

6) *Self-educating:* Earth literacy, formal and informal educational programs, centers, etc.

- Bioregional resource centers and programs, courses
- Curriculum development

7) *Self-fulfilling:* Integration of four-fold wisdom

- 1) Indigenous wisdom
- 2) Wisdom of women
- 3) Classical wisdoms/religions
- 4) Wisdom of science

Arts, celebration, ritual and festivals

C) Our goal is

- **to contribute to the transformation of the four dominant western institutions from their commitment to a "radical discontinuity between the human and other-than-human world" to a continuity.**
- **to do this on a local and/or bioregional level**
 1. **economics**
 2. **governance**
 3. **education**
 4. **religion**

THE ECOZOIC

*This material was excerpted from Chapter 13 of a draft manuscript of
The Universe Story by Brian Swimme and Thomas Berry.*

To attempt to live a former era's way of life is impossible. If we were to attempt to live as gatherer-hunters, for instance, the vast majority of humans would quickly perish. The Earth is incapable of sustaining billions of people in a gathering and hunting mode of existence. Nor could the modes of life in the Neolithic or the classical civilizations sustain the present population of humans. So too, to attempt to continue to live within the mode of industrial society of the last century will bring most of the Earth Community to ruin. What is required is the creation of a new mode of human presence.

By beginning with the awareness that we are the ones bringing the Cenozoic era to a close, we can begin to grasp the permanent nature of our situation. Quite simply stated, nothing we can do now can change the fact that the Cenozoic is ending. No amount of remedial action, no amount of political organizing. A decade or a century of work, even a millennium of the most dedicated actions could not bring that era back because the damage we have already inflicted has altered the Earth irreversibly. This needs to be accepted because unless the magnitude of the consequences of our actions is fully appreciated we will fail to respond with the order of creativity required. Quite literally, we are now living in a new biological and geological era.

While we are closing off the Cenozoic period, we have already begun shaping a positive and glorious future, what we are calling here the Ecozoic, an era of creativity available for both humans and the entire Earth Community if only we will immediately respond to the new transformations that have begun to open the way. Here we indicate the Ecozoic era's overall orientation. We need at the very least the basic directions in which to apply our energies. It is through a reflection upon the Earth Community as a whole that we arrive at these cardinal directions.

The Earth, within the solar system, is a self-emergent, self-propagating, self-nourishing, self-educating, self-governing, and self-healing community. These are the activities of the Earth. These are the basic patterns of work for the Earth. To reinvent the human as an individual, as a member of a human

society, as a member of a particular biome, and as an Earthling, we need to reinvent our basic patterns of work in such a way that the workings of the Earth Community are mutually enhanced.

Earth a self-emergent community

The creativity residing in the universe, as well as in the Earth considered as a separate entity within the universe, is real. We wish to navigate between two extremes: on the one hand, there is the conception of a creativity of Earth that is unrelated to the creative principle of the universe as a whole; on the other hand there is the conception of an Earth process that is entirely manipulated by a transcendent principle. What we strive for in our presentation is a sense of self-emergence that allows for an immanent creative principle that is neither independent nor manipulated. It is an ultimate creative principle.

A large portion of the work of the medieval thinkers, and the great bulk of Thomas Aquinas's work in particular, was concerned with establishing the reality of the universe in itself and in its functioning. We are working out of that conception with respect to the Earth as a separate entity. The Earth's activities are the Earth's activities—what Earth brings forth depends on the innate power of self-assembly possessed by the Earth.

Thus it is that rising out of the molten rocks are the continents, the forests, the meadows, and the human cities. Rising out of the primordial seas are both topsoils and power stations. In such work as architecture, technology, transportation, energy, and housing, humans enter directly into the self-emergent dynamics of the Earth in its most physical dimensions. The task before us is easy to state though its accomplishment will require a labor of such large proportions that the labor needed for the building of Rome will seem minor in comparison: *We need to bring forth our own physical structures in ways that enhance the physical structures of the entire Earth Community.*

To use the title of a book by Peter Berg, we need not cities but *Green Cities*—places of habitation for many different species, not places that are deadly for all but elite humans and their parasites. We can begin with a selective replacement of those structures and technologies that are most obviously ruinous to the Earth. Above all would be the creation of more biocentric transportation, architecture, and appliances.

Perhaps no machine is more responsible for Earth destruction than the car. Rather than the two dimensional sprawl snarled with highways that surround every city, we can look for three dimensional cities tied together with light rail transportation. Many of the systems of life within the city could be quickly transformed. As light rail was made available, half of all the streets could be removed to allow the rich topsoil buried under asphalt to provide foods. The rooftops of all the buildings could be used for gardens, as well, and bathwater would not be shunted into the sewers but could be used for the city's gardens. As the transformation continued, the natural creeks of the city could be brought back from the sewer drains and would become a sparkling presence throughout the city, safe even for salmon returning from the oceans. The disappearance of the automobile from its position of dominance would be accompanied by the appearance of plazas and parks throughout the city where a more human interchange could be carried on.

As the waste inevitable with energy-ignorance is replaced by the efficiency of energy-in-intelligence, the windows of our buildings would be treated to trap the infrared radiation of the Sun, drastically cutting back on our fuel needs. Entire walls of buildings would be banked with photovoltaic cells enabling even the northern cities to do away with the costly dependence on heating fuels. Machinery would be constructed with the efficiency of the natural world where each erg of energy is cherished and used. Even today energy efficient architecture is available that would cost no more than traditional construction and would cut energy requirements in half. Such efficiency will enable the industrial society to do away with its addiction to ever increasing fossil fuel consumption, and will eliminate nuclear energy altogether.

From the beginning of the universe, parts come in community. Each part is bonded together by an inner principle. The cells of the leaf and the cells of the root hairs are involved with a single organizing activity. So too the rocks of the ocean floor and the oxygen of the stratosphere—each part enters and participates in a bonded way with the community of beings in which it emerges. Thus it is that biocentric engineers will manifest this bonded organizing principle in the very works they produce, naturally in harmony with the ongoing enveloping work of the Earth. So too, with biocentric architects and with biocentric technicians as well.

Earth as self-propagating community

To understand the self-propagation of Earth, we need to realize that the Earth never gains weight. When life was invented, when life climbed out of the seas, when the forests covered the continents with billions of tons of wood, when the humans exploded from one million to one billion to five billion, the Earth never gained an ounce of weight. The Earth simply changed form.

In each moment a million new faces emerge in the Earth's existence. Each of these is the Earth in its unique expression. The Earth is continually changing its face and has been doing this for nearly five billion years. The question humans must ask, with respect to their own propagation, concerns this primordial self-propagation of the Earth and Sun. *How are we to participate in this dynamic in a way that will enhance the ongoing self-propagation of the Earth Community?*

Here at the end of the twentieth century, starvation is greatest in Africa which has half a billion people—fifth percent of the entire Earth's human population today. Kenya, if it continues in its present growth rate, will in a century's time have as many people as all of Africa today. Such explosive rates of growth will undoubtedly lead to vast suffering within both the human and non-human worlds, for such propagation is taking place without regard to the dynamics of the whole planet.

Earth is a community where each species has its paper habitat within a balance of life forces and sacred needs. Such habitat needs to be granted to each species as its sacred right. In order for this balance and for these needs to be met and maintained, each species must respect certain basic limitations on its activities. If any one species oversteps its limitations, the entire community is made to suffer. The human species is beginning to learn to envisage itself within the overall complex of the interacting and interrelated Earth Community. Only by establishing a sense of participation in the enveloping community, by granting other species their proper habitat, and by limiting human activities when they threaten the functioning of other species, can the human groups adjust themselves in ways beneficial to the Earth Adventure as a whole.

With respect to human numbers, the task is rather clear. If we wish to establish a mutually enhancing presence on the Earth, we need to stem the tide of human increase. The World Resources Institute's analysis suggests that to slow the explosive human growth, we must pursue two related goals, easy to state but massive in their requirements of human imagination. *First*, we need to work towards providing a full spectrum of educational opportunities for women and children, especially within the

developing world. *Second*, we need begin establishing means of economic independence for women, again especially within the third World. Not only in the historical example of the industrial societies, but in test cases within the developing world, where women and children receive an education, and where women are able to establish themselves within the financial realities of the societies, the propagation of humans slows.

Earth as self-nourishing community

Scientists develop definitions of the universe based on activity, on energy, on action. Matter itself shows its nature by what it does. In defining the Earth within the solar system we need to think in terms of what the Earth does. Most fundamentally, the Earth within the solar system nourishes itself. All nourishment is the Earth/Sun system consuming itself.

Any discussion of economics must begin with this basic primordial

The sunlight born of stellar nuclear fusion becomes green leaf and root and flowering fruits, that become the flesh and blood of the animals, that become the constellated genetic strands of the prokaryotes, that become the elements of the air, that turn again into the leaf lit by the Sun. Oak trees and whales and penguins and the grasses sprout into existence through participation in these cycles of self-nourishment that form the Earth/Sun system, where what is waste for one species becomes nourishment for another, so that the circle of life repeats endlessly in an unbroken sequence of transformations.

Any discussion of economics must begin with this basic primordial perduring economy of the Earth. Any use of the word *economics* that does not take the Earth and Sun as the basic context of meaning is too far removed from reality to serve us in the long term. By divorcing human economic activity from Earth economic activity, industrial societies have broken ancient patterns of Earth nourishment. The great bulk of our difficulties stem from this cosmological error. In an autistic perspective, industrial humans create a waste that is nourishment for nearly no other species and that instead renders the Earth dangerous for all life.

The fundamental economic statistic of our world is not the Dow Jones Average or the Gross National product or the prime rate for lending or the federal deficit or the yen-dollar exchange rate; the fundamental economic statistic is the Gross Earth Product, the sum total of the goods and services

produced annually by the entire Earth Community. We need to begin with a recognition that the fundamental corporation of the world is the planet Earth; the fundamental commercial enterprise of our solar system is that of the Earth.

Our task to evoke the Ecozoic era is simply stated. For health and prosperity for all, we need to integrate the human economy into the Earth economy in an indefinitely sustainable manner. If we learn to do this, the powers of the universe, the powers of the Earth, the powers of the Sun will provide us with the nourishment we require for our deepest fulfillment as a community of beings.

Our task is simply stated. We have only to learn how to nourish ourselves within the cycles of nourishment of the Earth and Sun. Nothing could seem more obvious, and yet for the thousands of years of civilization, nothing has been so difficult to achieve.

Wes Jackson states baldly that the five thousand years of agriculture is the most disastrous event to have occurred to the planet over the last sixty-seven million years. Farming humans have eroded fifth percent of the Earth's irreplaceable topsoil. Over the next couple decades another thirty percent will be gone. In only a few centuries we have devastated the North and South American continents. In fact, as a species, we are left with three or four percent of the Earth's surface to sustain ourselves and future generations. The conditions of the soils after agricultural humanity must be compared to what we would expect to find had a nuclear winter hit the planet instead of Homo sapiens.

Though we have not found an agriculture that preserves its essential source, we have at last recognized our difficulty, and can articulate what we must aim for: a regenerative agriculture. Important endeavors have already been established to explore these directions, as with Wes Jackson's Land Institute in Salinas, Kansas and Robert Rodale's Regeneration Project in Emmaus, Pennsylvania, and Bill Mollison's Permaculture Project in Australia and Masanobu Fukuoka's One Straw Revolution in Japan. The search is for techniques of interaction with the biotic communities that enhance both the human and the non-human components. The aim is a biotic community that provides nourishment for humans and other beings with such complexity of interaction and self-sustaining capabilities that actual planting of seeds will take place no more than once every twenty years.

Although the creativity required to actualize the dream of a regenerative agriculture only now begins to show itself, we can already state in a succinct way exactly what is required for success.

First, our use of renewable resources must be within the carrying capacity of the region. In this way, at the end of each season, the fecundity of the region will remain sufficient to carry forth in the next season. Second, each essential non-renewable resource must be recycled. This means each such resource must be carefully monitored, tracked, safeguarded and carefully brought back for a reconditioning that will enable further use, both for those living and those yet to come. And third, all wastes produced must be within the limits of the absorption capacity of the region. Nothing ever vanishes, not in physics, not in psychology, and not in ecology. The wastes are not simply taken out of the city or the factory; they are taken into the ecosystem. Those elements whose degradation is necessary for the production of foods must be kept within the regenerative capacities of the region itself, for then what is degraded can be transformed back into what is rich in possibility.

Already the future is clear in terms of certain basic transformations. We will have to shift away from mono-cultural, energy-intensive petrochemical techniques to a new emphasis on mixed crops, local markets, and permacultural or semipermacultural food production. Subsistence gardening will be carried out by large portions of the population, not simply as a way of food production but as a way of education and celebration with the primary powers of the universe. Almost every region of the Earth, even urban areas, would become relatively self-supporting in terms of food, and in this security will come true security.

For these three principles and these transformations to govern agriculture will mean a fifty percent reduction in agricultural production in the developed countries; obviously the cost must be born by the whole society and not the farming community alone. Furthermore, such a drastic reduction in food production means that we will no longer be able to afford raising the vast quantities of food required to feed our livestock. The dependence of industrial societies upon meat consumption must be replaced by diets strong in grains and vegetables and fruits.

Finally, for the developing countries to feed themselves in the future they will have to turn their land away from cash crops such as coffee and sugar beets and commit their land to primary food production. At the present time the developing world is unable to focus on food production because they need to meet the interest payments on their debts. The situation will find a creative resolution when northern countries come to realize that these debts are simply extensions of the colonial servitude of last century, that these debts are driving Southern peoples to destroy the jewel spots of the planet,

and that for a healthy and vibrant Earth all such debts must be reduced or excused altogether. Central to this plan for soil regeneration is the needed land reform that will provide peoples of each region a reasonable access to common lands for cultivation. In the majority of developing countries, a small clique controls the arable land and forces its use for cash crops; until this land is made available for subsistence cultivation, the degradation of the Earth Community will undoubtedly continue.

Our reinvention of economics begins with the observation that the planet Earth has organized itself within economic systems throughout its existence. The economics of the squirrel family, of the whales, of the woodpeckers, of the grazing mammals, even of the oceans, and of the Earth and Sun considered altogether determine much of the activity of Earth history. We need to begin with an awareness of these many non-human economic systems and insist that our own economic thinking and acting fit into these larger and encompassing systems of action.

If we picture the human economy within the Earth economy, we have a simple flow that begins with the Earth, goes through the human processes, and returns to Earth again. Resources are taken from the Earth, transformed by the manufacturing process, degraded by the consuming process and finally discarded by the pollution process.

So long as the Earth part of this diagram was seemingly infinite in comparison to the human processes, we could ignore this whole systems point of view. By now that the humans are effectively harvesting forty percent of the Earth's productivity, and we are destined to harvest perhaps eighty percent in the future, we can no longer avoid bringing the Earth and its primary processes into our thinking. If we train our three principles upon economic processes, what would the results be?

To insist that human economies use no more than the region's carrying capacity and that they produce no more pollution than can be absorbed by the region, is to insist upon an economy where the throughput of the human systems reaches a constant. The immediate consequence will be an astounding increase in efficiency and perdurability. By contrast in today's economy, overnight consumption is considered a good. The sooner consumers use up a commodity, the sooner will they return, buy more, and add to the corporate profit. But if the amount of raw materials available each year is set, the total volume of commodities is set as well; those commodities that will last the longest will be in greatest demand.

The transition from the extractive economy of today's societies to the sustainable economies of the future will involve dislocations of vast proportions undoubtedly. But in time the resultant prosperity promises to be a great one. A fixed population of humans, with a steady supply of long-enduring goods, within a social order that places limits on individual consumption, is a world where each human is provided with the fundamental needs for life and development, a world where the dominance over the weaker elements of society and planet has been greatly reduced, a world where the extremes of economic stratification have been mitigated.

Earth as self-educating community

Learning via evolutionary process is a self-educating process. It is precisely the educational dimension of Earth that provides Earth with such radiance and splendor when compared to any other planet. This genetic probing and sensitivity and capacity for remembering can be considered our supreme power; and as humans with our prolonged period of learning, we need especially to reflect on the nature of education which takes place as part of a community process.

When any member of a species enters the Earth's life, the first lesson learned is the story of the place. This includes awakening the learning that is already contained in the genetic material, as well as the receiving the learning that is passed on from elder to youth, as well as probing for insights and knowledge that are original with the particular being. Such conclusions concerning education are true for all five kingdoms of life, the primary education taking place in the plant world or the prokaryotic world is learning the story of the place, an education process that extends through the generations but that eventuates in a superb competency. A plant will tell its lessons by the very shape of its leaves.

Education for humans must begin with the story of the place, which is the universe. *In general we can identify education with learning the story.* For once a human understands the story and knows how to fit into the story and enhance the story we have a fully mature human being. Besides the intellectual learning, our education needs to include a more direct approach to the universe. Precisely through contact with the deep mysteries of natural places—the waterfall, the smell of autumn, the branching lighting strikes, the look of the disapproving elder, the mating of the animals, the joy of a child entering water for the first time—precisely through such contact do we attain those qualities that make us human.

Much of our present difficulties might be due to the mechanistic type environment of the industrial cities which stifles normal educational processes by depriving humans of vital contact with fresh and healthy beings. Without a participation in vibrant communities of beings, a stunted imagination is the result, a stunted moral and physical status is the result. Instead of fresh contact with healthy Earth Communities, we cage ourselves in artificial and oppressive conditions of existence, and distorted personalities are the results, ones easily victimized by drug experiences that kill the pain of deprivation in the youthful psyche. Without involvement in the central mysteries of Earth's vitality, education in its deepest cosmological meaning cannot be evoked. No greater need exists within the Earth Community than the establishment of education contexts where the promise of the human and thereby of the Earth Community as a whole can be evoked.

One way to speak of the education process is via the three basic ordering tendencies: differentiation, subjectivity, and communion.

Young humans need to have their capacities for enhancing the story drawn out fully. They need to concentrate on certain competencies that are required by the story and that are communicated to the person through an encounter with the voices of the place. The first task of education is differentiation, through identifying one's role in the great story of the Earth and universe.

Humans need processes for deepening interiority. We need to break out of our autism and establish a direct contact with the surrounding Earth. Sensitivities to sound and to place and to vital rhythms of the place need to be enhanced. In addition to a more responsive awareness, young humans need powers of critical reflection as well so that they are not drawn into the fanaticism of the moment.

Humans also need to establish deep and primary bonds of communion experiences, not only within the lifeworld and within the entire spectrum of Earthlings as well. They need to learn how to evaluate the great obligations humans have to one another as well as to the entire lifeworld. Only by developing a keen sense of bonded-ness can industrial humans break out of our irresponsibility and into a deep respect for the Earth Community. We must develop education processes that will bind humans into a bonded community with the living, with the nonliving, with the great dead, and with the vast numbers of still-to-come. By doing so a young human enters into the Great Journey that is the essence of our reality.

Earth as self-governing community

Throughout the modern period, the Western political project consisted of sovereignty for the nation-state, and liberty for the individual. Such goals only make sense within a human world structured by monarchies. The sovereignty of the state and the individual is not the issue today. Rather, it is the integration of the human species with the enveloping Earth Community, and an integration that begins with a comprehensive respect for the sovereignty of each species within the lifeworld.

Our reinvention of human governance begins with the patterns of governance within the Earth system as a whole. These are to be respected as the ancient laws that guided Earth throughout its turbulent periods of trial and error. Our laws must fit into Earth's laws. Every species must be considered an independent and free nation with a fundamental right to its own habitat and its own patterns of survival.

The natural world before the human emergence was a totally participatory community of qualitatively different species. *Each species governs the whole and is governed by the whole.* Such an ordering can be taken as a form of government for the human world as well when humans see themselves already belonging to a community with its own intrinsic laws and patterns of behavior. When human governance is thus integrated with the governance of the natural world we will have the beginnings of a biocracy, and a geocracy

Primal peoples established such biocratic and geocratic patterns of governance by working within a cosmological understanding of their world. The classical Chinese too had a form of governance that could be considered geocratic: the human was not a being isolated from the governance of the natural world. We have already learned some of the essential ideas of democracy of the natural world. We have already learned some of the essential ideas of democracy from the American Indians and codified them in the constitution of the United States and from there throughout the modern world. We need deeper learning from indigenous peoples of the world for establishing a new biocracy and geocracy that will function effectively in the contemporary geopolitical scene.

In our time, the development of a biocracy and a geocracy is found within the bioregional movements of the planet, where humans are attempting to work out forms of activities appropriate to and beneficial to the entire health of a natural region. The great volume of human governance will take place at the level of the biome, where the natural flow of energy and matter over the planet's surface finds its inherent boundaries. Here at the biome is the proper setting for disputes and for litigation and for assigning sanctions. In all this thinking we need to understand that our basic need is for more biocracy in every sphere of political life, participatory governance that is not just for the people but for the Earth Community altogether.

Earth as self-healing community

We can begin by stopping the flow of poisons into the systems of life of the Earth. The second step is the restoration of damaged ecosystems and damaged human communities.

Each community of the Earth carries within itself the special powers of regeneration. We can see this most dramatically in the 1883 explosions at Krakotoa: resplendent life systems, devastated by the violence of the Earth process, instantly bring forth the powers of regeneration to restore a garden spot of the planet. So too with the forests damaged by the great storms, or the plains overrun by the locus clouds, in all such destructions the life community adjusts itself, reaches deep into its regenerative powers, and heals itself.

The healing of the Earth Community has two basic dimensions that are intertwined. There is the need for the healing of the Earth as a whole; and there is the need for the healing of the human, considered as a particular species. In both of these related endeavors, the context for the healing is the universe as a whole. The powers of healing, the powers of regeneration, the powers of renewal are rooted in the primordial realities of the universe, the Earth, and the human species. Any approach to healing that forsakes this ultimate context needlessly cuts itself off from the most profound source of all healing. The indigenous peoples, such as the Navajo, understood this point fully and provide for us leadership in this work of understanding, the regional, planetary and cosmic context for healing.

To heal the Earth, two obvious paths offer themselves. We must say No and Yes: No to the processes that are ruining the planet; Yes to the processes that assist with the planet's regeneration. We must say No to the poisons that industrial processes pour into the Earth. So long as the patient is inundated with

new poisons each second, the healing powers are crippled in their efficacy. We must say no to the processes that are crippling the planet's ecosystems. The instant we stop our assault on the Earth, the regenerative powers of the Earth will be able to perform their work more efficiently.

Besides direct action to stop the destruction, we must also provide restorative assistance to the Earth Community in its healing processes. Many of Earth's systems are so extensively damaged that they require sustained assistance from the human community for any sort of vibrant well-being. This work need not be considered an intervention on the part of humans, for humans with a biocentric consciousness become a mode of the Earth process as a whole, and assist in the healing of Earth as another essential component in the regenerative event.

Already, great work has been done and more is underway. Particular species, once threatened with extinction, have been brought back to sustainable numbers. Wetlands previously poisoned have been restored to health. Forests in Costa Rica have been preserved and regenerated. In India some ten billion trees have been planted. Much of this work has been the result of individual initiative, and is praiseworthy and efficacious. And then humans unite on a species level and set themselves on the path of restoring the Earth Community, a great flood of healing energies will carry us forward into centuries of the most deeply satisfying and pleasurable work.

In addition to the work of restoration, we need to restrict in an absolute sense all activities pushing towards the elimination of the planet's wilderness. We need to set off areas where non-human nature is allowed to evolve along its own lines, free from intrusive human management, even of the most enlightened sort.

Leading ecologists have been making the point for decades now—we need to have pristine areas if only to use them as ideals toward which our restoration aims. It is not that human management is in itself an evil force, or that non-human nature is somehow superior to human nature. It is rather a simple recognition of the vast ignorance of humanity concerning the intricacies of an ecological community.

This ignorance is understood only by those humans—ecologists—who have spent the time necessary to glimpse the full complexities of an ecosystem, a vast complexity yet outside all human awareness.

The healing of the human at the species level begins with a recognition that health comes from the community and is sustained by the community. Too much of our medical understanding has focused on the health of the individual. What good does it do to restore the health of an individual human if we cannot return the human to a healthy community? This comment applies to physical as well as to mental health. What good does it do for a psychotherapist to assist in the restoration of the emotional health of an individual, if the individual can only be returned to a sick world? To be healthy, coherent individuals, we must have a healthy, coherent community and planet to abide with.

Humans need to eat foods that can evoke health. The foods created by the Earth awaken the health of a human; the foodstuffs invented by industrial processes do not awaken the deeper dimensions of health and often activate degenerative processes within the body. Humans need physical activity for health. The recent invention of a life that does not include human movement, but is a caging within artificial and technological devices, does not evoke or sustain health. Nor is the addition of ad hoc health clubs or exercise clubs truly satisfactory. Most desirable would be a way of life where walking and physical work were part of one's basic activities. Our unconscious ideal for our human lifestyle is the machine: blue collar workers with the monotony of their actions have assembly line machinery as the model of efficiency; white collar workers, with their attachment to desk, and communication devices, have the computer as the model of intelligence and efficiency. A healthier ideal for human lifestyle would be the animal in movement—a lion, or elephant, or dragonfly. We were shaped by the movements of the Earth, and are healthiest when we are participating directly in the cosmological events of the seasons.

Humans need a rich cultural life for true health. The monocultural productions of our entertainment industries, however necessary to distract the bored and dissatisfied workforce, fall short of what humans require for vibrant health. Most desirable would be a cultural life rising out of the biome itself, where each region flourished in its celebrations of the sacred dimensions of its place. Most essential would be the participation of each person and each community in several aspects of cultural life. Culture is lived, not watched. The spectatorship of modern industrial entertainment can never bring forth healthy humans. In the future, the individuals we call geniuses will be precisely those persons talented enough to create cultural forms enabling all to participate in direct and joyful celebration.

People working for economic justice in the inner city need to see their work within the context of the self-healing of the universe and Earth. When they do, their efforts will become part of the energy that greens burnt –out forests and that evokes flowers out of supernova explosions. To work for justice in Brazilian favellas or industrial ghettos is to participate in the deep self-healing energies of the cosmos.

In our four million year journey as hominid primates, we have encountered both tremendous difficulties as well as soul trembling pleasures. Our recent industrial part is difficult to evaluate in its total meaning and effect, but certainly it has inflicted vast suffering upon the entire Earth Community. Even so, we can now see the profound regenerative energies asserting themselves in the soils and the in our minds and in the atmosphere and in our hearts. The Earth is damaged, the human species is damaged, but the powers for renewal are at hand. What will we be like when we find ourselves in a healthy world again? What will humans be like when they are raised in a health community? What is it that we hope for? What dream draws us into the regenerative work? The fulfillment of the Earth Community; the fulfillment of the human. A celebration of the joy that is the meaning of existence. It is towards such deep issues that our final chapter turns.