manner that is integrated with the systems and beauty and diversity of the earth.

#### Sacred texts and other inspirational readings

*For you shall go out in joy, and be led back in peace; the mountains and the hills before you shall burst into song, and all the trees of the field shall clap their hands. Instead of the thorn shall come up the cypress; instead of the brier shall come up the myrtle; and it shall be to the Lord for a memorial, for an everlasting sign that shall not be cut off.*

—Isaiah 55:12–13

*Happy are those who meditate on wisdom who reflect in their heart on her ways and ponder her secrets.*

—Ecclesiastes 14:20–21

I may mention a remarkable circumstance that occurred in my childhood. On going to a neighbor's house, I saw on the way a robin sitting on her nest, and as I came near she went off; but having young ones, she flew about, and with many cries expressed her concern for them. I stood and threw stones at her, and one striking her, she fell down dead. At first I was pleased with the exploit, but after a few minutes was seized with horror, at having, in a sportive way, killed an innocent creature while she was careful for her young.

I beheld her lying dead, and thought those young ones, for which she was so careful, must now perish for want of their dam to nourish them. After some painful considerations on the subject, I climbed up the tree, took all the young birds, and killed them, supposing that better than to leave them to pine away and die miserably. In this case I believe that Scripture proverb was fulfilled, "The tender mercies of the wicked are cruel." I then went on my errand, and for some hours could think of little else but the

cruelties I had committed, and was much troubled. Thus He whose tender mercies are over all his works hath placed a principle in the human mind, which incites to exercise goodness towards every living creature; and this being singly attended to, people become tender-hearted and sympathizing; but when frequently and totally rejected, the mind becomes shut up in a contrary disposition.

—*The Journal of John Woolman*, pp. 2–3, Whittier edition

*Four things on the earth are small, yet they are exceedingly wise:  
the ants are a people without strength, yet they provide their food in summer;  
the badgers are a people without power, yet they make their homes in the rocks;  
the locusts have no king, yet all of them march in rank;  
the lizard can be grasped in the hand, yet it is found in kings' palaces.*

—Proverbs 30:24–28

### Hymns and songs

For the Beauty of the Earth. *Worship in Song, A Friends Hymnal*, #10.  
Take Off Your Shoes. *Worship in Song, A Friends Hymnal*, #311.

### Issue presentations

#### Part I

## The Emergence of a New Story

THERE IS A GROWING concern that human beings are gradually losing an experiential, felt knowledge of our embeddedness in the earth and cosmos. The psychoanalyst Otto Rank has said that when humanity lost the cosmos, we became neurotic. Erich Neumann, a Jungian analyst, has asked if consciousness has lost its link to the whole and is thus deteriorating. Pierre Teilhard de Chardin was concerned with “the dying down of the zest for life” in the modern world. Thomas Berry asks how, if we are without roots in the earth and cosmos, we are to activate the psychic energy that is required to address the major ecological issues confronting us.

The following extended quotation from Thomas Berry’s *Dream of the Earth* is his analysis of the situation in our culture.

### “It’s all a question of story”

It’s all a question of story. We are in trouble just now because we do not have a good story. We are in between stories. The old story, the account of how the world came to be and how we fit into it, is no longer effective. Yet we have not learned the new story. Our traditional story of the universe sustained us for a long period of time. It shaped our emotional attitudes, provided us with life purposes, and energized action. It consecrated suffering and integrated knowledge. We awoke in the morning and we knew where we were. We could answer the questions of our children. We could identify crime, punish transgressors. Everything was taken care of because the story was there. It did not necessarily make people good, nor did it take away the pains and stupidities of life or make for unfailing warmth in human association. It did provide a context in which life could function in a meaningful manner.

Presently this traditional story is dysfunctional in its larger social dimensions, even though some believe it firmly and act according to its guidance. Aware of the dysfunctional aspects of the traditional program, some persons have moved on into different, often New-Age, orientations, which have consistently proved ineffective in dealing with our present life situation. Even with advanced science and technology, with superb techniques in manufacturing and commerce, in communications and computation, our secular society remains without satisfactory meaning or the social discipline needed for a life leading to emotional, aesthetic, and spiritual fulfillment. Because of this lack of satisfaction many persons are returning to a religious fundamentalism. But that, too, can be seen as inadequate to supply the values for sustaining our needed social discipline.

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A radical reassessment of the human situation is needed, especially concerning those basic values that give life some satisfactory meaning. We need something that will supply in our times what was supplied formerly by our traditional religious story. If we are to achieve this purpose, we must begin where everything begins in human affairs—with the basic story, our narrative of how things came to be, how they came to be as they are, and how the future can be given some satisfying direction. We need a story that will educate us, a story that will heal, guide and discipline us.

### The discovery of a new origin story

WE NOW HAVE a remarkable new origin story, the story of the evolutionary universe discovered largely in the last three centuries. First evidence appeared in the realms of geology and paleontology, indicating that there was a time sequence in the very formation of the earth and of all life forms upon the earth. The earth was not the eternal, fixed, abiding reality that it had been thought to be. It suddenly dawned upon Western consciousness that earlier life forms were of a simpler nature than later life forms, that the later forms were derived from the earlier forms. The complex of life manifestation had not existed from the beginning by some external divine creative act setting all things in their place. The earth in all its parts, especially in its life forms was in a state of continuing transformation.

Discovery of this life sequence, with an explanation of how it came about, found expression in Darwin's *Origin of Species* in 1859. Now the evolutionary story has been vastly extended to include the beginning, the Great Flaring Forth of primal radiation, sometimes called "the Big Bang," estimated to have occurred 13.7 billion years ago. In a matter of seconds, the early radiation took form as the nuclei of hydrogen and helium. Subsequently, by a little-understood process, galaxies came into being when the universe was a billion years old, and it is within the galaxies that stars of many sizes began to shine as the primordial hydrogen underwent nuclear fusion within the stars. It was within stars and within exploding supernova that all the other elements (besides hydrogen and helium) that comprise the earth and our bodies were created. Our sun and the earth formed 4.6 billion years ago, at which time the earth began its stupendous creative journey. Life emerged very early in the earth's history, and then, over hundreds of millennia of gradual differentiation and complexification, the great diversity of species of the earth came into their astounding glory.

Although there are cycles of destructiveness, such as the major extinctions that closed several geologic periods on Earth, the overall thrust of the story is clearly one of great creativity. The very destructiveness prepares the way for bursts of creativity. Norman Pittenger, an Anglican process theologian, writes: "The evolution of the universe is not a mere unfolding of what has already been the case. There is continuity of process with the emergence of genuine novelty."

### A Copernican-like revolution in our thinking

THE REALIZATION that we and all the beings of the earth are differentiated forms of the substance of the universe and the earth offers of a Copernican-like revolution in our thinking. (The astronomer Copernicus demonstrated that the earth revolves around the sun rather than vice-versa.) In fact, Teilhard de Chardin says it involves the greatest change in human consciousness in 2 million years. We are the first humans to look into the night sky and see the birth of stars, the birth of galaxies, the birth of the cosmos as a whole. Our future as a species will be forged within this New Story of the world. Yet, since the story emerged out of science, many people are suspicious that it cannot significantly inform our identity and be a source of spiritual insight. Thomas Berry observes: "The secular school as presently constituted cannot provide the mystique that should be associated with this story. Nor can the religious-oriented school that has only superficially adopted this new story of the universe evoke this experience [the grandeur and meaning of the universe] in the child." Yet it is most heartening that Brian Swimme teaches that "expressed within the context of the dynamics of the developing universe, the essential truths of religion would find a far vaster and more profound form. The recasting would not be a compromise nor a diminution nor a belittlement; it would be a surprising and creative fulfillment, one whose significance goes beyond today's most optimistic evaluations of the value of religion." A convergence of great importance is developing between science and religion.

Brian Swimme says, “We are restructuring our fundamental vision of the world.... It overwhelms all previous conceptions of the universe for the simple reason that it draws them all into its comprehensive fullness.” Furthermore it is a story around which “we can begin to organize ourselves for the first time, on the level of species.” Loyal Rue, a professor of philosophy of religion, writes that the story is a “Wisdom tradition,” tolerating a diversity of interpretations yet providing a means for global solidarity and cooperation. It is a story of mythic proportions with the power to engage the deep structure of the human nature and to transform how we think and what we do. It can protect us from sitting back and letting our knowledge be packaged and paid for by private, often corporate, interests.

## Part II

### New insights and many questions

**T**HE REMARKABLE NEW STORY immediately offers many insights and raises innumerable questions. Without being aware of what was happening, during the years of our education in Western culture, most of us learned attitudes and adopted philosophical and religious assumptions that directly contribute to our alienation from the earth. One common assumption is the dualism of matter and spirit, and the associated radical scientific materialism that suggests that we live in a meaningless, random universe. The great danger of this dualism, placing God outside the natural world and outside the person, is that the natural world is denuded of value and becomes an object of commercial exploitation beyond our basic needs. There are no restraints on exploitation. Furthermore, also of tragic consequences, is the perception that the individual person is denied intrinsic power, creativity, and value, leading to the loss of psychic energy and zest for life. Also as a consequence of the dualism, there has been a move away from biblical holistic thinking to a dualism which separates the sacred realm from matter.

Parker Palmer has written: “Western culture has a million ways of reinforcing the illusions that the world consists of inert stuff out there and that we are the active agents of change whose role is to get that stuff in shape.... This is the assumption on which most modern education has been based, an education aimed at giving us the tools to exercise dominion over the earth.” Closely related to this is Thomas Berry’s observation that in our dominant Western worldview “the earth [was] no longer a communion of subjects. It has become a collection of objects to be adjusted to in an external manner.”

Thomas Berry notes that: “Children who begin their Earth studies or life studies do not experience any numinous aspect of these subjects. The excitement of existence is diminished. If this fascination, this entrancement, with life is not evoked, the children will not have the psychic energies needed to sustain the sorrow inherent in the human condition. They might never discover their true place in the vast world of time and space. Teaching children about the natural world should be treated as one of the most important events in their lives.”

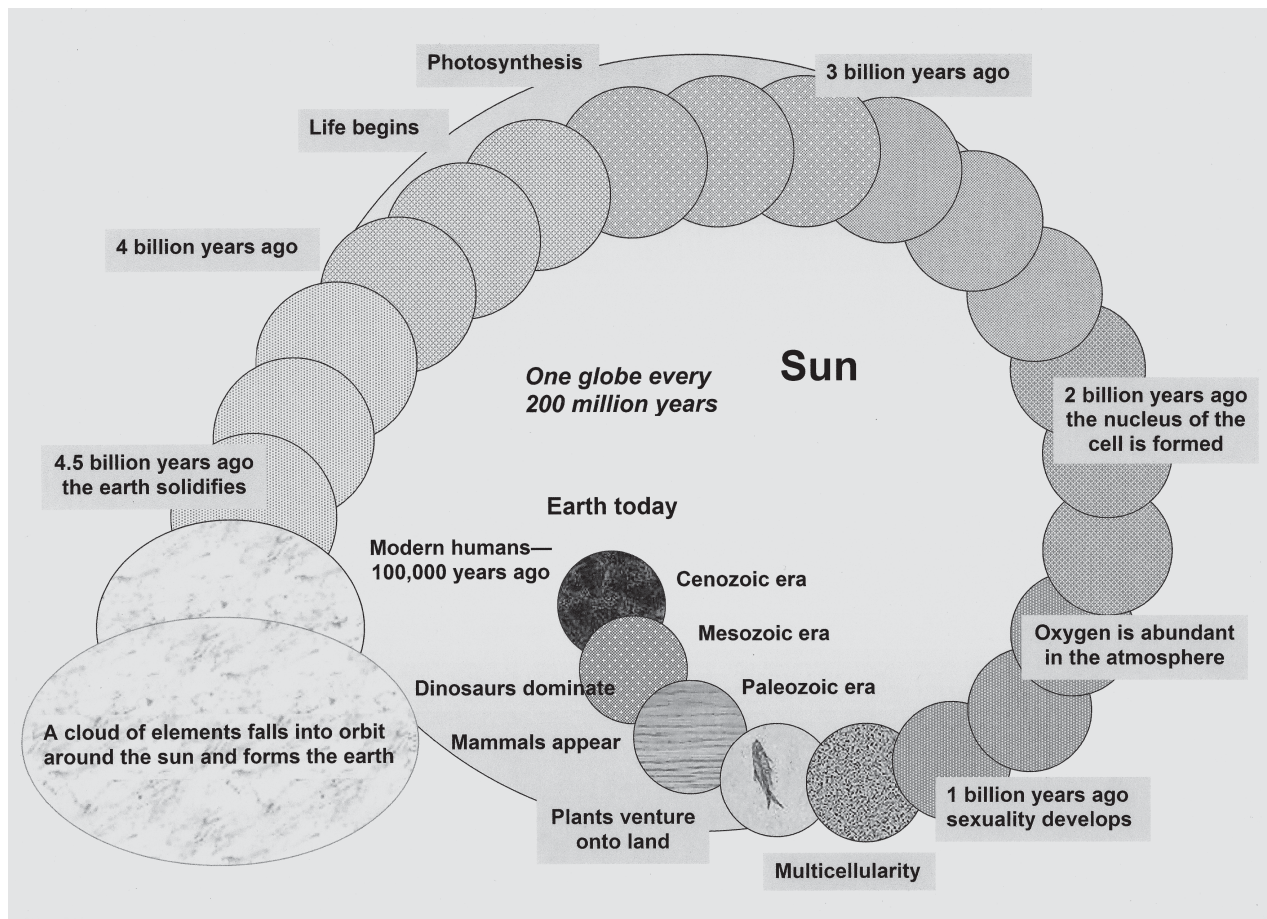
### The mystery of matter

UNEXAMINED AND HARMFUL ASSUMPTIONS about the nature of matter, common to the Western educated person, are immediately challenged by the remarkable history of the earth. Figure 1 summarizes this history, starting when Earth formed 4.6 billion years ago as our sun began to shine within the Milky Way galaxy. Since the early material coalescing around the earth eventually became birds and trees and people, we see right away that matter must not be inert and dead. Otherwise how did the very substance of the early Earth undergo such dramatic change, involving untold transformations, to become Earth as we know it today?

Another source of challenge to our assumptions about matter has come from the experimental investigations of atoms at the turn of the last century, which gave sensational and totally unexpected results. It is important to be aware of them as we seek to understand the story of Earth. When Quantum Theory, the theoretical foundation of atomic physics, was worked out in the 1920s, it became clear that even the subatomic particles were nothing like the solid objects envisioned by classical physics. Far from being the hard and solid particles that they were believed to be since antiquity, atoms turned out to consist of vast regions of empty space in



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which extremely small particles, electrons, moved around the nucleus—which contained the particles known as nucleons (protons and neutrons).

The subatomic units of matter are, we know now, very abstract entities. Depending on how we look at them, they appear sometimes as particles, sometimes as waves. This dual aspect of matter was extremely puzzling. The picture of a wave that is always spread out in space is fundamentally different from the picture of a particle, which implies a sharp location.

Mass, according to Fritjof Capra, is a form of energy. Energy is associated with activity and with processes, and this implies that the nature of subatomic particles is intrinsically dynamic. The being of matter and its activity cannot be separated. From the perspective of daily experience, material objects around us seem passive and inert, but when we magnify a “dead” piece of stone or metal we see that it is full of activity.

### **The generative depth of things / the indwelling God**

THOMAS BERRY describes the cultural situation as follows: “The pathos in our own situation is that our secular society does not see the numinous quality or the deeper psychic powers associated with its own story, while the religious society rejects the story because it is present only in its physical aspect. The remedy for the failure to recognize the numinous quality within the West’s own story, is to establish a deeper understanding of the spiritual dynamics of the universe as revealed through our own empirical insights into the mysteries of its functioning.”

If an atom were enlarged to the size of Yankee Stadium, it would consist almost entirely of empty space. Brian Swimme explains: “The center of the atom, the nucleus, would be smaller than a baseball sitting out in centerfield. The outer parts of the atom would be tiny gnats buzzing above at an altitude higher than any pop fly Babe Ruth ever hit. And between the baseball and the gnats? Nothingness. All empty. Indeed, if all the space were taken out of you, you would be a million times smaller than the smallest grain of sand.”

Quantum physicists state this dramatically when they tell us that the wave/particles are so small that things made of matter, including ourselves, are proportionally as void as galactic space. Yet this very “emptiness,” we are told, is *full* rather than empty; it is only referred to as empty because it is empty of *measurable* things. Dark energy is now being considered an aspect of empty space, also referred to as a vacuum. Brian Swimme teaches from the elementary perspective that “the root foundation of anything or any being is not the matter out of which it is composed so much as the matter together with the power that gives rise to matter.” It is crucial for Westerners to learn that what we call matter has an *inside*, so to speak. As just described, it can no longer be conceived of as tiny particulate pieces, like very small grains of sand, but rather as a mysterious, generative emptiness within which there are interconnected, minute wave/particles of energy/matter. Werner Heisenberg, one of the creators of Quantum Theory, has argued that at the deepest level of reality, at the ground of the vacuum, there is emptiness, equivalent to what the Buddhists call *sunyata*, prior to anything that “is.”

It is important to know that in Western theology there is also a tradition, the *apophatic* tradition, of understanding God as a nameless mystery, free of any distinctions. This realm is for Meister Eckhart and others a fertile, fecund ground. The similarity between this tradition and recent insights into the nature of matter cannot be without great significance. We have to guard against too facile assumptions, but it seems evident within our new context that both traditions are exploring the same mysterious realm, each in their particular mode of knowing. Fritjof Capra observes that it is ironic that physics, that extreme specialization of the rational

*It is ironic that physics, that extreme specialization of the rational mind, should be the science that has now led us to mysticism*

mind, should be the science that has now led us to mysticism. According to Capra, mystical thought, in fact, provides a consistent and relevant philosophical

background to the theories of contemporary science, a conception of the world in which scientific discoveries can be in perfect harmony with spiritual aims and religious beliefs.

Brian Swimme, a physicist by early training, says that the entire cosmos came from this “emptiness.” He goes on to say; “The realm or power that brings forth the universe is not itself an event in time, nor a position in space, but is rather the very matrix out of which the conditions arise that enable temporal events to occur in space.” Though “the originating power gave birth to the universe 15 [now estimated to be 13.7] billion years ago, this realm of power is not simply located there at that point in time but is rather *a condition of every moment of the universe, past, present, and to come.*” (Italics added.) This realm is of what we ourselves are largely made. The entire cosmos came from the emptiness of which we and all of Earth and cosmos are largely made.

Most remarkably, Bede Griffiths, the Benedictine monk who established an ashram in India, says that the Hindu search is to find that inner center where the whole universe is in you. From this insight, we are conferred a remarkable identity, radically challenging many Western dualistic assumptions that so completely separate spirit and matter. We and all beings are rooted in mystery. We dwell in creativity. We are at the center of things.

This creative, bonding realm, this “no-thing-ness” or “emptiness” that is a *plenum*, what Brian Swimme calls the “All-Nourishing Abyss,” does not visit now and then; it is always present. Clearly the New Story and the New Physics challenge some conceptions of God that developed within a static cosmology. Earlier dualistic theologies emphasized the transcendence of God, a God who only occasionally intervened to move material things that are otherwise lacking spirit and the fullness of life. This conception is not congruent with the evolutionary story.

It can be proposed with considerable confidence that it is this realm, the *plenum* that has been experienced as love, or known through a kind of alternative, intuitive knowing, or as Light.

It is here as we live within the *plenum* or it within us, that we find a very profound belonging that addresses directly the loss of roots and modern alienation. Often, a difficult, transformative journey is required to come to an ongoing consciousness of this nourishing Presence. Such a pathway has been worked out by many traditions. These pathways lead to personal wholeness and unity with the natural world.

## The universe carries within itself a psychic-spiritual dimension

PIERRE TEILHARD DE CHARDIN, a French Jesuit paleontologist born in 1881 in Auvergne, France, and Sri Aurobindo, from India, first articulated the New Story of the evolutionary universe from a religious perspective. They arrived at the same basic vision, which is that the unfolding of the universe is a physical evolution and also a spiritual evolution. Brian Swimme thinks of these two men as both geniuses who had insight into an integrated worldview.

Thomas Berry writes: “Empirical inquiry into the universe reveals that from its beginning in the galactic system to its earthly expression in human consciousness, the universe carries within itself a psychic-spiritual as well as a physical-material dimension. Otherwise human consciousness emerges out of nowhere. The human is seen as an addendum or an intrusion and thus finds no real place in the story of the universe. In reality the human activates the most profound dimension of the universe itself, its capacity to reflect on and celebrate itself in conscious self-awareness.” Other beings share this psychic-spiritual identity in their particular mode.

When we tell the new story of our origins, we must seek to hear the story freshly, recalling these insights into matter and its mysterious depths.

### \_\_\_\_Part III\_\_\_\_

## Additional insights from the New Story

### Human beings belong to a diversified unity

MOST NOTEWORTHY is the revelation from the New Story that everything that exists in the universe came from a common origin. The material of our bodies and the natural world are intrinsically related. Our ancestry stretches back through the life forms and into the stars, back to the beginnings of the primeval fireball. Everything is a differentiation of a single energetic event. Brian Swimme explains that the universe is a single multiform energetic unfolding of matter, mind, intelligence, and life. With regard to the earth, we see clearly from the long history of the earth summarized in Figure 1 that the earth is a diversified unity. It is of critical importance to learn from the story that the unity derived from the common origin from the matter that coalesced around the sun 4.6 billion years ago is not broken with the emergence of diversity and complexity.

It is not only from the evolutionary story that we learn of the unity of things. The mathematical language of Quantum Theory convincingly reveals the basic oneness of the universe. It shows that we cannot decompose the world into independent existing smallest units. Fritjof Capra writes: “As we penetrate into matter, nature does not show us any isolated basic building block but rather appears as a complicated web of relations between the various parts of a unified whole.”

One reason that it is difficult for us to recognize that we are part of an unfolding unity is that we easily assume, given our education, that complex beings and objects are put together the way a child piles one block on another to make a tower. This is another of our unexamined assumptions. If the atoms were separate, discrete particles as was once thought, there would indeed be no real unity among complex forms. However, given the radical discoveries about the nature of matter just outlined, we can now begin to appreciate and to imagine that there is *an organizing from within* matter by self-organizing processes such that distinct beings remain integral to the unfolding whole. Atoms themselves are self-organizing forms. There is a nesting of self-organizing forms within larger self-organizing wholes. An atom, a functioning whole, becomes part of a cell, which is also a functioning whole. The cell in turn may be part of an organism. We leave the world of discrete blocks and everything changes. In some manner not fully discerned, local laws of physics and random events are caught up in the larger form-patterning of the implicate orders and *plenum*. Ordering powers, or form-generating powers, according to David Bohm and others, are in the implicate order, a dimension of the *plenum*. The true meaning of form, said David Bohm, is known by realizing that they are generated and sustained from the *plenum*. This grounds complex forms in the mysterious plenum or All-Nourishing Abyss, undermining our illusion of a world of separate beings.



Thomas Berry asserts that we will enter the future as a single, sacred community of the human and other than human or we will perish on the way.

### A changed conception of time

HUMAN BEINGS are just beginning to realize that human activities are radically and irreversibly affecting the conditions of the earth and that the changes occurring now will be carried indefinitely into the future, affecting the unfolding Earth story in unpredictable ways. For centuries human beings assumed that, except for seasonal changes, the earth was static and unchanging, formed as it is from the hands of the Creator. We have not seen ourselves as integral players in the unfolding future of an evolving Earth. We believed we were placed on the earth, not forms of the earth itself, not key players in the earth's destiny. Only when we understand that the behavior and activities of human beings are integral to the unfolding story in a time-developmental universe will we begin to take seriously the consequence of our behaviors and reconsider our role as Earth-beings.

*We need to discern  
what time it is now  
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in a manner congruent  
with that time.*

In a time-developmental universe, time refers to the ongoing, changing state of affairs of each successive now. Time is not independent of the changing state of affairs of the earth, contrary to the impression of a clock measuring minutes as it ticks on the shelf. Time is not external to our lives. Depending on the characteristics of a rock, a geologist can assign a rock to the particular condition of the earth in which is formed, a certain

time. A paleontologist can assign a fossil to a particular situation of the earth in which the organism once lived, the particular time in the unfolding story. The date, which human beings have assigned to that situation representing a certain year on our calendar, simply labels and identifies a certain condition. Brian Swimme reminds us that there was a time when the extensive New York subway system could be built. It could not be built now; it is no longer the time. There are times in human lives when we can do certain things, such as have a family. Later it is no longer the right time. *We need to discern what time it is now here on Earth and live in a manner congruent with that time.* The survival of our whole civilization may depend on whether we can learn to discern the time within the story of Earth.

Teilhard de Chardin seemed to say that the idea of awakening to eternity was very, very significant in human history, but not as difficult as awakening to the time-developmental nature of the universe.

### Creativity and Friends' leadings

BRIAN SWIMME writes: "The dynamics that fashioned the fireball and the galaxies also fashion your ideas and visions.... In your specific personal dreams and desire, the whole process is present in your personal self." This is a critical insight and remarkably congruent with Friends' understanding of leadings. We are awakening to the fact that human consciousness has the potential for being an exponent of the creative experiments of the whole. Our insights and activities can actually be occasions of the original creativity of the universe.

As an example of this original creativity, Brian Swimme describes Albert Einstein's experience when his insights into relativity came to him. "Chock-full with the very dynamics he sat contemplating, Einstein experienced a birth that permeated him whole, his mind, his muscle, his viscera. Effortlessly, and as a form of the very dynamics, he jotted down the field equations. This chunk of the Milky Way jotted down the dynamics of the Milky Way. This region of space- time, rich with the interactions of the universe, jotted down the symbolic form of the interactions of the universe. This fleshy portion of the world transformed its insides into graphite to reveal the harmonies at work throughout the fleshy world."

Although very few people are likely to have such comprehensive, original insights as did Einstein, given that we are a form of the unfolding whole, the movement of the whole may find expression in us. Creative ideas can be expressed in small acts of kindness and also quite radical changes in the way that we understand the earth, value it, and relate to it. Alternative forms of knowing and creative insights are available to all of us. We must be faithful to them and at the same time, faithful to the earth.

## The Great Story

We have found more than a belonging. We join a dynamic, creative reality within which we can create a viable, life-giving future. It is a place that stirs the heart and soul.

As a conclusion we offer several excerpts from Thomas Berry's *Dream of the Earth* and a closing, summary paragraph:

If this integral vision is something new both to the scientist and to the believer, both are gradually becoming aware of this view of the real and its human meaning. It might be considered a new revelatory experience. Because we are moving into a new mythic age, it is little wonder that a kind of mutation is taking place in the entire Earth-human order. A new paradigm of what it is to be human emerges. This is what is so exciting, yet so painful and so disrupting.

Now a new way of understanding values is required. We are returning to a more traditional context of story as our source of understanding and value. It is somewhat fascinating to realize that the final achievement of our scientific inquiry into the structure and functioning of the universe as evolutionary process is much closer to the narrative mode of explanation given in the Bible than it is to the later, more philosophical mode of Christian explanation provided in our theologies.

It is of utmost importance that succeeding generations become aware of the larger story outlined here and the numinous, sacred values that have been present in an expanding sequence over this entire time of the world's existence. Within this context all our human affairs—all professions, occupations and activities—have their meaning precisely insofar as they enhance this emerging world of subjective intercommunion within the total range of reality. Within this context the scientific community and the religious community have a common basis. The limitations of the redemptive rhetoric and the scientific rhetoric can be seen, and a new, more integral language of being and value can emerge.

There is no way of guiding the course of human affairs through the perilous course of the future except by discovering our role in this larger evolutionary process. If the way of Western civilization and Western religion was once the way of election and differentiation from the others and from the earth, the way now is the way of intimate communion with the large human community and with the universe itself.

Here we might observe that the basic mood of the future might well be one of confidence in the continuing revelation that takes place in and through the earth. If the dynamics of the universe from the beginning shaped the course of the heavens, lighted the sun, and formed the earth, if this same dynamism brought forth the continents and the seas and atmosphere, if it awakened life in the primordial cell and then brought us into being and guided us safely through the turbulent centuries, there is reason to believe that this same guiding process is precisely what has awakened in us our present understanding of ourselves and our relation to this stupendous process. Sensitized to such guidance from the very structure and functioning of the universe, we can have confidence in the future that awaits the human venture.

The new story of the evolutionary universe offers a vision of the whole that values differentiation without destroying unity; it values matter without becoming materialistic; it values unity without demanding uniformity; it values spirit without degrading matter; it values the present without disregarding the past; it values the future without failing to look honestly at the present out of which the future will unfold.

## Questions for reflection

1. Has your conception of God changed within the context of the vast, ever-changing cosmos, described by the New Story?
2. If you actually experienced the sacred within the natural world, how do you imagine you would behave differently?
3. Has the New Story of the evolutionary universe informed your self-understanding or assumptions about nature and the earth in a significant way?

## Illustrative activities

### 1. The Cosmic Walk

THIS FIRST ACTIVITY is a great multigenerational activity. One way to become more engaged in the new story of the evolutionary universe, to realize more fully that we have indeed emerged from the cosmos and Earth, and to appreciate the great time spans involved in the new origin story, is to participate in a Cosmic Walk. This consists in walking along a rope laid out in a spiral. the spiral represents 13.7 billion years of the cosmic and evolutionary journey. It begins in the center of the spiral where there is a candle representing the Great Flaring Forth of the cosmos and continues to the end of the spiral, which is the present moment. Along the way, events important in the history of the cosmos and Earth are marked, the space between the events being proportional to the actual time span between the events as they occurred in history of the cosmos. One event, for example is the creation the sun and the planets within our Milky Way Galaxy 4.6 billions years ago. The preparation of a clothesline with key events marked on it and the cards to explain those special events, can itself be engaging and a valuable group project.

When the actual Cosmic Walk is done, it can be done in silence, or there can be appropriate music accompanying those who are walking. Sometimes one person reads a description of the major events when the walker come to them, or they may be read by each individual walker as they come to place that is labeled. This is a multigenerational activity.

#### Materials

1. A length of thick yarn or rope to represent the time-line of the universe. Total length is arbitrary, but these are the measurements we use. A 130-foot line is divided into intervals (10 feet equals 1 billion years) when special events took place. Tie a piece of colored yarn at each interval so it is always visible, or use colored tape.
2. A tall candle to be placed at the center of the spiral or a bouquet of wild flowers or grasses, a bowl of stones, etc.
3. A small taper candle to be carried by each participant if you use candles.
4. 25 small vigil (votive) candles in glass containers to be placed at each interval marker or a small dish at each station to receive a stone or small vase or glass to receive a flower.
5. 25 individual papers with or without pictures, describing the event plus the narration.

*Note: We have found that candles can be difficult to work with. Outdoors they blow out and worry the carrier about their candle or even indoors they can be difficult to light, etc. The purpose is to depict the big bang at the center and that everything comes from that. So the pile of stones or bouquet seems to work just as well. Be creative and think of what would work where you are creating this event.*

#### Music

Use any appropriate solemn/contemplative/yet sometimes-energetic piece. We use Holst's *The Planets* or a custom-made audio tape or compact disk, which we can make available on a loan basis. Some use *The Fairy Ring* by Mike Rowland. (Have someone at the music source to turn down the volume when each person speaks and then back up for the walking.)

#### People

- ❖ Narrator
- ❖ Participants (hopefully 26, including the narrator, one for each "event." However, fewer can do it and double up by walking twice.

#### Procedure

In advance, in a large room, the rope is laid out in a spiral, which is large enough for people to walk it. Pre-light the candles and then blow them out and straighten the wicks for easier lighting during the walk. Also put the piece to read, face down, next to each candle, dish, or vase so the walker can easily light the candle and then pick up the paper to read.

The narrator stands off to the side and explains the procedure, reads the introductory words:

## The Great Story

*This is a story, the story of the cosmos, the story of Earth, the story of human, of gazelle, of mountain, the story of you and me. It is the narrative of one single integrated activity, universe. (Start the music) In the beginning was the Mystery. Through the Mystery all things came to be. Not one thing had its being but through the Mystery.*

The narrator then goes to the middle of the spiral and lights the center candle and reads:

“Some 13.7 billion years ago our universe flashes into existence. Time, space, and energy become the gifts of existence.” The narrator then solemnly walks out to the edge of the spiral.

Then one by one, each participant picks up a sheet with an event (in chronological order), goes to the center of the spiral, lights their taper, and walks to the next unlit votive candle, lights it and reads from their sheet. Have each person go to the center when the person ahead of them has walked half their distance. This helps keep a good rhythm. The order and events read aloud are:

300,000 years later	As the Universe continues expanding, small differences in the density of matter are stretched into gigantic filaments of streaming gases, forming the Cosmic Web, the primordial creator of structure.
200 million years later	Concentrated by the gravitational force of dark matter these gaseous filaments collapse into enormous stars.
1 billion years later	Flowing dark matter draws together stars, black holes, and gaseous clouds into small galaxies wherein stars are born, live, and die. Over time these clusters merge into the giant galaxies we see today.
2 billion years later	Within the interstellar dust these chemical gifts of the supernovas are nurtured into simple organic molecules, vital components for the later emergence of life.
4.6 billion years ago	Our ancestral star gives herself into the transforming mystery of a supernova. Our sun and a great disk of matter, all the planets and other members of our solar system family, emerge from the dispersed body of our grandmother star. Here begins the story of what will become one blue-and-white pearl of a planet.
3.9 billion years ago	As the young molten Earth quiets and cools, an atmosphere begins to form. Then, the first rain! Within the newly formed oceans a rich variety of chemicals gather together to birth the wonder of life. Earth comes alive.
3.8 billion years ago	Small bacteria learn to capture the sun’s photons and store the energy in chemical bonds. In doing so, they claim a new source of energy, water, for the growing bacterial population of Earth.
2 billion years ago	The cell with a true nucleus, the eukaryotic cell, forms. It’s a consortium of different types of bacteria within one cell wall. It includes mitochondria, the cell organelle in all our cells in which oxygen is used to break up food molecules and release energy. Symbiosis and cooperation have been central to the evolutionary process.
1 billion years ago	Sexual procreation emerges. Single-celled organisms learn to share their genetic heritage and bequeath to their progeny an extravagance of possibilities.
600 million years ago	Predator organisms arise, ones who have learned to use the complex bio-molecules of neighboring organisms, thereby acquiring significant gain in energy. Here begins the predator-prey dance that promotes the vast diversity of life: the power of the lion and the speed of the gazelle.
540 million years ago	Sight is invented: eyes emerge.
460 million years ago	Plants and animals move on land. Leaving the water, they seek the adventure of weather and gravity.
330 million years ago	Insects invent flight.

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235 million years ago	Dinosaurs emerge. For 170 million years, these creatures explore the extremes of size, speed, and strength.
215 million years ago	Mammals emerge.
150 million years ago	Birds and flowers emerge.
65 million years ago	With the disappearance of the dinosaurs, mammals are given unlimited opportunities to explore new habitats, new food and new varieties of size, shape, defenses, and creative expressions. This new community of animals, plants, birds, and insects produce the great florescence of Earth life that will last 65 million years.
150,000 years ago	Modern humans and language emerge.
13,000 years ago	Human farming and herding emerge.
3,000 years ago	Classical civilizations and religions emerge. Over several thousand years, humans invent writing and more complex technologies and with them arise a variety of religious perspectives that gradually become institutionalized as Hinduism, Confucianism, Judaism, Buddhism, Christianity, and Islam.
75 years ago	Astronomers observe the expansion of the Universe. After 2½ million years we humans learn that we live in a developing Universe.
50 years ago	Humans discover DNA, life's common language.
40 years ago	Scientists observe the origin of the Universe. The cosmic background radiation, still streaming from the Great Emergence, is observed by humans for the first time.
35 years ago	Earth is seen as whole from space.
Today	The Story of the Universe is being told as our sacred story. The creativity implicit in the Great Emergence and expressed in the remarkable longing of Earth for life continues as this moment, in us, as one.

### A suggested Cosmic Walk program

#### Part I. (40 minutes)

Opening with silent worship  
Brief Introduction  
Words about Meditative Walking  
The Cosmic Walk

#### Part II. (10 minutes)

Query for the entire group: *Is there anything you would like to share about your experience?*

#### Part III. (20 minutes)

In concentric circles, the inner circle facing out and the outer circle facing in. Both individuals who are opposite each other, answer assigned questions. One person listens for two minutes and then the facilitator marks the time and the second person listens for two minutes. Then the inner circle moves one space to the left so each person is facing a new partner. Those people then speak to another assigned questions.

#### Possible questions

1. Where on the spiral would you want to be a cosmic observer?
2. Were there any surprises or great insights for you on the walk?
3. How did this experience affect your perception of the global ecological situation?

#### Part IV. (20 minutes)

Query for the entire group: *What are you doing in your own life to move toward a more ecologically sound lifestyle?*

Close with some silent worship.



## The Great Story

### Two-Hand Exercise

(with indebtedness to Joanna Macy)

*Choose a partner. One person, who will go first, takes the hand of the other person.*

- ❖ With both your hands and hold your partner's hand. Turn it, feeling it, flexing it to become familiar with this hand. Hold it with care and reverence. Take time to feel its warmth. It is both strong and gentle.
- ❖ Bend and fold the fingers several times and feel their flexibility.
- ❖ View the "map" of lines on the palm. Trace one line. Look at the nails. They protect the delicate, sensitive fingers. Feel the soft, sensitive padding on the palm and fingertips.
- ❖ Feel the skin, it is highly sensitive to touch, to heat and cold, to pressure. Are there blood vessels visible? Look at the delicate sensitive hairs on the skin. No heavy shell or pelt encloses this hand. It is vulnerable; it is easy to break or burn or crush. It is an instrument of knowing as well as doing. If you were anywhere in outer space, in intergalactic reaches, and you were to grasp this hand, you would know that you were home. It is only made here. This is a human hand of planet Earth, and it has taken five billion years of conditions particular to this planet to shape it.
- ❖ Be aware of the great chasm of time concentrated in this hand. The substance of the hand came out of the explosion of a star billions of years ago.
- ❖ Imagine all that it has caressed. Imagine all the care it has given. Imagine all the work this hand has done. Imagine all that it has made.

*Switch roles so that the person who was active now has their hand held.*

- ❖ Hold *this* hand with care and reverence.
- ❖ Feel the bones of the hand. The bone structure is highly intricate. The bones of the hand reach back into the earliest vertebrates, some *500 million years* ago.
- ❖ Note the delicacy of the musculature. This hand can play the piano or pick up the tiniest piece of sand. This was a fin once in the primordial seas where life began, just as it was again in its mother's womb in this lifetime. Countless adventures since then have shaped it, shaped it in connection with the convolutions of the neocortex and frontal lobes of the brain. This hand connected with the trees and wind as it refined its intelligence. The ancestors are in it, ancestors who learned to push up on dry land, to climb, to reach, to grasp, to chip rock, to gather weeds and wave them into baskets, to gather seeds and harvest them and plant them again; to make fire and carry it, banked, on the long marches through the ages of ice. It's all in that hand from an unbroken succession of adventures. It is an ancient hand, gradually created over millions of years in interaction with trees, with the earth, with food, with tools, with other living beings.
- ❖ Similarly, open your awareness to this hand's journey through this particular lifetime, ever since it opened like a flower as it came out of its mother's womb. Clever hand that has learned so much: learned to reach for breast or bottle, learned to tie shoelaces, learned to write and draw, learned to wipe tears, learned to give pleasure. You know there are people living now who believe they are worthwhile and lovable, because of what that hand has told them. There are people living now whose last touch in life will come from this hand and they will be able to go into their dying knowing they are not abandoned. You know there are people living now who will be healed in mind or body by the power that this hand allows to flow through it.
- ❖ So experience how much you want that hand to be strong and whole for this time, to serve its brothers-sisters beings and the planet of which it is a part. And before you part learn it by heart so that you can remember it is always part of your world. Experience how much you want it to be strong and play its part in the building of a culture of sanity and decency and beauty.
- ❖ Without words, express your appreciation of this hand, and your blessings for it. Hold this gift of the creative sacred Earth, look at it and feel it with great care. Hold it in a final blessing.

## 2. Nighttime and the Stars Exercise

THIS IS A CHALLENGING EXERCISE! Go out into a field on a starry night. Lie down on your back and look at the stars. Imagine that you are on the bottom of the earth. See the stars as down there below you. Let yourself go and feel the gravitational bonding with the earth holding you and keeping you from falling down to the stars. Feel that you are a participant in the vast cosmic forces. Ask yourself, “What are my central bonds to the universe? What holds me as strongly as I am held here? What dreams am I bonded to?”

### Prayers and responsive readings

That in the elements of earth, sea and sky I may see your beauty,  
that in wild winds, birdsong and silence I may hear your beauty,  
that in the body of another and the interminglings of relationship I may touch  
your beauty,  
that in the moisture of the earth and its flowering and fruiting I may smell your  
beauty,  
that in the flowing waters of springs and streams I may taste your beauty,  
these things I look for this day, O God, these things I look for.

—J. Philip Newell

*Sounds of the Eternal, A Celtic Psalter, p. 41*

For the wisdom that fashioned the universe  
and can be read in the earth’s dark depths  
and in heaven’s infinity of lights.

*Thanks be to you, O God.*

For the wisdom of teachers before me  
and their words and imaginative seeing,  
for the wisdom of those I have known  
and their silence and humility of speech,  
and for wisdom’s wellspring in my own soul  
and in the soul of every human being  
from which ancient truth and new realizations spring forth.

*Thanks be to you.*

Let wisdom unfold in my own heart and mind  
and in the men and women of every nation.

Let us see the foundations for a new harmony  
within us and between us,  
the foundations for a recovered unity  
with the earth and all its creatures,  
for the ground of life is in you, O God,  
the ground of all life is in you.

—J. Philip Newell

*Sounds of the Eternal, A Celtic Psalter, p. 22*

The strength of the rising sun,  
the strength of the swelling sea,  
the strength of the high mountains,  
the strength of the fertile plains,  
the strength of the everlasting river  
flowing in me and through me this day,  
the strength of the river of God  
flowing in me and through me this day.

—J. Philip Newell

*Sounds of the Eternal, A Celtic Psalter, p. 29*

## The Great Story

In the silence before time  
began, in the quiet of the  
womb,  
in the stillness of early  
morning is your beauty.  
At the heart of all creation,  
at the birth of every  
creature, at the center of  
each moment is your  
splendour.  
Rekindle in me the sparks of your beauty  
that I may be part of the splendour of this moment.  
Rekindle in me the sparks of your beauty  
that I may be part of the blazing  
splendour that burns from the heart of  
this moment.

—J. Philip Newell

*Sounds of the Eternal, A Celtic Psalter*, p. 38

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## Organizations

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