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## The Story of the Universe



*“The New Story” is a culmination of a lifetime of Berry’s reflections on the growing ecological crisis and what new paradigm would be essential to counteract the devastating power of extractive industries and consumer economies. This new story, he felt, could begin to break through the modern view of materialism and reductionism that had objectified nature primarily as a resource for human use.*

*To do this he felt we needed a coherent evolutionary story that would draw together science and religion in an integrated manner. Recognizing the immense complexities of both science and religion, he nonetheless felt that a fresh creative integration of the two was critical for our times. In other words, the revolutions of the last three centuries in astronomy with Copernicus, gravitation with Newton, genetics with Mendel, biology with Darwin, and physics with Einstein could be threaded together in an epic story of evolution. Moreover, the more recent discoveries regarding the unfolding of the early universe needed to be told in a way that was comprehensible and comprehensive. Thus the new cosmology of universe emergence and the formation of stars and galaxies could now be told in a manner that was accessible to a nonscientist. Moreover, the new understanding of planetary formation and the emergence of life on Earth could be narrated in a way that the*

*viewer could recognize the evolutionary processes of both universe and Earth as dynamic, differentiating, and self-organizing.*

*All of this is to say that humans have emerged out of these processes and are not an addendum to them. Rather they are the self-reflective consciousness of Earth itself. We are related to all other species, sharing their genetic coding. Moreover, we see the stars, too, as our ancestors for out of their explosions have come the elements necessary for life.*

*Berry was thus concerned to see the evolutionary story as a unifying epic that would ignite an awareness of our deep connection with the universe and Earth and our place as a species among other species. This sweeping cosmological narrative could provide a cosmological context for an ecological ethic of reverence, respect, and restraint toward Earth and its myriad life forms.*

*One of Berry's central convictions was that as we began to see the universe as an unfolding symphony and Earth as a living planet, we would be able to find our role as participants in these dynamic processes. As we appreciate the immense diversity of the Earth community, we would come more fully into communion with Earth's ecosystems and life forms. Thus, learning to work with nature's creativity would become our "Great Work" in the newly emerging ecological age that Berry called the Ecozoic era.*

*"The New Story" was written in 1978 when Berry was sixty-four. This essay was the inspiration for The Universe Story, which Berry published with Brian Swimme in 1992 after a decade-long collaboration. It was also a major inspiration for Journey of the Universe (2011), which Brian wrote with Mary Evelyn Tucker during a dozen years of working together on the film and book.*

## THE NEW 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 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.

A radical reassessment of the human situation is needed, especially concerning those basic values that give to life some satisfactory meaning. We need something that will supply 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.

Western society did have, in its traditional story of the universe, an agreed-upon functioning story up until somewhere

around the fourteenth century. This religion-based story originated in a revelatory experience some three thousand years ago. According to this story, the original harmony of the universe was broken by a primordial human fault, and that necessitated formation of a believing redemptive community that would take shape through the course of time. Human history was moving infallibly toward its fulfillment in the peace of a reconstituted paradise.

This religious story was integrated with the Ptolemaic account of the universe and how it functioned, an abiding universe that endlessly renewed itself and its living forms through the seasonal sequence of time. The introduction of irreversible historical time onto this abiding cosmological scene is precisely the contribution of the Western religious tradition. However severe the turbulent moments of history through the late classical and early medieval periods, these at least took place within a secure natural world and within a fixed context of interpretation. Whatever the problems were, they were not problems concerning the basic human or spiritual values that were at stake. Those were clear. . . .

The story of the universe is the story of the emergence of a galactic system in which each new level of expression emerges through the urgency of self-transcendence. Hydrogen in the presence of some millions of degrees of heat emerges into helium. After the stars take shape as oceans of fire in the heavens, they go through a sequence of transformations. Some eventually explode into the stardust out of which the solar system and the planet Earth take shape. Earth gives unique expression of itself in its rock and crystalline structures and in the variety and splendor of living forms, until humans appear as the moment in which the unfolding universe becomes conscious of itself. The human emerges not only as an Earthling, but also as a worldling. We bear the universe in our beings as the universe bears us in its being. The two have a total presence to each other and to that deeper mystery out of which both the universe and ourselves have emerged.

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. One aspect of this change involves the shift in Earth-human relations, for we now in large measure determine the Earth process that once determined us. In a more integral way, we could say that the planet Earth that controlled itself directly in the former period now to an extensive degree controls itself through us.

In this new context, the question appears as to where the values are, how they are determined, and how they are transmitted. Whereas formerly values consisted in the perfection of the Earthly image reflecting an external Logos in a world of fixed natures, values are now determined by the human sensitivity in responding to the creative urgencies of a developing world. The scientist in the depths of the unconscious is drawn by the mystical attraction of communion with the emerging creative process. This would not be possible unless it were a call of subject to subject, if it were not an effort at total self-realization on the part of the scientists. As scientists, their taste for the real is what gives to their work its admirable quality. Their wish is to experience the real in its tangible, opaque, material aspect and to respond to that by establishing an interaction with the world that will advance the total process. If the demand for objectivity and the quantitative aspect of the real has led scientists to neglect subjectivity and the qualitative aspect of the real, this has been until now a condition for fulfilling their historical task. The most notable single development within science in recent years, however, has been a growing awareness of the integral physical-psychic dimension of reality. . . .

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 redemption rhetoric and the scientific rhetoric can be seen, and a new, more integral language of being and value can emerge.

Within this story, a structure of knowledge can be established, with its human significance, from the physics of the universe and its chemistry through geology and biology to economics and commerce and so to all those studies whereby we fulfill our role in the Earth process. 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 others and from Earth, the way now is the way of intimate communion with the larger 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 Earth. If the dynamics of the universe from the beginning shaped the course of the heavens, lighted the sun, and formed Earth, if this same dynamism brought forth the continents and seas and atmosphere, if it awakened life in the primordial cell and then brought into being the unnumbered variety of living beings, and finally 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," in *The Dream of the Earth*,  
123–25, 132–33, 136–37

## THE DREAM OF THE EARTH

This story of the past provides our most secure basis of hope that Earth will so guide us through the peril of the present that we may provide a fitting context for the next phase of the emergent mystery of earthly existence. That the guidance is available we cannot doubt. The difficulty is in the order of magnitude of change that is required of us. We have become so acclimated to an industrial world that we can hardly imagine any other context of survival even when we recognize that the industrial bubble is dissolving and will soon leave us in the chill of a plundered landscape.

None of our former revelatory experiences, none of our renewal or rebirth rituals, none of our apocalyptic descriptions are quite adequate for this moment. Their mythic power remains in a context far removed from the power that is abroad in our world. But even as we glance over the grimy world before us, the sun shines radiantly over planet Earth, the aspen leaves shimmer in the evening breeze, the coo of the Mourning Dove and the swelling chorus of the insects fill the land, while down in the hollows the mist deepens the fragrance of the honeysuckle. Soon the late summer moon will give a light sheen to the landscape. Something of a dream experience. Perhaps on occasion we participate in the original dream of Earth. Perhaps there are times when this primordial design becomes visible, as in a palimpsest, when we remove the later imposition. The dream of Earth. Where else can we go for the guidance needed for the task that is before us.

—“The Cosmology of Peace,” in  
*The Dream of the Earth*, 222–23

## THE HUMAN AS INTEGRAL WITH THE UNIVERSE

With all the inadequacies of any narrative, the epic of evolution does present the story of the universe as this story is now available to us out of our present experience. This is our sacred story. . . .

To appreciate the numinous aspect of the universe as this is communicated in this story, we need to understand that we ourselves activate one of the deepest dimensions of the universe. We can recognize in ourselves our special intellectual, emotional, and imaginative capacities. That these capacities have existed as dimensions of the universe from its beginning is clear since the universe is ever integral with itself in all its manifestations throughout its vast extension in space and throughout the sequence of its transformations in time. The human is neither an addendum nor an intrusion into the universe. We are quintessentially integral with the universe.

In ourselves the universe is revealed to itself as we are revealed in the universe. Such a statement could be made about any aspect of the universe because every being in the universe articulates some special quality of the universe in its entirety. Indeed, nothing in the universe could be itself apart from every other being in the universe, nor could any moment of the universe story exist apart from all the other moments in the story. Yet it is within our own being that we have our own unique experience of the universe and of Earth in its full reality.

—“The Earth Story,” in *The Great Work*, 31–32

### THE UNIVERSE AS SYMPHONY

This sensitive experience of the universe and of the planet Earth leads us to appreciate the ten billion years required for the universe to bring Earth into existence and another four billion years for Earth to shape itself in such splendor. For our present Earth is not Earth as it always was and always will be. It is Earth at a highly developed phase in its continuing emergence. We need to see the sequence of earthly transformations as so many movements in a musical composition. In music, the earlier notes are gone when the later notes are played, but the musical phrase, indeed the entire symphony, needs to be heard simultaneously. We do not fully understand the opening notes until the later notes are heard. Each new theme alters the meaning of the

earlier themes and the entire composition. The opening theme resonates throughout all the later parts of the piece.

Thus the origin moment of the universe presents us with a stupendous process that we begin to appreciate in its magnificence as it unfolds through the ages. The flaring forth of the primordial energy carried within itself all that would ever happen in the long series of transformations that would bring the universe into its present mode of being. The original moment of the universe in its primordial energies contained the undetermined possibilities of the present, just as the present is the activation of these possibilities. This primordial emergence was the beginning of Earth's story as well as the beginning of the personal story of each of us, since the story of the universe is the story of each individual being in the universe. Indeed, the reality inherent in the beginning could not be known until the shaping forces held in this process had brought forth the galaxies, Earth, its multitude of living species, and the reflection of the universe on itself in human intelligence.

After the universe's origin moment, a sequence of other transformational moments took place: the shaping of the first-generation stars within their various galaxies, then the supernova collapse of first-generation stars. These creative moments brought into being the entire array of elements. These in turn made possible the future developments throughout the universe, especially on the planet Earth, where the expansion of life needed the broad spectrum of elements for its full development.

The gravitational attractions functioning throughout the universe gathered the scattered stardust into this second-generation star we call our sun, and surrounding this star, its eight planets. Within this context, Earth began its distinctive self-expression, a groping toward its unknowable and unpredictable future, yet carrying within itself a tendency toward greater differentiation, a deepening subjectivity, and a more intimate self-bonding of its component parts.

Such wonder comes over us as we reflect on the planet Earth finding its proper distance from the sun so that it would be

neither too hot nor too cold, shaping its radius so that it would be neither too large (and thus make Earth more gaseous, like Jupiter) nor too small (and thus make Earth more arid and rocky, like Mars). Then the Earth-moon distance was established so precisely—the moon was neither too close that the tides would overwhelm the continents nor so distant that the seas would be stagnant and life could not emerge.

—“The Gaia Hypothesis: Its Religious Implications,”  
in *The Sacred Universe*, 107–9

#### A LIVING PLANET

Profound mysteries were taking place all this while, the most mysterious of which was this setting into place of the conditions required for the emergence of life and human consciousness. Principally through the work of James Lovelock and Lynn Margulis, we now understand in some detail that the story of life is so bound up with the story of Earth’s geological structure that we can no longer think of Earth as first taking shape in its full physical form and then life somehow emerging within this context. The simultaneous shaping of its physical form and the shaping of its life took place in intimate association with each other. The living forms that appeared in the early history of Earth were among the most powerful forces shaping the atmosphere, the hydrosphere, and even the geological structures of the planet.

But while we need to understand the shaping power of living forms in the sequence of Earth’s transformations, we must understand that living forms themselves were brought into being by the shaping power of earlier Earth development. Always there is this integral relationship between the earlier and the later. In the larger arc of this transformation process, the simpler forms are earlier, the most complex forms later, just as the simpler atomic elements took shape in the earliest moments of the universe and the more complex elements came later.

Much else might be said about this early phase of Earth's development, yet it is sufficient to note that each of these early occurrences in the life development of the planet were decisive. Each had to happen at precisely the opportune moment in the sequence of Earth's development for the planet to be what it presently is.

While perhaps incomplete, the narrative as given here presents in outline the story of the universe and of the planet Earth as this story is now available to us. This is our sacred story. It is our way of dealing with the ultimate mystery whence all things come into being. It is much more than an account of matter and its random emergence into the visible world about us, because the emergent process, as indicated by the geneticist Theodosius Dobzhansky (1900–1975), is neither random nor determined, but creative, just as in the human order creativity is neither a rational, deductive process nor an irrational wandering of the undisciplined mind, but the emergence of beauty as mysteriously as the blossoming of a field of daisies out of the dark earth.

On Earth we find the fulfillment of the primordial tendency of the universe toward clearly articulated and highly differentiated entities. Earth astounds us with the vast differences between itself and the other planets. Each of the planets has its own distinctive mode of being, but these other planets are all much more like one another than any of them are like Earth.

This unique mode of Earth-being is expressed primarily in the number and diversity of living forms that exist on Earth, living forms so integral to one another and with the structure and functioning of the planet that we can appropriately speak of Earth as a "Living Planet." This term is used neither literally nor simply metaphorically, but as analogy, somewhat similar in its structure to the analogy expressed when we say that we "see," an expression used primarily for physical sight but also used to connote intellectual understanding. A proportional relationship is expressed. The eye is to what it experiences as the intellect is to what it experiences. The common quality is that of subjective

presence of one form to another as distinctly other. In this experience, the identity of each is enhanced, not diminished.

So in using this term “living” in speaking about a tree as a living being and in speaking about Earth as a living being, we are indicating that some of the basic aspects of life, such as the capacity for inner homeostasis amid the diversity of external conditions, are found proportionately realized both in the tree and in the comprehensive functioning of the planet. In the tree, as the primary analogue, we have the basic functioning of the life process through its beginning as a seed with its identifiable genetic coding, its absorption of the energies of the sun, and the flow of nourishment from its roots through its trunk to its leaves. Then there is the process of self-reproduction through its seeds. This process produces a certain continuing transformation of the surrounding atmosphere, whereby the presence of the life process can be discerned.

So too Earth comes into being. Not, however, with an identifiable genetic coding guiding Earth through its stages of development to its maturity nor through birth from a prior Earth or living organism with the capacity to continue this generative process. Earth cannot reproduce itself. Yet notwithstanding, there are similarities that justify the use of the term “living” to describe Earth in its integral functioning, especially in its capacity for inner self-adjustment to the diversity of external conditions to which it is subject. This “feedback” process is so remarkable that, along with the capacity of the planet to bring forth such an abundance of life forms, Earth can be described not simply as living but as living in a super-eminent manner.

The use of metaphor and analogy does not diminish the reality of what is being said. The more primordial realities can only be spoken of in a symbolic manner. To indicate that Earth is not exactly a living reality in the sense that a bird or a flower is a living reality is not to diminish the significance of Earth as a living being. It is rather to heighten the significance of what we are saying. Earth makes possible all those multiple forms

of life upon the planet, not simply some single life form. Earth “flowers” into the immense variety of species, not simply into another Earth.

The deepest mystery of all this is surely the manner in which these forms of life, from the plankton in the sea and the bacteria in the soil to the giant sequoia or to the most massive mammals, are ultimately related to one another in the comprehensive bonding of all the life systems. Genetically speaking, every living being is coded not only in regard to its own interior processes, but in relation to the entire complex of earthly being. This is to be alive and to be the fertile source of life.

—“The Gaia Hypothesis: Its Religious Implications,” in  
*The Sacred Universe*, 109–12

#### NEW FORMS OF RELIGIOUS ENCHANTMENT

For the human especially, the multiple modes of our being require both the activation of the physical and biological modes of being and the activation of the psychic mode of our being. We have our individual self, our biological self, our Earth self, and our universe self. It is through attraction to the larger modes of our self that we are drawn so powerfully toward our experience of Earth. We seek to travel throughout Earth, to see everything, to experience the grandeur of the mountains, to plunge into the sea, to raft the rivers, to fly through the air, even to go beyond Earth into space. We seek this for the expansion of our being, even more than for the physical thrill. In all these experiences we come to know the further realms of ourselves and experience the deepest mysteries of existence—what might well be considered the numinous origins whence the planet Earth and the entire universe derive, subsist, and have their highest mode of fulfillment.

Thus the scientist seeks to understand Earth in all its geological and biological forms, to examine the inner realms of the atomic and subatomic worlds. Even recent concerns for understanding

Earth as a living organism arise not from an arbitrary feeling that it would be an interesting venture of the human mind. We are, rather, impelled to this inquiry through our efforts at our own self-discovery. It is a mystical venture, for its ultimate purpose is to achieve a final communion with that ultimate reality whence all things come into being. The dedication of personal effort, the life discipline, the excitement of the discoveries made, the differences, the identities, the coherences, the moments of intellectual impasse—all these reveal a new form of religious enchantment and a quest for further revelatory experience. For the universe whence we emerged is constantly calling us back to itself. So too Earth is calling us back to itself, and not only to us but to all its components, calling them into an intimacy with one another and to the larger community within which all earthly realities have their existence. . . .

Indeed, our scientific inquiry in this direction establishes the basis for a new type of religious experience different from but profoundly related to the religious-spiritual experience of the earlier shamanic period in human history. Since religious experience emerges from a sense of the awesome aspects of the natural world, our religious consciousness is consistently related to a cosmology that tells us the story of how things came to be in the beginning, how they came to be as they are, and the role of the human in enabling the universe in its earthly manifestation to continue the mysterious course of its creative self-expression.

—“The Gaia Hypothesis: Its Religious Implications,” in  
*The Sacred Universe*, 113–16

## DIVERSITY AND UNITY

From a religious perspective, we might consider that because of the diversity of life expression that is held together in such intimate unity, Earth is a special presentation of the deep mysteries of existence whence religious consciousness arises. Thomas Aquinas refers to “difference” as “the perfection of the universe.” The reason is that the divine could not imagine itself in any single being, so the divine brought into being an immense variety of

beings. Thus the perfection lacking to one would be supplied by the others. “Consequently, the whole universe together participates in the divine goodness more perfectly, and manifests it better than any single being whatever” (Thomas Aquinas, *Summa Theologica* 1.47.1).

We could adapt this passage by simply saying that the deep mysteries of existence are manifested more perfectly in accord with the greater diversity held in the greater unity. This provides us with a way of dealing with the special role of Earth as revealing the deepest realms of existence with a perfection unequalled in any other mode of being we know of. For on Earth we have our most magnificent display of diversity caught up into the coherence of an unparalleled unity.

In this context, we can understand the special numinous quality attributed to Earth. In its own self-manifestation, Earth is also a revelation of the ultimate mystery of things. The sense of awe and mystery that was evoked in the earliest human awakening to the universe is beginning to awaken once more within this new context of scientific understanding. We have indeed lost contact with the world of the sacred, as this sacredness was experienced through a spatial mode of consciousness in which time was perceived to move in eternally recurring seasonal cycles. Yet we now begin to experience the sacred dimension of our new story of the universe as an irreversible emerging process.

No longer are we celebrating simply the seasonal renewal of the living world. We now are experiencing in the world around us the primordial emergence of the universe in the full surge of its creativity. We are integral with the process. We experience the universe with the delight of our postcritical naiveté.

Never before have any people carried out such an intensive meditation on the universe and on the planet Earth as has been carried out in these past few centuries in our Western scientific venture. Indeed, there is a mystical quality in the scientific venture itself. This dedication, this sacred quest for understanding and participation in the mystery of things, is what has brought us into a new revelatory experience. While there is no need for

us to be professional scientists, there is an absolute need for us to know the basic story of the universe and of the planet Earth, as these are now available to us by science.

—“The Gaia Hypothesis: Its Religious Implications,”  
in *The Sacred Universe*, 115–16”

### THREE PRINCIPLES: DIFFERENTIATION, SUBJECTIVITY, AND COMMUNION

These governing principles of the universe have controlled the entire evolutionary process from the moment of its explosive origin some fourteen billion years ago to the shaping of the planet Earth, the emergence of life and consciousness, and so through the various ages of human history. These principles, known in past ages by intuitive processes, are now understood by scientific reasoning, although their implications have not yet been acted upon in any effective way. The ecological age must now activate these principles in a universal context if the human venture is to continue. These principles on which the universe functions are three: differentiation, subjectivity, and communion.

Differentiation is the primordial expression of the universe. In the fiery violence of some billions of degrees of heat, the original energy dispersed itself through vast regions of space not as some homogeneous smudge or jellylike substance, but as radiation and as differentiated particles eventually distributed through a certain sequence of elements, manifesting an amazing variety of qualities. These were further shaped into galactic systems composed of highly individuated starry oceans of fire. Everywhere we find this differentiating process taking place. In our own solar system, within the sequence of planets, we find the planet Earth taking shape as the most highly differentiated reality we know about in the entire universe. Life on Earth finds expression in an overwhelming variety of manifestations. So, too, with the human: as soon as we appear, we immediately give to human existence multiple modes of expression. These themselves change through the centuries.

The second primary principle is that of increased subjectivity. From the shaping of the hydrogen atom to the formation of the human brain, interior psychic unity has consistently increased along with a greater complexification of being. This capacity for interiority involves increased unity of function through ever more complex organic structures. Increase in subjectivity is associated with increased complexity of a central nervous system. Then comes the development of a brain. With the nervous system and the brain comes greater freedom of control over the activity of the organism. In this manner planet Earth becomes ever more subject to the free interplay of self-determining forces. With subjectivity is associated the numinous quality that has traditionally been associated with every reality of the universe.

A third principle of the universe is the communion of each reality of the universe with every other reality in the universe. Here our scientific evidence confirms, with a magnificent overview, the ancient awareness that we live in a *universe—a single, if multiform, energy event*. The unity of the entire complex of galactic systems is among the most basic experience of contemporary physics. Although this comprehensive unity of the universe was perceived by indigenous peoples, affirmed by the great civilizations, explained in creation myths the world over, outlined by Plato in his *Timaeus*, and given extensive presentation by Newton in his *Principia*, nowhere was the full genetic relatedness of the universe presented with such clarity as by the scientists of the twentieth century.

—“The Ecological Age,” in *The Dream of the Earth*, 44–46