

\$5.00 US

The Ecozoic Reader

CRITICAL REFLECTION, STORY AND SHARED DREAM EXPERIENCE
OF AN ECOLOGICAL AGE



"The historical mission of our time is to reinvent the human—at the species level, with critical reflection, within the community of life systems, in a time-developmental context, by means of story and shared dream experience."

—Thomas Berry

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The Great Work

We are about the Great Work.

***We all have our particular work—some of us are teachers,
some of us are healers, some of us in various professions,
some of us are farming.***

We have a variety of occupations.

***But beside the particular work we do
and the particular lives we lead,
we have a Great Work that everyone
is involved in and no one is exempt from.***

***That is the work of moving on from a terminal Cenozoic¹
to an emerging Ecozoic Era² in the story of the planet Earth...
which is the Great Work.***

- Thomas Berry

¹ Our current geo-biological era, the Cenozoic Era, began 65,000,000 years ago following the mass extinction of dinosaurs and many other species. Now Earth is undergoing another mass extinction of plant and animal species, this time caused by the impact of human activity on the community of life systems. The Cenozoic Era is ending.

² That another geo-biological era will follow the Cenozoic Era is not in question. What is in question is whether humans and other forms of life as we know them will continue to flourish. Will we achieve a viable mode of human presence on the Earth? The “Ecozoic Era”—a time of a mutually enhancing relationship of humans and the larger community of life systems—represents the hope that we will.

World Charter for Nature
Resolution Adopted by the General Assembly



37/7. *WORLD CHARTER FOR NATURE*
 9 November 1982

**UNITED
 NATIONS**

The General Assembly,

Having considered the report of the Secretary-General on the revised draft World Charter for Nature,¹

Recalling that, in its resolution 35/7 of 30 October 1980, it expressed its conviction that the benefits which could be obtained from nature depended on the maintenance of natural processes and on the diversity of life forms and that those benefits were jeopardized by the excessive exploitation and the destruction of natural habitats,

Further recalling that, in the same resolution, it recognized the need for appropriate measures at the national and international levels to protect nature and promote international co-operation in that field,

Recalling that, in its resolution 36/6 of 27 October 1981, it again expressed its awareness of the crucial importance attached by the international community to the promotion and development of co-operation aimed at protecting and safeguarding the balance and quality of nature and invited the Secretary-General to transmit to Member States the text of the revised version of the draft World Charter for Nature contained in the report of the Ad Hoc Group of Experts on the draft World Charter for Nature,² as well as any further observations by States, with a view to appropriate consideration by the General Assembly at its thirty-seventh session,

Conscious of the spirit and terms of its resolutions 35/7 and 36/6, in which it solemnly invited Member States, in the exercise of their permanent sovereignty over their natural resources, to conduct their activities in recognition of the supreme importance of protecting natural systems,

¹ A/36/539.

² Ibid., Annex I.

maintaining the balance and quality of nature and conserving natural resources, in the interests of present and future generations,

Having considered the supplementary report of the Secretary-General,

Expressing its gratitude to the Ad Hoc Group of Experts which, through its work, has assembled the necessary elements for the General Assembly to be able to complete the consideration of and adopt the revised draft World Charter for Nature at its thirty-seventh session, as it had previously recommended,

Adopts and solemnly proclaims the World Charter for Nature contained in the annex to the present resolution.

*48th Plenary Meeting
28 October 1982*

ANNEX WORLD CHARTER FOR NATURE

The General Assembly

Reaffirming the fundamental purposes of the United Nations, in particular the maintenance of international peace and security, the development of friendly relations among nations and the achievement of international co-operation in solving international problems of an economic, social, cultural, technical, intellectual or humanitarian character,

Aware that:

(a) Mankind is a part of nature and life depends on the uninterrupted functioning of natural systems which ensure the supply of energy and nutrients,

(b) Civilization is rooted in nature, which has shaped human culture and influenced all artistic and scientific achievement, and living in harmony with nature gives man the best opportunities for the development of his creativity, and for rest and recreation,

Convinced that:

(a) Every form of life is unique, warranting respect regardless of its worth to man, and, to accord other organisms such recognition, man must be guided by a moral code of action,

(b) Man can alter nature and exhaust natural resources by his action or its consequences and, therefore, must fully recognize the urgency of maintaining the stability and quality of nature and of conserving natural resources,

Persuaded that:

(a) Lasting benefits from nature depend upon the maintenance of essential ecological processes and life support systems, and upon the diversity of life forms, which are jeopardized through excessive exploitation and habitat destruction by man,

(b) The degradation of natural systems owing to excessive consumption and misuse of natural resources, as well as to failure to establish an appropriate economic order among peoples and among States, leads to the breakdown of the economic, social and political framework of civilization,

(c) Competition for scarce resources creates conflicts, whereas the conservation of nature and natural resources contributes to justice and the maintenance of peace and cannot be achieved until mankind learns to live in peace and to forsake war and armaments,

Reaffirming that man must acquire the knowledge to maintain and enhance his ability to use natural resources in a manner which ensures the preservation of the species and ecosystems for the benefit of present and future generations,

Firmly convinced of the need for appropriate measures, at the national and international, individual and collective, and private and public levels, to protect nature and promote international co-operation in this field,

Adopts, to these ends, the present World Charter for Nature, which proclaims the following principles of conservation by which all human conduct affecting nature is to be guided and judged.

I. GENERAL PRINCIPLES

1. Nature shall be respected and its essential processes shall not be impaired.
2. The genetic viability on the earth shall not be compromised: the population levels of all life forms, wild and domesticated, must be at least sufficient for their survival, and to this end necessary habitats shall be safeguarded.
3. All areas of the earth, both land and sea, shall be subject to these principles of conservation; special protection shall be given to unique areas, to representative samples of all the different types of ecosystems and to the habitats of rare or endangered species.
4. Ecosystems and organisms, as well as the land, marine and atmospheric resources that are utilized by man, shall be managed to achieve and maintain optimum sustainable productivity, but not in such a way as to endanger the integrity of those other ecosystems or species with which they coexist.
5. Nature shall be secured against degradation caused by warfare or other hostile activities.

II. FUNCTIONS

6. In the decision-making process it shall be recognized that man's needs can be met only by ensuring the proper functioning of natural systems and by respecting the principles set forth in the present Charter.
7. In the planning and implementation of social and economic development activities, due account shall be taken of the fact that the conservation of nature is an integral part of those activities.
8. In formulating long-term plans for economic development, population growth and the improvement of standards of living, due account shall be taken of the long-term capacity of natural systems to ensure the subsistence and settlement of the populations concerned, recognizing that this capacity may be enhanced through science and technology.

9. The allocation of areas of the earth to various uses shall be planned, and due account shall be taken of the physical constraints, the biological productivity and diversity and the natural beauty of the areas concerned.

10. Natural resources shall not be wasted, but used with a restraint appropriate to the principles set forth in the present Charter, in accordance with the following rules:

(a) Living resources shall not be utilized in excess of their natural capacity for regeneration;

(b) The productivity of soils shall be maintained or enhanced through measures which safeguard their long-term fertility and the process of organic decomposition, and prevent erosion and all other forms of degradation;

(c) Resources, including water, which are not consumed as they are used shall be reused or recycled;

(d) Non-renewable resources which are consumed as they are used shall be exploited with restraint, taking into account their abundance, the rational possibilities of converting them for consumption, and the compatibility of their exploitation with the functioning of natural systems.

11. Activities which might have an impact on nature shall be controlled, and the best available technologies that minimize significant risks to nature or other adverse effects shall be used; in particular:

(a) Activities which are likely to cause irreversible damage to nature shall be avoided;

(b) Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed;

(c) Activities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be

undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects;

(d) Agriculture, grazing, forestry and fisheries practices shall be adapted to the natural characteristics and constraints of given areas;

(e) Areas degraded by human activities shall be rehabilitated for purposes in accord with their natural potential and compatible with the well-being of affected populations.

12. Discharge of pollutants into natural systems shall be avoided and:

(a) Where this is not feasible, such pollutants shall be treated at the source, using the best practicable means available;

(b) Special precautions shall be taken to prevent discharge of radioactive or toxic wastes;

(c) Measures intended to prevent, control or limit natural disasters, infestations and diseases shall be specifically directed to the causes of these scourges and shall avoid adverse side-effects on nature.

III. IMPLEMENTATION

14. The principles set forth in the present Charter shall be reflected in the law and practice of each State, as well as at the international level.

15. Knowledge of nature shall be broadly disseminated by all possible means, particularly by ecological education as an integral part of general education.

16. All planning shall include, among its essential elements, the formulation of strategies for the conservation of nature, the establishment of inventories of ecosystems and assessments of the effects on nature of proposed policies and activities; all of these elements shall be disclosed to the public by appropriate means in time to permit effective consultation and participation.

17. Funds, programmes and administrative structures necessary to achieve the objective of the conservation of nature shall be provided.

18. Constant efforts shall be made to increase knowledge of nature by scientific research and to disseminate such knowledge unimpeded by restrictions of any kind.

19. The status of natural processes, ecosystems and species shall be closely monitored to enable early detection of degradation or threat, ensure timely intervention and facilitate the evaluation of conservation policies and methods.

20. Military activities damaging to nature shall be avoided.

21. States and, to the extent they are able, other public authorities, international organizations, individuals, groups and corporations shall:

(a) Co-operate in the task of conserving nature through common activities and other relevant actions, including information exchange and consultations;

(b) Establish standards for products and manufacturing processes that may have adverse effects on nature, as well as agreed methodologies for assessing these effects;

(c) Implement the applicable international legal provisions for the conservation of nature and the protection of the environment;

(d) Ensure that activities within their jurisdictions or control do not cause damage to the natural systems located within other States or in the areas beyond the limits of national jurisdiction;

(e) Safeguard and conserve nature in areas beyond national jurisdiction.

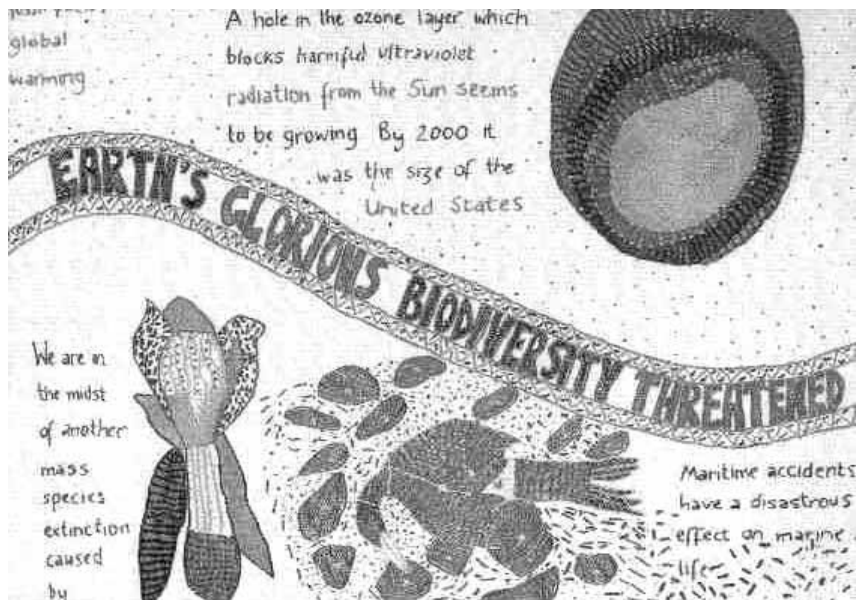
22. Taking fully into account the sovereignty of States over their natural resources, each State shall give effect to the provisions of the present Charter through its competent organs and in co-operation with other States.

23. All persons, in accordance with their national legislation, shall have the opportunity to participate, individually or with others, in the formulation of decisions of direct concern to their environment, and shall have access to



means of redress when their environment has suffered damage or degradation.

24. Each person has a duty to act in accordance with the provisions of the present Charter; acting individually, in association with others or through participation in the political process, each person shall strive to ensure that the objectives and requirements of the present Charter are met.



The Universe and the University

By Thomas Berry

In recent centuries our scientific studies have given us a new understanding of the universe in its origin and structure, in the vastness of its expansion and in the sequence of its transformations over immense periods of time. The unfortunate thing about our studies of the universe is that they have given us extensive information but no meaningful relation with the universe. We have measurements, equations and a vast number of photos of celestial and earthly forms and phenomena. We have an endless number of research papers and articles. We have written about the universe and about the planet Earth. Yet we remain unimpressed by our discoveries except for an occasional exclamation or momentary excitement. It's a kind of childhood delight that disappears the next day. As Stephen Weinberg says at the end of the most extraordinary description of the first three minutes of the emergent universe, "The more we know about the universe the less point it seems to have." Of course, the industrial entrepreneurs know differently. They see the new powers we now have for extracting profit by ruining this beautiful planet under the plea that we are improving life for us humans.

Although it satisfies our curiosity, brings profit to the avaricious, provides questionable improvement in our human situation and gives us Westerners a sense of making "progress" by moving from a more intimate form of life within the natural life systems into a life controlled by technological mechanisms, we can see no significant meaning in the universe itself. We are at a loss as to how we should relate to the universe in anything other than an exploitative role. This makes a rather profound break in the prior relation of humans with the universe around us.

So far back as we have records, humans have sought the deeper meaning of their existence in a profound ritual integration of human affairs with the grand liturgy of the cosmological order. They experienced a pervasive spiritual continuity with the universe. The course of human affairs was coordinated with the sequence of the seasons, with the diurnal sequence of dawn and sunset, with the phases

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of the zodiac. There was a single community of existence. Manifested in the phenomenal world was the mystery of the sacred, the mysterious, the unfathomable beauty and wonder and foreboding whence all things came, by which all things are guided, to which all things returned.

Intimate relations with these deeper forces of the universe established personal security in a dangerous world. When an infant was born within the Omaha Indian tribal peoples of America, the infant was taken out under the sky and presented to the powers of the universe in the four regions with the invocation: "O' ye sun, moon and stars, all ye that move in the heavens, I bid you hear me. Into your midst has come a new life. Consent ye we implore, make its path smooth that it may pass beyond the first hill." Then a similar invocation is made to the powers of the atmosphere to the winds, rain, snow, the thunder and lightning. Then to all those beings that inhabit the Earth, and finally to all those beings that dwell within the Earth.

In this manner the infant is introduced to the entire cosmic order and given its place in the universe. The universe became the primary guardian of the child in its course through life. The entire course of human affairs obtained its meaning through participation in the larger community of existence. Not only in tribal cultures but in the earlier civilizations, in Mesopotamia, in Egypt, in India, in the civilizations of pre-Columbian America, we find this continuity of the human with the cosmological order given ritual expression. The great architectural structures were aligned with the cardinal directions. The winter solstice, the moment of return of the sun from its lowest point in the sky, was a moment of special meaning. Special structures were built to identify and to participate in this event.

Especially in China, the coordination of human affairs with the movement of the natural world required that in the various seasons of the year the emperor move to a different section of the palace, that he wear robes suited to the mystical significance of the season, that appropriate music be played. The concern for this coordination of the human with the universe was such that if winter music were played in summer, cosmological disturbance would occur.

We do not expect anything of this nature from our modern understanding of the universe. Yet there is something missing in our relations with the universe and with the planet Earth that can no longer be regarded as

irrelevant. Nor can it any longer be ignored. Something is terribly wrong in human-Earth relations. Since the university is a primary teacher and guide in government and law, in economics, and in philosophical-religious studies, we might look to the university for some understanding of what is happening and how to deal with the situation. In virtue of its pervasive influence over the guiding personalities of the human community, the university has a unique responsibility. Yet, at present, much university teaching in law and economics has fostered these devastating forces. The university can be considered among the foremost dangers to Earth and to the survival of the human community.

Because of human activity, the integral functioning of the planet has become so disturbed, the biological systems so disrupted, that the Cenozoic period, the last 65 million years in the geo-biological development of the planet, is being terminated. What is happening is not simply a historical change or cultural modification. This is an event at a new order of magnitude. We are changing the chemistry of the planet, a chemistry that has been worked out by nature over some billions of years. We are making the planet toxic in its air and water and soil, so toxic that we have suddenly become aware this is affecting reproductive systems, the genetics of vast numbers of living forms on the planet, including the humans. We are terminating many of the life systems, species extinctions of possibly 5,000 to 10,000 annually according to the biologist E.O. Wilson. Yet only recently has there been any indication in university activities that serious attention is being given to this change in its larger implications as regards its larger origins and its more pervasive consequences in human affairs. The need for a total rethinking of the human process and all the basic institutions of our societies seems to be indicated.

What is needed is a transition from the terminal Cenozoic to an emerging Ecozoic Era, a period when humans would be present to the planet in a mutually enhancing manner. The university in all its disciplines, as well as all human institutions needs to make this move. A transformed university might be turned into our main source of guidance and inspiration in effecting a renewal of the Earth and its basic life-systems. The university should have the critical competence for such

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a comprehensive overview. Of the four great establishments, it is in the best position to do so. The other establishments are more severely impeded—governments are too subservient, corporations are too avaricious, religious establishments are too pious.

In making this transition into the Ecozoic Era, we need to recognize that the universe itself is the primary university...

In making this transition into the Ecozoic Era, we need to recognize that the universe itself is the primary university just as it is the primary law-giver, the primary healer, the primary economy and the primary teacher. The human university is the context in which the universe reflects on and communicates itself to the larger human community along with the guidance in the various professions whereby the human process governs itself in law, heals itself in medicine, feeds and shelters itself in economics, understands itself in philosophy, and relates itself to its ultimate transphenomenal origins and destiny in religions.

A basis of understanding has been laid in the scientific studies of the past few centuries. We might even say that the millions of modern scientists have carried out the longest and most sustained meditation on the universe and the planet Earth that has ever been carried out by humans. This meditation has finally enabled us for the first time to tell the Universe Story from empirical evidence and with a refinement of detail that has never previously been possible. Our basic hope for the future lies in a proper understanding of this story. This story does for the modern world what the Odyssey of Homer did for the Greek world, what the Aeneid of Virgil did for the Roman Empire, what the City of God of Saint Augustine did for the medieval Christian world. In each of these cases, the epic narrative gave an identity and an interpretation of the period and also guided the society in the larger direction of its destiny.

So now we can say that the Universe Story is the epic narrative of the evolutionary sequence. In the context of this narrative, the human attains an understanding of itself and of the other component members of the universe. This story, understood as having a meaningful as well as a measurable aspect from the beginning, is the ordering context of our modern world. Earlier universities in the medieval period sought their ordering principle and basic referent in the literary and humanistic heritage from the classical Mediterranean world, in the Christian faith and in Ptolemaic astronomy.

Later the gravitational principles of Newton formed the basis for cosmological understanding for two centuries. Then came the cosmology of Albert Einstein and Max Planck, relativity and quantum theory, when the human observer was brought back into cosmological understanding. Most important was the discovery begun by James Hutton in the 18th century and continued through the work of Lyell that the universe was an evolving process and much older than we previously thought. This sense of time was immensely extended when the discovery was made that the galaxies are even now moving away from each other and that the universe is continuing the expansion begun at its origin moment.

During these centuries of discovery, the division deepened between the sciences and the humanities. The sciences had become mechanistic in their explanation of the phenomenal world. Such a cosmology was hardly relevant to the humanistic teaching of history and literature and the arts, philosophy and religion; although in terms of being completely rigorous in its critical norms it did affect the entire range of studies. The critical norms of scientific realism and statistical methods of interpretation came to dominate the humanities, also sociology and economics. Even law and medicine were profoundly affected by new critical norms.

To relate human affairs to cosmological moments was not difficult in earlier centuries of tribal cultures and the rise of literate urban civilizations. At that time the universe was considered as expressing a complex of personal powers controlling the sequence of seasonal changes moving in an ever-renewing cycle without beginning or ending. Within this abiding context, coordination with human affairs was quite simple. The issue that we must deal with now is vastly different for we see the universe as an emergent process moving, with no preexisting design, through a sequence of irreversible transformation moments that can be seen in general as passing from lesser to greater complexity in structure and from lesser to greater consciousness.

Because the human in studying the universe seems to be outside the universe being studied, there is a general impression that the human is not an integral member of the universe community but is so superior to the other members of the community that the human is in command of the universe in some manner and not subject to the control of the larger community. This holds, of course, primarily in relation to the Earth. If humans have penetrated

so deeply into the origin of the universe itself and the sequence of its unfolding process, it has penetrated even more extensively into the origin and sequence of geological and biological developments on the Earth.

Through this knowledge, humans have learned how to influence the functioning of the Earth, how to use this functioning for human benefit, for protection against the threatening aspects of the natural systems that govern the basic functioning of the planet, and for enhancement of human life in its basic enjoyment. In the European and American worlds especially there has developed a special sensitivity to the afflictions experienced by humans in the chill of winter and the heat of summer, the illnesses, floods and tornados, starvation, plagues, the death of infants and mothers in child-birth and an unending list of personal and community disasters. After the Great Plague of 1347-1349 in Europe, there developed a certain alienation from the natural world.

The entire surrounding world came to be considered as a threat to the human. A deep hidden rage against the human condition developed in the Western psyche, an unwillingness to accept life under the conditions that life is granted us with its immense and ecstatic delights and yet with afflictions too great to endure. There was a certain deep, hardly conscious, determination to take control of the planet so far as humans were able and to remake the planet in a manner more acceptable to human well-being.

This determination to control is in large measure the explanation of the immense and enduring scientific effort to identify how the universe came into being, the sequence of its emergent unfolding with a special reference to the place of the planet Earth in the entire process, its stages of life development and the role of the human. All of this was considered to be "progress," the magic word in the modern Western world. This achievement was measured by increasing knowledge, but even more by increasing control over the planetary process attained through the knowledge.

A new empirical method of understanding had come into the Western thought tradition in the 16th and 17th centuries. The earlier more philosophical deductive method of reasoning was replaced by the empirical method and that has made all the difference. This new method was more observational, more a question of looking at and listening carefully to the universe and measuring the phenomena observed. After centuries of trying to

understand the universe by deductive reasoning from a few philosophical principles, this new method became enormously successful. We found we could even invent technologies whereby the energies of the universe could be controlled and used with enormous benefit for the human. We could burn the coal to drive our railway engines and our steamships. We could take petroleum from the Earth, then refine it into gasoline to fuel automobiles and airplanes that could carry humans and transport materials vast distances in little time.

We were discovering vaccines to control the spread of disease, learning to monitor our physical health and devise measures to preserve health that were never known previously. We learned to mine the mineral treasures of the Earth, the iron ore, the copper, the silver, the gold, on a scale never before possible. We could now cut the forest for lumber at an amazing rate. We discovered electricity and how it could be produced from hydro-electric plants or by coal or oil burning. More recently we learned how to invade the nuclear structure of the atom and use its enormous energies, and still more recently the genetic structures of life itself.

Everything was at our service. Everything non-human existed for use by the human. The finest achievement of the human was seen as accelerating the amount of natural resources taken from the Earth, speeding up their processing, marketing, and consumption and then disposing of their products in the trash heaps that have come to litter the land.

This use of scientific understanding to plunder the Earth was, however, a distortion of the real purpose of the scientific inquiry which was, despite the inability of scientists to explain themselves, to achieve a more intimate human presence to the planet through a more comprehensive understanding. There was a mystical motivation even though this motivation would generally be denied by the scientists themselves. Deep in the genetic structure of the human there is an overwhelming tendency to bring the personal self into a more intimate presence to the Great Self—the Universe which is the Great Self of every particular being in the universe.

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The story of the universe from the beginning is the account of how the emergence of the entire universe and the articulation of the individual components of the universe are joined in an absolute unity and mutual dependence. The universe and the individual components of the universe are so intimate that neither the universe, nor the individual components are thinkable separated from each other. So too each of the component members of the universe is unthinkable without all the others. So also no phase in the sequence of irreversible moments of the universe could exist without all the others.

This sense of comprehensive community is the basis of contemporary scientific thinking, just as it was the basis of ancient thinking. The difference is that ancient thinking understood all things existed simultaneously from the beginning and from the beginning moved in an ever-renewing sequence of seasonal cycles, while modern thinking understands the universe as emerging through a long sequence of irreversible transformations whereby it has become what we observe at the present time, a sequence of transformations that is continuing even in the present.

In either case, the human is considered as intimately present to the entire universe, most immediately to planet Earth. The destiny of one is the destiny

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of the other. Each individual reality has its own unique value and significance, but the greatest beauty and the supreme value are found in the coherence of the whole, what Saint Thomas has in mind when he says that the integrity of the universe is “the ultimate and noblest perfection in things.” Also when he says that “the whole universe together participates in and manifests the divine more than any single being whatsoever.”

So too the comprehensive evolutionary process from the beginning and over the vast period of its unfolding is a greater reality than any single phase of this process. So at any moment the entire planet Earth constitutes a single community of existence. The difficulty came about when humans, assuming that the well-being of humans depended on the subjugation and exploitation of the non-human, separated themselves out from the Earth community and took a predatory attitude toward the non-human members of the community.

The university needs to teach these principles of comprehensive community. In literature and the humanities throughout the sequence of cultural developments in the various peoples of the world we find a cosmological context. In the Western world we find this in the Iliad and the Odyssey. The controlling forces in the struggle and in the long journey home involve trans-human cosmological as well as human forces. So too the Commedia of Dante involves the entire cosmological order of the universe. Indeed, the power of literary works or of artistic works generally involves the capacity for relating particular events to the powers of the universe. We find this especially in architecture where human structures are oriented toward and in some manner intimately related to planetary and solar and universe coordinates.

In virtue of the same principles of the comprehensive community of the Earth, Law Schools need to teach that the non-human world has rights that humans are morally and legally obliged to respect. Every being has at least three basic rights: the right to exist, the right to habitat, the right to fulfill its role in the great community of existence. These rights deserve recognition in our jurisprudence. To frame a constitution such as the American constitution that grants rights only to humans is to break the covenant of nature that binds the human and the non-human together in a single planetary community. This covenant is broken especially in the protection granted individual property rights against invasion by other humans while no protection is granted to the property itself against the abuse of the owners. The abuse associated with the ownership of humans by humans has long been recognized and a certain abhorrence has developed toward this practice throughout the contemporary world. The corresponding abuses associated with ownership in land have only recently been recognized because of the deep Western commitment to personal ownership of land with no obligations to the land itself.

Beyond this question of the rights of the non-human world, there is the corresponding obligation of humans to obey the laws of the community as regards its own actions. The biological law is that every species should have opposed species or conditions so that no one species or group of species could overwhelm the other species. This law of limitations is imposed on the nonhuman world through genetic coding. The distinctive quality of the human is that it must do by reason what other species do by instinct under genetic determination. Humans have the capacity by intellectual cunning to

by-pass this law of limitations. This shows up especially in questions of habitat. Humans in recent centuries have taken over the habitat of other species on an extensive scale and have thereby disrupted the larger patterns of inter-species relations.

This inherent limitation on the human in its taking over the habitat of other species can hardly be recognized in Western legal processes since Western jurisprudence has no consciousness of a legal structure based on the integrity of the Earth community as the source, the norm, and the purpose of all legal processes. This subject needs much more extensive consideration within university law schools since the violation of the norms of survival of this larger community leads eventually to severe consequences on the human community.

So in the school of medicine there is need to recognize that the well-being of the land is a precondition for the well-being of humans. There cannot be well humans on a sick planet. Only now is this beginning to be recognized although we still consider that we can overcome this situation with our medical technologies and the fixes that we can devise through our medications and our surgical skills. Finally, recent studies are revealing just how far the toxicity of the planet through the refuse from our factories and industrial centers and from the 60,000 chemicals produced by our chemical industries is affecting not only our present population, but the genetic processes whereby future populations are brought into being. This leads again to the conclusion that we cannot make any segment of the Earth community toxic without affecting the entire community, humans included. Just as there is no human economy apart from the Earth economy so there is no human well-being without the well-being of Earth. Human health is derivative, Earth health is primary.

In the schools of science, the study of physics sets the norm of the scientific endeavor because it is the science most concerned with the universe community. Physics becomes the normative reference in the other sciences. Indeed the sciences, particularly the biological sciences, tend to seek a resolution of their ultimate basis in the science of physics. Here scientists seek their answers the ultimate questions of the structure and functioning of the universe. The difficulty is that physics has taken the reduction of things into their component parts as its basic method, ignoring the fact that the parts are revealed in the wholes even more than the wholes are explained by the

parts. Thus the human produced by the universe reveals the nature of the universe just as the component parts of the universe reveal the nature of the human. So too the human in its intellectual and spiritual activities reveal the nature of the universe. If mechanism and measurement cannot account for the human, they cannot account for the non-human. The capacity for intellectual and spiritual manifestation is obviously a dimension of the universe from the beginning. Otherwise it would be an addendum or an intrusion and thus not truly an integral aspect of the universe. The poetry of William Butler Yeats is a dimension of the universe as well as the atoms or the molecules, the seas or the mountains. Only the integral community of the universe can explain any phase of the universe.

The schools of business administration need to teach that the first principle of a viable economy is to preserve the integral economy of the Earth, and this based on the understanding that the human economy is a subsystem of the Earth economy. Quite obviously an increasing human economy cannot endure if it brings about a declining Earth economy. Thus too the absurdity of a rising gross human product and a declining gross Earth product. All the members of the community must progress if any member is to progress in any substantial manner. There is no such thing as a human economy separate from the Earth economy. There is a single economy of the planet, just as there is single health system.

In the Schools of Education there is a need to recognize that the universe is the primary attraction and primary fulfillment of the human mind. Maria Montessori, one of the most prominent educators of our times, explains in her book, *To Educate the Human Potential*, how the child six years old is already discovering the universe. Even at this age, there is need to present to the child the entire universe as the contextual answer to all questions. Instinctively the child experiencing itself at the center of the universe finds a certain security of mind. The imagination is excited; a largeness of soul, a certain nobility in existence is experienced.

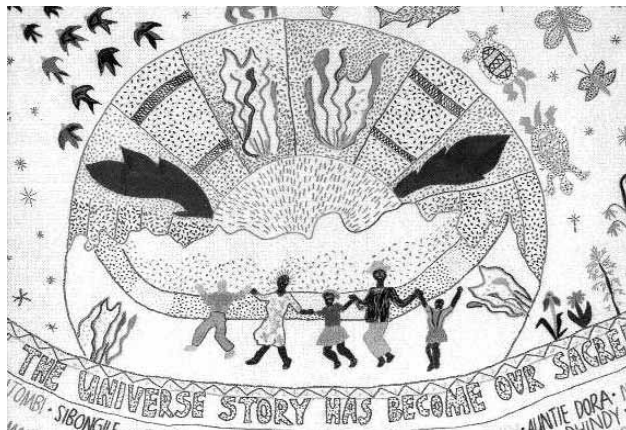
So in the religious sphere the schools of divinity need to teach that the entire universe is the primary sacred community. Humans become sacred by participating in the sacred dimension of this more comprehensive community. So too the universe is the primary revelatory experience. Verbal revelation cannot be primary since it is too abstruse for humans to understand in an immediate way. Interpretation of verbal revelation requires knowledge

of the peculiarities of the language in which it is given. It requires acquaintance with the social mores of the people. It also requires knowledge of the specific historical circumstances in which it is given. On the other hand, the universe in its every aspect reveals immediately the mysterious source whence it comes. We need only observe any natural reality or any natural phenomenon to be struck with the wonder and reverence that we identify as the source of religion.

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In this new story of the universe, we also have the basis for new liturgies. Just as the transformational moments of the seasonal cycle have been recognized and celebrated throughout the human community and on every continent as the mystical moments when the divine is especially manifested in the physical world, so now the sequence of transformational moments in an emergent universe can be recognized as moments when the divine is especially manifested, moments that should be celebrated in appropriate liturgies.

From such slight sketches as these explaining how the various disciplines of the humanities, law, medicine, science, business administration, education and religion all depend on the intimate relations that each of these bears to the surrounding universe, we can see how the university can neither exist nor function or in manner explain itself except as the context in which the universe and the human community come together in an intelligible presence to each other. In this context the unity of the university can be seen in the wide diversity of its disciplines.



A Scientist Responds to Thomas Berry's Cosmology

By Brian Swimme

My own professional training is in mathematical physics, and in this essay I would like to indicate what a scientist finds valuable and unique in Thomas Berry's work.

Before I get to Thomas Berry's contribution, I think it's important to bring to mind two facts about contemporary society. The first is the general apathy scientists have for religious thinking in general. I was reminded of this at a conference I attended for Catholic scholars held at the University of California at Berkeley. One physicist came and one mathematician . . . and this from a university that employs hundreds of scientists. The second point is the fact that about half of the world's scientists and technologists are employed in war research and development. And how many of the remaining scientists are employed by corporations heavily implicated in ecological destruction?

The context for my remarks is this: We are all suffering under the threats of war and ecological devastation, and yet our spiritual or ethical traditions seemingly stand by unable to make a difference. They do show up at the sidelines and moralize, but it always comes at the end of the game. This moral criticism is of great importance, surely, but it is offered too late. It comes only after the science and technology has been taught.

What is missing, and what Thomas Berry provides, is a functional cosmology that will enable the human community to organize itself in a way aimed at planetary health. Nothing less than a comprehensive vision of the universe is required. A new social theory, a new psychological theory, a new economic program will make no impact on the scientific-technological trance that is behind our impasse.

Thomas Berry's achievement is to position himself within the knowledge that scientists and all the rest of us

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regard as obviously true. His starting point is natural selection and genetic mutation, the second law of thermodynamics, the initial singularity of spacetime, the innate releasing mechanisms of neurophysiological response. His starting point is the universe as it has been discovered by our contemporary scientific modes of understanding. By taking the universe as primary, he is able to work out a cosmology that is meaningful to anyone educated in modern ways of knowing. It is this cosmological achievement that must be understood if his work's full significance is to be appreciated.

Before going further into a discussion of the main outlines of his cosmology, I think it might be helpful to say briefly what Thomas Berry does not do. I do not mean to imply that these other approaches are without value. I am simply trying to clarify what is unique in Thomas Berry's thought.

- (1) He does not set out to prove that religion and science are compatible. There are a number of thinkers involved with this enterprise. They examine the methodologies and epistemological assumptions of scientists and theologians, and arrive at subtle distinctions concerning truth claims and so forth. All of this is absent from Thomas Berry's work.
- (2) He is not interested in adjusting the world of the sacred to fit scientific categories of thought. Such a program has been carried on throughout the scientific period, based on the assumption that science is the whole truth and needs to eliminate the superstitious claims of religion and so forth, all ending in an unacceptable belittling of reality.
- (3) He does not translate the universe into theological or scriptural modes of thought. This enterprise too is common, and one that irritates scientists as much as number two above irritates religious people.

What does Thomas Berry do? He wonders over the revelations of the universe. He wonders over the human. He faces the great discoveries of tectonic movements, of spacetime curvature, of stellar nucleosynthesis and he asks himself: "What does all this reveal about the role of the human species in the universe?"

Thomas Berry
teaches scientists
about the universe.

Here's the great surprise: Thomas Berry teaches scientists about the universe. I would say that this is why a scientist encountering his work for the first time grows

ecstatic, as if in the rush of an illuminating event. Thomas Berry provides not psychological insight, nor moralistic guidance, not mystical or contemplative teaching about withdrawal¹ and detachment from the world, but knowledge and insight into the nature of the universe. This is such a shock, such a disorienting surprise, a scientist can hardly believe it is actually occurring. One has become so accustomed to assuming the universe must always be left out of religious thinking.

I think more should be said here, or misunderstanding will be inevitable. It is true that most or all theologians speak of “reality” or the “world” or “life.” But scientists automatically ask these questions: Do theologians have a great deal to say about life if they are unaware of the dynamics of cell division, of genetic language, of the elegance of photosynthesis? Should a person use the word “life” if he or she knows little or nothing of the actual events comprising the four billion year epic of life on this planet? From a scientist’s point of view, the theological use of the word “life” appears to be something “spiritual” or “psychological”; something perhaps germane to moral statements, but something disconnected from the structures of the actual world as it is given to us in our most basic investigations.

Here is Thomas Berry’s point of view: Theologians, when they speak of “life” in a moral, spiritual, or psychological sense only, inevitably emasculate their own theology. Thomas Berry criticizes the theological enterprise today for its timidity. The scripture “I am the way, the truth and the life” has been crippled to mean little or nothing at all, precisely because theologians, when they say “life,” they do not mean “biological life.” It is to overcome this parochial attitude that Thomas Berry offers a comprehensive interpretation of the universe, one that goes beyond both science and theology by themselves.

I have said scientists learn about the universe from Thomas Berry, and this accounts for their enthusiasm for his thinking. But, this is not all. There is something else that is vital. Scientists recognize Thomas Berry as a brother, as one who has discovered and been stunned by the beauty of the universe. One who is just as amazed as they are by the universe. This alone enables a scientist to value Thomas Berry’s intuitions. For here is a person—even a religious personality—who is as devoted as they are to the beauty that suffuses the world.

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I think it is important to say something about how rare this is, and how essential. It explains both Thomas Berry's accomplishment, and the inadequacy of so much theology of recent centuries. Scientists have learned it is not wise to speak to religious people about one's devotion to the universe or nature. What happens generally is that theological, clerical, or spiritual people, without thinking at all, belittle such devotion. How do they do this? By transforming the great majesty of what a scientist is trying to express into side comments on this or that scriptural text, or this or that theological doctrine. They listen to this excitement unaware they are listening within a theological orientation that inevitably leads them to discount it all as secondary.

Why do scientists have little interest in theologians? When you fall in love, you bring your spouse home, beaming with excitement; but if your parents disapprove, if they are disappointed, if they are apathetic or if they engage in psychological assault, you eventually learn to stop dropping by the old homestead. Scientists dropped out of religion not primarily because theologians and preachers had nothing interesting to say about the universe. They stopped sitting in the pews because the preachers kept explaining to them that their passions and interests, their meaning, their central devotions in life, were unimportant . . . or irrelevant . . . or footnotes to the real truth . . . or regrettable, secondary, and a waste of talent.

For Thomas Berry the universe is primary. He enters with no distracting agenda drawn from conciliar documents. He does not attempt to see the universe as a gloss on the Bible. From his point of view, to attempt to cram this stupendous universe into categories of thought fit for scriptural studies or systematic theology is to lose the very magnificence that has stunned us in the first place. Our encounter with the universe must be primary, for the universe is primary. In his view, the stars, the mountain ranges and the clusters of galaxies demand and are worthy of our deepest regard. Our attention must be turned to the vast drama and majesty of the universe if we are to discover our role at the species level of life.

I would like to indicate here some of the main features of Thomas Berry's cosmology. I will jot down a few sentences on ideas he has spent decades pondering. At best I will give a dim flavor of the whole vision he

offers. Anyone interested will have to examine his essays for a fuller consideration of his ideas.

A. The Great Achievement of the Scientific Era Is the Cosmic Creation Story

It's interesting to me that in my graduate courses in mathematics and physics, in my conversations with scientists, and in my readings in the philosophy of science, I never once learned the full significance of what we scientists were doing. Embroiled in the work, most scientists did not have the freedom to recognize the cosmic story as their aim. There were some thinkers, of course, who did. Albert Einstein explained that science was essentially "the recapitulation, in the conceptual realm, of the universe."

But Thomas Berry goes beyond Einstein in emphasizing the cultural role this "recapitulation of the universe" will play. It required someone with knowledge of the world's cultures back to the tribal period to recognize the transcultural and trans-scientific meaning of this story of the universe that burst into being some billions of years ago, that developed in complexity and form throughout the galactic, planetary, life and human stages. Though scientific knowledge has put these lethal weapons in our hands, it has also provided the Earth with the first common story of our origins and development. The scientific enterprise has eventuated in a creation myth that offers all humans a deeper realization of our bondedness, our profound communion not only within our species, but throughout the living and non-living universe.

B. The New Story Is an Empirically Based Story

Precisely because this story of the universe comes to us through our investigations beginning with our eyes and ears and body can we speak of a transcultural creation story. Members of every continent are involved in discovering and articulating this story. Members of every major religious tradition are involved in its telling.

What other story could possibly have served humanity as a whole? How else could members of Hinduism and Christianity and Native American Traditions come to agree on the ultimate origin and development of the planet, or the life forms, or the stars but through a direct experience of

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these realities? So long as humans insist on their own scriptural stories, they only emphasize their differences. But with a story that begins with the wind and sunlight and the continental movements as they reveal themselves through our direct investigations, we have the promise of a convincing story, one around which we can work out a common reverence and a common set of values.

C. We Live in a Time-Developmental Universe

The larger meaning of time has been discovered in the last couple of centuries. It is difficult to estimate the full significance of this fact. The universe in which we live and think is vastly different from the spatial or cyclical universes of Plato, Aristotle, Thomas Aquinas, or Shankara, for instance. For all previous humans, the universe was something set. Either all the species came into existence at the same time, or else they emerged as spring and summer emerge, in a cyclical pattern. In such worldviews, time is seen either as related to decay, or as unreal, a wheel of delusion.

In our new vision, time's dynamics reveal themselves in an ongoing creativity. Only through the most prolonged meditation on the universe could this creative dimension of developmental time be appreciated. Eventually it was recognized that species were not set from the beginning, but were created throughout time. Eventually it was realized that the Earth had not simply been here from the beginning, but was involved in a vast development stretching back billions of years. The awareness completed itself when physicists discovered that the universe as a whole was a self-emergent, dynamic, one-time energy event caught up in its own inner developments through time.

The insights of all thinkers previous to our time are, to varying degrees, conditioned by spatial cosmologies, all of which have been surpassed. Thomas Berry's insistence is that until we begin our thinking in this time-developmental universe, we condemn all our thoughts to conceptual frameworks in the midst of collapse. How convincing are theologies that are framed by worldviews no longer regarded as real? In insisting that we begin our thinking within a time-developmental universe, Thomas Berry continues an intellectual tradition best represented by Thomas Aquinas, when he set out to learn the philosophy of Aristotle. This tradition insists that our insights must be framed in our best knowledge of the universe. Thomas Aquinas had his Aristotle; Thomas Berry has his Newton, Darwin, Lyell, and Einstein.

D. Everything in the Universe Is Genetically Related

Humans and beasts are kin. They organize themselves chemically and biologically in nearly indistinguishable patterns of intelligent activity. They speak the same genetic language. And all things, whether living or not, are descendents of the supernova explosion. All that exists has been shaped by the same energy that erupted into the universe at the primeval fireball.

No tribal myth, no matter how wild, ever imagined a more profound relationship connecting all things in an internal way right from the beginning of time. All thinking must begin with this cosmic, genetic relatedness.

E. The Universe Is Integral with Itself

We have already mentioned the intrinsic connection between the human body and the star that created the elements of the human body five billion years ago. We can remember as well the cosmic background radiations that communicate events fourteen billion years ago to humans alert to their intelligibility today. These are macrophase examples of what is most obvious to us today in our new ecological awareness—we live in an interconnected universe. Every being on Earth is implicated in the functioning of the Earth as a whole; and the Earth as a whole is intrinsic to the functioning of any particular life system.

We have discovered that this integral nature of the universe extends back to the beginning of time. The conditions and dynamics of the fireball were such as to enable life to develop within the universe. We can even speak of the way in which the human face is there in the structures of the fireball, for if the elegance of the fireball were changed substantially life and human presence would be eliminated. In this cosmological vision, life is more than a quality characterizing certain events on a particular planet. Life is a principle inherent in the primordial structures of the universe.

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universe.

F. Humanity Is a Celebratory Species

Rather than seeing human self-awareness as simply an addition to the planet, Thomas Berry describes a planet that becomes aware of itself through



the human element. In this vision, the human emergence is an activation of a deep dimension of the universe. It is true, of course, that the human is an individual being on the planet; but it is equally true that the human person is a mode of the planetary process as a whole.

From this perspective, humans are activities of the Earth. Scientists and artists are not simply exercising their private talents and rational capacities when they set about their work. Rather, in these very activities, the Earth is simultaneously revealing and discovering itself. This Earth must be understood as an ongoing developmental activity that has eventuated in mountain ranges and humans and ants. The earthquake and the Mozart symphony are both activities of Earth – not of Mars, not of Jupiter. They are processes grown out of the fundamental dynamism of this planet.

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The universe as a whole is a great celebration of that ultimate mystery whence it came. But the human species is especially created for celebration; for in human awareness, the universe turns back on itself in admiration and joy.

G. The Three Basic Laws of the Universe are Differentiation, Subjectivity, and Communion.

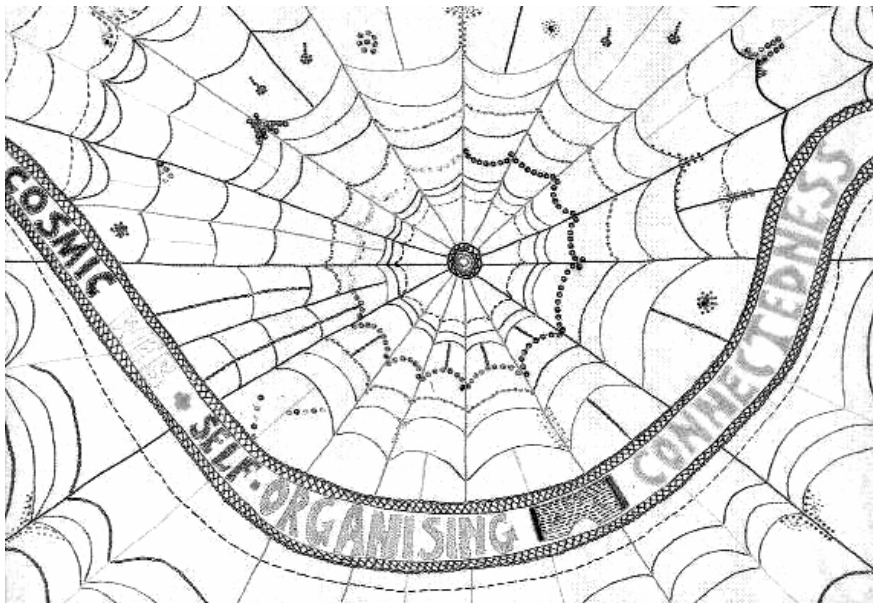
The universe is differentiated. It comes to us in articulated energy constellations, not as a simple homogeneous material. The more closely we examine anything, the more clearly do we appreciate its unique differentiation from everything else that exists in the universe.

The universe consists of acting subjects. After our penetration into the deepest reaches of matter, we realized that there was no such thing as an inert thing; there was no matter that was not simultaneously churning with activity. An atom is a centered self-organizing entity. The Earth is a centered self-organizing entity—so too the virus, the galaxy, and the forest. The Universe consists of subjects.

The universe is bound together in communion, each thing with all the rest. The gravitational bond unites all the galaxies; the electromagnetic interaction binds all the molecules; the genetic information connects all the

generations of the ancestral tree of life. We live in interwoven layers of bondedness.

The planet as a whole is in a traumatized state. This is not the first time. Throughout the history of these disastrous crisis points, there have been stupendous creative achievements enabling the planet as a whole to move from misery to health. The invention of photosynthesis might be the most spectacular. In my thinking, the creativity breaking through Thomas Berry represents that vision of the world that will enable the Earth to move toward health.



Blue Bird

By Greg Futch

Saw a blue-bird today,
in the hill country of Texas.

Haven't seen them much,
rare treat it was.

The more experience and time goes by,
the more I reflect,

the more it seems that
all things have meaning

all things, "good or bad"
pleasant or not,
clear or obscure.

All things have import.

This blue-bird was so
beautiful,
it stops your breath,
if you pause enough

to absorb it.

What means this sign
for me?

Nothing, the cynic says,
"Who can say" philosopher replies,
but they have no sight
to feel what's there,
The gift is given
so still and free

Light and clean,
so simple, see?

Cling not,
love life,
shine bright,

quiet be

Nature yields
these gems

like rain or shine

Spirit-talk
but not in words

Eyes to see,
ears to hear

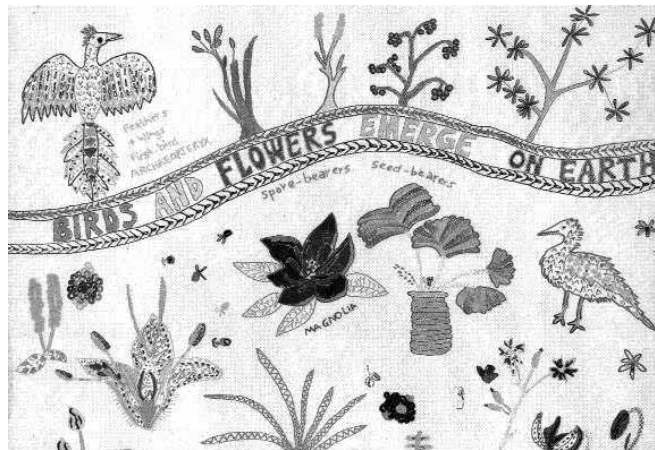
child-like open-ness
is dear

So blue-bird
flying through the wood.

Gave me joy and
serene I stood.

Glory lies all about,
pain and truth,

love and doubt.



Outside My Bedroom Window, Southeast Texas, India and Beyond

By Roseanne Sands

Just when I needed her, a red-tailed hawk came screeching and soaring from above the woods next to the house, as soon as I had gone out on the deck. She then hovered above my head so I could actually see the markings in her wide-stretched wingspan. Then she glided over the trees and the pasture, keeping up her excited screech all the time. She swung back around and perched on a very high branch and continued her message, which filled up the whole sky and all the air for miles around. When she was certain she had my undivided attention and had caused me to look upward, lifting my energy up, she flew away.

I've lived in nature for more than two years and though I've seen many hawks, this was new behavior. So I took note and meditated on it. All wild creatures bring us messages from the invisible world, from the Earth Mother and Divine Mother. The red tailed hawk awakens our vision. She inspires us and leads us to use our creative energy in manifesting soul purpose.

I had been feeling despair about my writing ability. But hawk came and infused me with hope and vision. She commanded my attention and woke me out of the fog of self-pity and self-abuse. I was born to write, so it's not a question of whether I'm good at it, it's more like I can either sit down and write or kill myself—in one way or another.

It's winter here in southeast Texas where I live in the countryside. I grew up hating winter because I lived in Seattle where there are only 60 days of sun each year, and my body type cannot abide the cold. I used to stand in my long flannel nightgown over the heat register all winter long when I was a child. Only on the weekends, of course, since during the week I had to walk or take the bus to school in the cold drizzle. It was depressing. For the first time in my life, in these last two years, I have begun to love winter maybe more than any other season.

Winter is a time of rest and quiet. It's a time of going within. The bare-branched trees are exquisite in their simplicity. Lying in my bed in the dark

of night, I can see the woods outside my bedroom window, slightly illumined by the blue-white light on the other side of the house. There is a hauntingly mystical beauty emanating from all those gray-brown arms reaching out and upward against the black velvet night.

From the bareness of winter trees, I learn that under the outer coverings abides the naked truth. Authenticity is revealed. The soul shines forth. The hidden inner self, who is silent, pure and patient, is simply being present. It becomes exposed. We realize the freedom of standing our ground, no longer hiding or making excuses for our being. We can surrender and stand tall, naked, exposed, authentic, silent and strong.

I'm sitting here looking at the trees in the woods outside my window. A brown-orange female cardinal just whizzed by with a bright red male in hot pursuit. They live here on the edge of the woods outside my bedroom window. They bring dashes of color and vibrancy to the gray sky, bare trees and yellow pastures. And they remind us to remember the importance of the role we play in life. They match with the red berries on the bushes filling in the void of the sparse winter woods. Last year great flocks of robins came to eat the berries. They grew fat until they had consumed every berry. Then after two weeks they flew away. But while they were here, more than a dozen bluebirds came to join them. I've never seen such an exciting color of blue. Its radiance caused our hearts to open and sing reminding us of the rainbow and happiness.

I want to tell you about two gifts from Mother Nature so let me step back to the fall for a moment. October is a wonderful month for us living in southeast Texas. After a very hot summer we are blessed with coolness. Nature begins to go within, the grasshoppers, crickets, snakes and scorpions look for places to hibernate and we turn toward Mystery, becoming quieter, wanting solitude.

One October morning as I went out to pick up some logs for the fire, I was gifted by a visit from a bobcat, the first one I'd ever seen in person. It came very close to the house and up onto the lower deck by our little pond. Our house cats came running in, but the bobcat simply turned and stopped, staring at me for a long minute before it scurried off into the woods. Bobcat symbolizes silence, solitude, sensitivity and secrets. He was telling me how

important silence and solitude are for my journey now. He says to hear what is not spoken and to see what is not visible.

Last year, in October, a red wolf came while I was meditating. I opened my eyes and it appeared about fifteen feet in front of me just outside my bedroom window on the edge of the woods. I felt awe and wonder. Her message was of Spirit. Seeing her up close lifted my vibrations so high that I went into a slightly altered state. For two days I felt like I was in a Carlos Castaneda novel.

And in November, looking out the living room window I could see the great, peaceful beauty of nature, the oak and cedar trees, the yellow, brown and green sloping pastures, the changing colors of the leaves on the trees and on the grass, the daddy-long-legs on the window screen, the greenish gray Spanish moss dripping from the tree outside the big window, swaying in the cold wind, the enormous bushy mesquite tree down on the side of the pasture dancing to nature's tune. I could hear the thunder as it rolled across the heavens energizing the atmosphere while the crow cawed from a high branch. The daddy-long-legs moved to escape the rain dripping down the window. Woodpecker drummed out a new rhythm as the downpour stopped. Mystery embraced me. Silence. And in that silence, life became seamless and I realized there is no death, only transformation.

These experiences are the richest jewels of life for me. But until two years ago I had never lived in nature. Four years ago when I was still living in the city, I went to visit my best friend Elaine in Mt. Vernon, Washington. She lives in nature on 36 acres. Giant blue-green pines and snow-covered mountain peaks in the distance are the view from every window. It's so quiet, and so dark at night. My father had died and I went for the funeral. It was February and very cold and crisp. In the morning the frost was thick and sparkling-white over the fields. At night, standing on the porch glimpsing the occasional star through the black-overcast sky, I felt the quiet like a blanket of dark, soft Presence.

I stood contemplating death and grieving for my father. And I felt an irresistible urge to find the road and walk deeper into the dark. I wasn't frightened. It was profoundly comforting, like being cocooned in the womb. I was completely open to that dark Mystery, safe, free, alive and happy.

When I returned to Houston, I could no longer hide from the intense urge to live close to nature. My heart and my gut cried out constantly. It hurt. I felt like a thirsty wanderer in a dry desert. It was not just something I wanted. It was as powerful a need as I have ever experienced. Before the year was out, we were guided to our place in the countryside, with pastures, hills and woods.

Now the barking and howling of coyotes on the chase sometimes interrupts my sleep, and my early morning meditation before dawn's light is occasionally punctuated by the mystical "Who, Who, Who" of an owl in the woods right outside my bedroom window. Most mornings, a cacophony of large black crows greets the huge, pink-red sun rising over the pasture. The red-tailed hawk swoops over the field to find his breakfast. In the summer, roadrunners tease our little cat Rani who can never catch them, though she knows she's a queen. When my husband and I sit on the deck speaking of spirit and the other world, occasionally a giant blue heron will fly over us very low bringing awe and goose bumps. This actually happened twice—once, bringing a special blessing, was on his birthday.

In these two blessed years, I have slowly become quieter inside. I understand very well what the great Mahayogi, Maharaj Gagangiri means when he says we need to be in nature as much as possible if we want God consciousness. He says:

All those who are eager to initiate themselves into yoga (union with God) should spend some time in natural surroundings. Nature has a continuous imperceptible influence on your mind and body. This is why it is the duty of everyone who desires to attain Sadhana to be in close contact with nature.

I went to India and met Maharaj in person this past summer. I had wanted to go to India for 35 years but I waited for Spirit to invite me. It was worth the wait, a long-time dream came true. Maharaj was different than I thought he would be. I have been meditating for eight years with his picture on my altar and there is an austerity, almost a severity in some of his photos. But there is also great compassion and other-worldliness in his look. When I met him, the other-worldliness and the non-attachment were there. But what surprised me was his child-like Presence. He said, "I am like a child." Around him there is only love and no judging. At his ashram I felt closer to



Heaven than I have ever felt. Each morning before light, I was awakened to chanting and incense wafting up to my open window. Devotion saturated the air. Gods and Goddesses reside there, barely invisible to our mortal eyes. I felt profound happiness. I became like a child. Everything was alive and new and vibrating with joy!



Maharaj told us that Nature is his guru. He went into the jungle when he was very young man and lived alone for twenty years. He became one with the trees, plants and animals. The tigers would lie down by him and never harm him. Worshipping God, he would go into deep trance. Once he saw a black panther very near—he surrendered to God, went into trance and the panther left him alone. One time he lived in a large hole in a tree, sharing it with a poisonous snake. Before that he lived in the Himalayan Mountains for many years with some very mystical yogis who like to hang out there meditating for the sake of humanity and the world.

Now Maharaj is very old, in his nineties. He has three ashrams. I was at the one on a sacred river. Well all rivers are sacred . . . in India they know all rivers are sacred. Maharaj Gagangiri spends most of the day sitting naked in the river meditating. He is able to transform all the cells in his body. He is able to absorb the energy from the water, sun and air. He requires very little food and water to live in his body. In the evening, he dresses and comes out to give darshan to the hundreds of people who come each day for his blessing.

There are green, low mountains behind the ashram with at least twelve waterfalls running into the rushing, laughing, ecstatic river! I loved to stand on the bridge over that beautiful river watching it dancing and flowing. It's so powerful and yet soothing, calm and gentle. Its joy gurgled up into my consciousness. The constant sound it made is like the everlasting Cosmic motor—like "OM," the word manifesting Creation. Standing over the water, I could see the vibrant atoms and I could see the energy flowing from one form into another . . . for a split second the world became One. The Presence of God was there. Super consciousness was there on that river, in that place.

I wasn't able to go to the Mountain Ashram on this trip. It's more secluded. I will try next time, people told me it is very special. There is a powerful presence there, they say. The mountain is holy and is a guru itself. When Maharaj first approached the cave on Gagangad Mountain, he witnessed a very strange sight. A beautiful peacock stood at the entrance of the cave displaying his plumes, a king cobra was close by happily spreading his hood, and not far away, a tigress was merrily playing with her cubs.

Maharaj says about the mountain:

Devotees have been visiting Gagangad Mountain as pilgrims or because it is holy place. But they have never experienced the unique Divine power that encompasses the peak of this mountain and its surroundings. It requires uncommon courage to stay on this mountain or in the cave. Initially one may find the place desolate, deserted. But, if you accept the challenge to stay put without fear of the mysterious atmosphere, an inner voice of this mountain will start speaking to you. You will be able to hear the breathing of this mountain like a human being. You will feel the luminosity. This luminosity has the strength of reducing any pain experienced by human beings. This is why I attain enlightenment here every single day. What I am today I was not yesterday and today I will not remain the same as yesterday. Thus as a result of constant communion with an ennobling power one's organs and intellect too go on evolving. Thus my body has no separate existence. The unbreakable relationship with the atmosphere has taught me the way of divine worship and shown me how to influence worldly ways. We all started the journey with the blessings of the Almighty. One should work with faith, confidence, devotion and perseverance. The inner voice of this mountain gives a new direction to the work here. Out of nothing, something solid takes place. We yogis hold the view that the efforts of all, the blessings of the Almighty, and the guidance of this inner voice are a panacea for all the problems that beset us.

We all started the journey with the blessings of the Almighty. One should work with faith, confidence, devotion and perseverance.

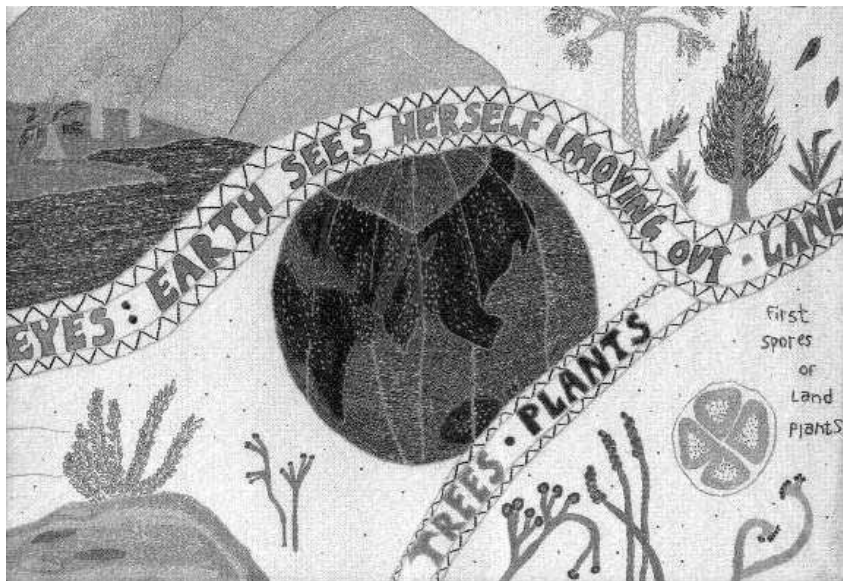
Every day in India I stayed as awake and present as I could cherishing each sacred moment in gratitude for being allowed to be there. I prayed to



bring back to our place in Texas, some of the spiritual power of India. The Native Americans speak of Power Places and they say that any place can become a power place when we pray, meditate and do ritual and ceremony worshipping the Great Mystery.

It's easier to live here in the country than in the city, but only as I allow it to be by becoming quiet and drinking in the silence, the peace, and the life force. And then I find I can surrender to the Divine and in the moment become one with Mother Nature, the Mahayogini, the great Guru.

Spring comes early in southeast Texas. And with it comes new buds on trees, baby birds and wildflowers. The Indian paintbrush and bluebonnets cover fields and roadsides in April. Last year we counted seventeen different kinds and colors of wildflowers on our property alone. Outside my bedroom window the trees will dress themselves in tender green leaves. Squirrels will leap from branch to branch, and birds of many varieties and colors will make their homes in the woods. After winter hibernation, the cycle will begin anew and the invisible world will once again manifest its beauty visibly in all its glory.



A Shamanic Journey In Search of Common Ground*

By Mike Bell

Shamans have existed in our part of the world for thousands of years. The way shamans get outside the limitations of their own frames is to take shamanic journeys. They can take shamanic journeys. They can travel high up into the galaxies or down into the nether world—the world where life begins, where species share common origins. On their journeys they transcend time, space and distance.

Some of the shamans are shape-shifters. They can change their form and take on the form of an animal or of another person. This power makes it easier for them to move around in the places they visit. For our journey today we are selecting a modern shaman who understands the traditional ways and can shape-shift into animal species or a human member of the community. But he can also shape-shift into a modern service provider and pass freely among public servants and caregivers in organizational life forms. He's some talented fellow.

There are two particular reasons for choosing a modern shaman as our guide down into the Land of Organisms and Life Forms. First, though shamans have many powers, their primary power is as healers. As one of our great experts on shamans, Mircea Eliade has told us, there are two kinds of sickness: physical sickness and spiritual sickness—the loss of soul. The shaman is a specialist in the latter. He sets off to find the lost soul or spirit and return it to its owner. As I move around communities in the North and in

* *Editor's Note:* Management consultant Mike Bell spoke to The Primary Health Care Conference at Yellowknife, Northwest Territories, Canada. His assigned topic was "Developing Communities and Health Care Systems." To bring together parties in conflict, he offered this foundation: "Those who want to discover common ground," he said, "must start by recognizing that they are standing on it." The ground he names is "Earth—nature—and the way it develops." He continued, "Communities and health care systems are life-forms, organisms. They are part of a living universe, a living planet. They develop the same way nature develops—according to the same developmental principles. He invited his listeners on a Shamanic journey.

and out of government departments or service organizations, I am often aware of a deep sense of loss of soul. Who cares for the caregivers?

The second reason for choosing the shaman as our guide is his strong sense of mission. The shaman exists for the community. The purpose of his journey is to acquire new knowledge and experience, to establish new relationships with other spirits, and to bring back this knowledge and these new relationships to benefit the community. We need new ideas and new ways of understanding this world in which we find ourselves. And somehow our quest to discover common ground between communities and health care systems is very much about developing new working relationships.

Now we meet him and the journey can begin. As the shaman comes forward, he invites us to pause for a moment. He asks us to reflect upon the journey we are about to undertake and to prepare our individual spirits to meet with other spirits that we will encounter in The Land of Organisms and Life Forms. He then begins to move, and move quickly.

As we follow him, we have a strong sense that we are falling—a psychic sense that we are traveling down through the layers of our own existence. We quickly pass through the frame of our personal experience, down through our family coding, down through the realities of our cultural coding, down through the institutional coding of our workplaces. When we come to a soft landing, we're in a very weird and strange place. We're back where life begins. We have arrived at the source of our own genetic coding, where our DNA has its origins. We are in a sub-atomic world surrounded by atoms and molecule electrons, protons and quarks, and waves and particles of all kinds.

As we get our bearings, we realize that we are surrounded by organisms and life forms all in various stages of development. There are two things that strike us immediately. First, everything is in a state of flux. Everything, continually, is changing. Second, everything is in relationship with something else and everything else. The whole of existence is organisms in relationship—creating relationships, maintaining relationships, dissolving relationships and moving on to form new relationships. Everything is interconnected.

We realize that we, too, are in relationship with all other species and with Earth itself. We can see now that we share a similar DNA with species that

were our ancestors. We recognize that the salt water that makes up most of our bodies is part of Earth's irrigation system. The minerals that make up the rest of our body are the same minerals as those that make up Earth's crust—minerals that came from the explosion that created our solar systems and planet five billion years ago. This is a real rush.

After giving us a little while to be overwhelmed by all the movement and relationship building, the shaman speaks. He says, "Observe the life forms and organisms. Can you see any common tendencies or patterns that all exhibit as they develop?"

At first we can see nothing—but when he shares with us his psychic vision, we can detect three dominant development patterns. First, we notice that all of the organisms and life forms, from the very moment of their existence, begin to differentiate themselves from every other organism. The human body starts out as a single fertilized egg, but soon the cells differentiate into brain cells, lung cells, kidney cells, cells of the central nervous system, foot cells and so forth. And this tendency to differentiate is consistent across all forms of existence. Galaxies differentiate themselves and so do species and communities and cultures. Aboriginal people are differentiated from people of European ancestry; Inuit peoples from Dene peoples, Dogrib people from Cree and Metis peoples. Nature, it seems, hates mono-cultures, but loves diversity.

The second thing we notice is that all life forms have some type of consciousness or self-awareness, in different degrees and according to different modes of being. Earth has its own mode of being and it seems to have a psychic awareness of its own existence, as do all other species and organisms. Life forms manifest this consciousness through their ability to self-organize. The rapidly expanding universe self-organizes and so does Earth with its changing seasons and cycles for the migration of species. So do the various organisms and social structures. It is this ability to self-organize that manifests life and guides the nature of development.

The third characteristic that seems common to all development is communion. All organisms enter into and sustain mutually enhancing relationships. These relationships create dependencies among organisms. Each organism is continually interacting with its local environment. The local environment—composed of the other organisms—is continually

interacting with the organism and yet things seem to hold together within some kind of self-imposed boundaries. Communion exerts influence over differentiation and differentiation influences communion.

As we watch this relationship-building process, we become profoundly aware that all development is co-development. The horse can't develop if the grasses don't develop; the fish can't develop unless the nutrients in the lake develop; the child won't develop unless the family develops. The company won't develop unless its customer base develops; the economy won't develop unless the markets develop; the health care system won't develop unless the community, which is part of the system, also develops.

As a group we share our findings about the patterns of differentiation, self-awareness and communion with the shaman. He responds, "You have just recognized what your world would call the strategic framework for all of existence. These three principles are not only the context within which life occurs—they are also the driving forces behind all development. All existence—from galaxies, to the earth, to the single cell organism—develops according to the principles of differentiation, self-awareness and communion. So do communities. So do health care systems.

"Now that you have seen the broad context of life" says the shaman, "let us observe more closely the life forms around us. You will learn and understand more if you try to think like an organism."

He now sends us off in small groups to wander around, observe, take notes and report back to the group as a whole. When we return, we compare notes and have a heated discussion, but eventually come up with what one person calls "The Six Down To Earth Principles of Life Form Development." Here they are:

The Six Down to Earth Principles of Life Form Development

1. Go with what works. Organisms are very practical. The fundamental concern of all organisms is their own survival—and they survive by continually anticipating the future in some way. They experiment. They do this by taking signals from their past and bringing them forward to modify their future. (Systems folks call these signals "feedback loops."). When organisms are ready for development, they put out feelers to new levels. If the feedback is positive, they move. If it isn't, they try something else. But

they always move from one stage to another by building on what works. What organisms don't do is develop long-range plans with imaginary long-term strategic objectives or speculative scenarios.

2. Respect the nature and pace of development.

Organisms always build from the ground up. They take signals from their local environment and move from where they are to places of greater levels of complexity. They develop at their own pace, and the pace of development differs even among similar organisms. Thus, the Yellowknife, Inuvik and Fort Smith Health Boards, to use a local example, may all find themselves at different stages of development. They develop at their own pace. They don't follow development criteria that are imposed upon them from the outside. They don't follow 5-year strategic plans, or 3-year budget cycles, or 1-year operational plans that are superimposed unilaterally by a central authority. When they try to do these things, they often fail.

Organisms always build from the ground up. They take signals from their local environment and move from where they are to places of greater levels of complexity.

3. Build capacity. Survival depends upon an organism's ability to grow and develop. Organisms do this in one of two ways. Either they build capacity within themselves by acquiring new skills and resources, or they build capacity by entering into symbiotic relationships, mutually enhancing relationships with different organisms. (Nature is full of such relationships—the pilot fish that attaches to the shark to clean out harmful bacteria, the bird that cleans the teeth of the hippopotamus.) As we stated before, all development requires co-development. But the main point about capacity-building is this. Organisms build upon what already exists. They start from where they are, not from where someone else would like them to be.

4. Respect self-organization. What an organism needs is order, not control, and most of that order comes from the organism itself through its ability to self-organize. It only exercises control over others when it is threatened. (The antibodies rush to fight the infection). Here's an important point: the focal points for self-organization are distributed throughout the system—even in complex adaptive systems. There is no central control mechanism, no central brain, no deputy minister or CEO, no queen bee that determines how order will develop. As organisms become more complex, the



order functions are further distributed throughout the system in individual cells and units.

The only way
organisms can
develop is to pass
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but some turbulence
is normal.

5. Learn to tolerate chaos. As organisms develop, they continually experiment. The experimentation often creates disturbance and what seems to be confusion. But as the Nobel Prize Winner Ilya Prigogine has pointed out, order seems to emerge out of chaos. When things are stable or in a state of equilibrium, there is no development. This is true of single-cell organisms, caterpillars that change into butterflies, teenagers and institutions. The only way organisms can develop is to pass through periodic transitions. These can be turbulent, but some turbulence is normal.

6. Learn to recognize the manifestations of spirit. All organisms seem to have the capacity to manifest life or spirit through four basic functions. These are distributed throughout the system. We can see these most clearly in human organizations.

- The ability to discern, animate and channel spirit—THE LEADERSHIP FUNCTION
- The ability to care for and restore spirit—THE HEALING FUNCTION
- The ability to protect and safeguard spirit—THE PROTECTOR/GUARDIAN FUNCTION
- The ability to acquire knowledge and pass it on to future generation—THE LEARNER/TEACHER FUNCTION

When we finished our work the shaman reappeared. We made our report and he smiled. We could tell he was pleased. Then he spoke.

“You set out on this journey to the Land of Organisms and Life Forms to discover the common ground between the development of communities and the development of health care system—so that both could develop together. You have done well. You must now bring your knowledge and wisdom back for the benefit of your communities and health care systems. What will you tell people back in your communities and in your systems? What have you learned in your journey through The Land of Organisms and Life Forms?”

We thought for a moment about our journey. One by one people began to speak.

“Let’s start thinking about the wholes—not the parts. Everything in the universe is interrelated. The health care system is a single, interrelated system that includes headquarters, regions, local communities, nursing stations, social services, non-profit agencies, housing services and the people we are serving. They are all part of the same system. We cannot make changes in one part of the system—say at the headquarters level or the community level—without impacting all parts of the system.”

“Let’s re-think the nature of communities. A community is not really a place on a map. It is really a network of relationships. Let’s place the emphasis back on the relationships. Let’s go back to the traditional aboriginal definition: “A community is an intimate relationship with all living things, both animate and inanimate. Every human community is part of the Earth community.”

“Let’s re-think what a healthy community is. It is not just a community with good services. It’s a community where people have an intimate relationship . . .

- with the spirit of the land (their primordial relationship)
- with their own inner spirit,
- with the spirit of their families, neighbors and culture,
- with the spirit of their organizations.

Let’s place the emphasis back on relationships. The services are important—but they are only a means to an end.”

“Let’s re-think what we mean by Primary Health Care. It is not just the point of entry into an array of services—health promotion or disease prevention, assessment, diagnosis and treatment. Perhaps it is the means by which we help individuals develop healthy relationships and assume responsibility for their own health, their family’s health, the health of their communities and the health of their local environment.”

Let’s place the
emphasis back on
relationships.



“Let’s place the emphasis back on effectiveness—on doing the right things—and put less emphasis on efficiency.”

“Let’s stop emphasizing what we can’t do—and start emphasizing what we can do. We are having successes, many successes. Let’s be like organisms. Let’s identify our successes and build on what works. Let’s share them with the rest of the network. Let’s also build upon our individual and group strengths, not on our limitations.”

“Let’s sort out our priorities. Let’s stop developing fancy multi-colored manuals that no one reads, carrying out constant corporate re-organizations, and creating expensive strategic plans that have a beard on them the day they are born. Instead, let’s teach people how to monitor activities, read and analyze feedback, become sensitive to small changes in their environments, plan for the short-term, make regular adjustments to procedures, and relate to one another.”

“Let’s learn to respect the reality of self-organization. Let’s accept a certain amount of chaos as inevitable—as a sign of growth. Let’s stop panicking and trying to control everything. Most of the time communities and systems don’t need control. What they need is order. And there is a difference.”

Let’s acknowledge and honor the signs of life and spirit that are all around us.”

“Let’s make the key word for Primary Health Care ‘network, network, network.’ And to build the networks the key word is going to have to be ‘trust, trust, trust.’”

“Let’s care for the caregivers—and help them to heal.”

“Let’s realize that the work we are all doing is essentially spirit work. For most people who do what we do, work is not a job—it is a vocation, a calling. We need to call up and share the spirit of healing.”

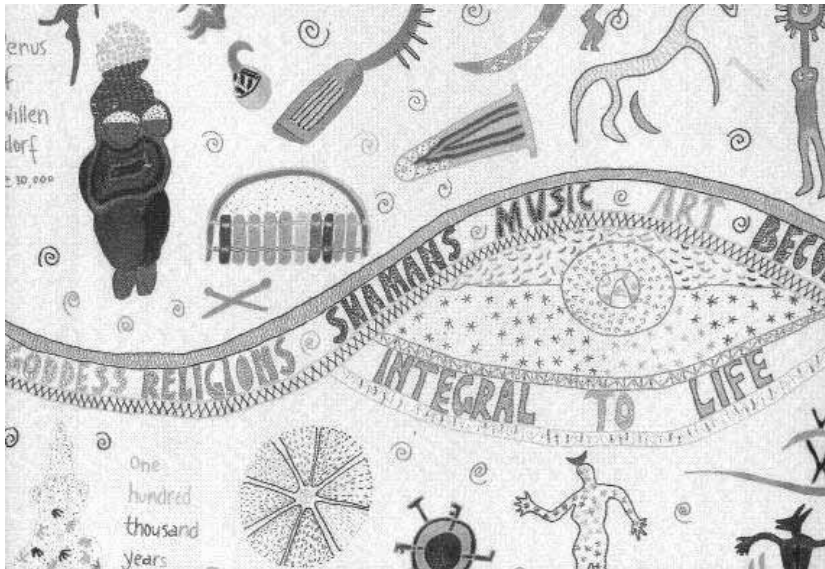
We finished with a sort of flourish. The shaman said nothing for a bit. Then he just smiled and nodded his head in agreement. After another slight pause, he said, “I want to leave you with a gift, a memento of our journey

through The Land of Organisms and Life Forms. It will be a reminder of where you have come from and where you will return to.”

He looked down at the earth beneath his feet and began to speak softly

Oh Great Spirit, our creator,
All over the world the faces of living ones are alike.
With tenderness they have come up out of the ground.
Look upon your children,
That they may face the winds
And walk the good road to the day of quiet.
Fill us with the light.
Give us the strength to understand, and the eyes to see.
Teach us to walk the soft Earth as relatives to all that live.

(Adapted from the Lakota Prayer in *Earth Prayers*)





Center for Ecozoic Studies

Statement of Purpose

The purpose of the Center for Ecozoic Studies (CES) is to contribute through education, research and the arts to the realization of the Ecozoic Era. CES emphasizes critical reflection, story and shared dream experience as ways of enabling the creative advance needed to bring into being a new mode of human civilizational presence, and also discerning the practical steps leading toward the Ecozoic. CES is dedicated to the principle that we live in a meaningful, continuously evolving universe. In such a universe, the Ecozoic Era is a process concept—not something to be arrived at, but rather something ever to be created. Its hallmarks are inclusiveness, interdependence, and appreciation; communion, differentiation, and subjectivity; and sensitivity, adaptability, and responsibility. It crucially involves more just and cooperative relationships among humans, as well as transformed relationships of humans with the larger natural world.

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A subscription to *The Ecozoic Reader* is a benefit of membership in CES.

Membership in CES means a personal commitment to research, education and artistic expression concerning the Ecozoic Era and how to bring it about.

Dues are \$25.00 US per year for individuals and \$35.00 US for families (outside of the USA, Mexico and Canada, add \$15.00 US). Sustaining memberships are \$125 US.

Membership forms and a description of member benefits may be found at www.ecozoicstudies.org; or contact CES as indicated on the back cover.

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is a women's cooperative in Geluksdal and Tsakane, South Africa. Kopanang means: gathering together, building bridges, making connections. The art in this edition is part of a collection of 31 embroidered panels measuring over 35 meters in length and one meter in height, depicting the wondrous story of creation and evolution.

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Submissions for Publication

We invite you to share with us your thoughts, poetry, art, music, dance, ritual, meditation, story or dream experience of the Ecozoic Era and your insights on how to realize it.

To submit an item for publication, send a printed copy of the item and the electronic file(s) on diskette (formatted for PC) to Center for Ecozoic Studies, 2516 Winningham Road, Chapel Hill, NC 27516 USA. Or, e-mail your submission to ecozoic@mindspring.com. Please send your contact information and a brief biography. Publication and copyright guidelines are available at www.ecozoicstudies.org.

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