

A Flower¹

The sun points the way. You're traveling the "high country" of northern Idaho and have just come over a hill flanked by thick lodgepole pine on either side. It's been a long journey, a journey that has taken much effort to reach this certain place. There, in a small clearing of grass, the red of its petals shines bright in the sun's light.

The shape of the perfectly formed petals, the color of unmatched red, the image of beauty that bursts forth through the grasses: all is God-inspired. You stand there, without a word exchanged. But in the silence you've heard, oh so clearly.

After a moment, or was it longer? a glance down, a glance to the sky, and with hand raised and voice, you give "thanks," and continue on through the trees.

* * * * *

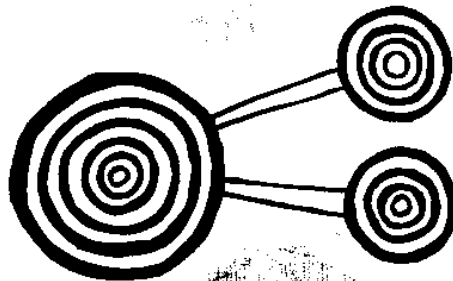
Along with a host of others, you've left the camp, leaving behind the women and the uninitiated and all vestiges of the mundane, your spears and carrying bags, and your social names. You're on a solemn journey to your birth place. Single file, without a sound, you and the others walk in awe. Although it's not far into the desert, few ever visit without invitation.

¹For additional background, see Bell 1983, Berndt and Berndt 1977, Emerson 1985, Frey 1987, Plato 1968, Spencer and Gillen 1899 and 1904, Stanner 1959-63, Strehlow 1947, Thoreau 1960 and Tonkinson 1978.

Your group has arrived, and all immediately begin to clear the ground of the debris and stones that have accumulated since last you were here. The area of some twenty paces is laid smooth. Several go to a nearby rock outcropping and, from the cache, bring out with great care the churinga boards. Some are as long as an arm, most much shorter, all of wood, each richly carved with the signs of the clan ancestors and of their adventures. Sitting in a circle on the cleared earth, the churingas are passed to each of your group in turn. Each holds the oval-shaped boards close, rubbing them against himself.

* * * * *

Ground Painting
of the Wallunqua (Snake) Totem
(Warramunga Tribe, 2 meters long)



* * * * *

A couple of the older men begin opening the veins of their arms, letting the life within fall upon the smoothed ground and upon a few other men who sit to one side of the circle. It's a gift of blood. When blood fell from the veins of the ancestors, human sons emerged

out of the ground. Song has begun; the words of the ancestors, their names, their birth places, and their adventures are heard in verse. Upon the base of blood is added the white of down feathers and of pipe-clay, and the reds and yellows of clay ochres. The patterning of feather and ochre is as the designs on the churinga boards; and the ground and the men are no longer who they may have been. As the sun sets, a fire is lit. The songs continue. All sense of ordinary time and place is replaced.

In the flickering light of the stars and the fire, those who are painted will dance out the adventures of the ancestors. And the ancestors have emerged. It's they who move about in their ancient landscape. Those who have journeyed have journeyed far, as you now will witness and participate in the *Alcheringa*, the Dreamtime

* * * * *

The earth is a barren plain...

There are no mountains,.

no rivers,.

no animals,.

no plants...

It's a dry plain,.

without light..

All is in perpetual darkness,.

without form...

Night oppresses the earth.....

There's no life,.

no beginning,.

there's no death...

The sun,.

the moon,.

the animals,.

the plants,.

all are resting in a state of half-dream,.

under the earth,.

in a perpetual eternity...

They do not stir.....

On the surface,
 scattered about,...
 are half-developed infants..
They do not grow,
 they do not die..
All exist in a perpetual eternity....
Karora is one of those in perpetual sleep.
On the earth that covers him,
 is a bed of red,
 of purple flowers.
Near his head towers a churinga pole.
Below this surface of flowers,
 of churinga,
 lies the bandicoot ancestor....
Without warning,
 all over the earth,
 the awakening happens..
Karora begins to think,
 to desire,
 and from his navel,
 from his armpits,
 bandicoots burst through the
 earth,
 and spring to life....
Now Karora himself breaks through the crust of earth,
 the place where he had laid becomes a soak,
 filled with the sweet dark juice of the honeysuckle
 buds..
All over,
 the ancestors emerge from the ground,
 born out of their own eternity...

They are the kangaroo,

the emu,
 the opossum,
 the crocodile,
 the moon,
 the wallaby,
some are men,
 some are women,
all are in various shapes,
 various appearances.
They are human,
 they are animal,...
 as one....
The sun floods the land in light....
Slowly the eyelids of Karora open.
He is yet not fully awake,
 he thinks,
 he hungers...
All about him is a mass of bandicoots.
Two are taken.
With the heat of the sun as fire,
 he cooks,
 he eats these bandicoots....
His thoughts now turn to a helpmate.
The sun hides its face under a veil of hair-string pendants,
 vanishes.
Karora falls asleep...
While asleep,
 from the armpit of Karora,
 emerges a bull-roarer,
 that which gives voice to the ancestors...
In one night,
 the bull-roarer grows to a full-grown young man,
 the firstborn son..
When Karora awakes,
 he sees his son lying beside him.
Dawn breaks....
The son awakes,

he dances around his father,
the father sits adorned in his ceremonial designs
of down feathers,
of blood.

The first ceremony is held....
That day the son kills some bandicoots.
They had been playing peacefully.
The meat is cooked under the sun's heat.
Karora,

his son eat the meat of the bandicoots...

The sun passes,
sleep falls upon Karora,
his son..

As Karora sleeps,
two more sons are born out of his armpits.

The dance is held....

This happens for many days,
many nights,..

soon there are many sons born out of Karora...

The many sons have a great hunger,
and soon devour all the bandicoots,
they who had themselves sprung from Karora...

In their hunger,
Karora sends his sons on a long hunt,
to search for food.

There is tall grasses,
trees,

the sons search for the bandicoots.

In the great expanse,
no bandicoots are found,
the sons return to Karora,..
hungry,.
tired....

Suddenly,
a sound comes to the ears of Karora,
to the ears of his many sons.

* * * * *

Painting from Aryes Rock
(7 meters in length)



* * * * *

It is a sound like that which comes from the whirling of the bull-roarer...

Karora,

his sons search for the sound,
stabbing at all the bandicoot nests with their
sticks..

They search,

they search...

Something darts up..

is gone....

It is a sandhill wallaby.

The sons throw sticks,
 hit the wallaby,
 break its leg.
 It limps off giving words in song,
 "I've grown lame.
 I'm a man as you are,
 not a bandicoot!" it sings....
 Karora,
 the bandicoot brothers return to their soak,
 they sit at its edge in a circle...
 From the east,
 comes a great flood of sweet honey from the honeysuckle
 buds,...
 washes the bandicoot ancestors back into the
 soak...
 The rocks,
 the stones that you now see scattered about the soak are
 the undying bodies of the bandicoot brothers.
 At the bottom of the soak lies,...
 Karora himself,
 fast asleep....

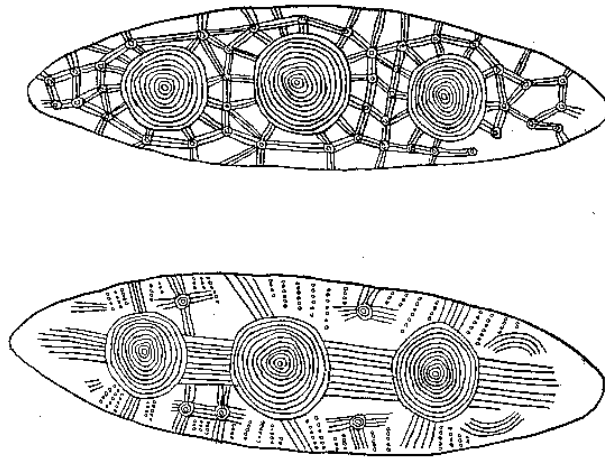
* * * * *

Words of Karora have been heard and sung. Images of Karora on churinga boards and on ground and body paintings have been viewed and worn. And you have danced with Karora and his Bandicoot Sons, and in the *Alcheringa*.

After the churinga boards are placed back in their cache, the designs on body and ground removed and the songs stored in memory, the short journey to camp is made. Each who had just participated is secure in the understanding that the wisdom and spirit of Karora is alive in the Dreamtime, and, as it is alive, so are you. The world is made.

* * * * *

The following illustrations are the reverse sides of a churinga board. The board is from the Aranda (an Australian Aborigine people) and represents the Frog spirit, an expression of the *Alcheringa*. The wood carving is 39 centimeters in length. On the churinga, the three prominent sets of concentric circles are the celebrated gum-tree at the sacred site near Hugh River. It is out of these trees that the frog comes forth. On the first side (top), the double concentric circles are the bodies of small frogs having just emerged from the trees. The lines connecting them are their limbs. On the reverse side (bottom), the three gum-trees are again seen. The series of lines extending from them are their roots. The smaller concentric circles are less important gum-trees with their roots. The dots are the tracks of the frogs as they hop about in the sand of the river bed.



* * * * *

In the beginning of creation, when God made heaven and earth, the earth was without form and void, with darkness over the face of the abyss, and a mighty wind that swept over the surface of

the waters. God said, "Let there be light;" and there was light; and God saw that the light was good, and he separated the light from darkness. He called the light day, and the darkness night. So evening came, and morning came, the first day.

God said, "Let there be a vault between the waters, to separate water from water." So God made the vault, and separated the water under the vault from the water above it, and it was so; and God called the vault heaven. Evening came, and morning came, a second day.

God said, "Let the waters under the heavens be gathered into one place, so that the dry land may appear;" and so it was. God called the dry land earth, and the gathered waters he called seas; and God saw that it was good.

Then God said, "Let the earth produce fresh growth, let there be on the earth plants bearing seed, fruit-trees bearing fruit each with seed according to its kind." So it was; the earth yielded fresh growth, plants bearing seed according to their kind and trees bearing fruit each with seeds according to its kind; and God saw that it was good. Evening came, and morning came, a third day....

God said, "Let the earth bring forth living creatures, according to their kind: cattle, reptiles, and wild animals, all according to their kind." So it was; God made the wild animals, cattle, and all reptiles, each according to its kind; and he saw that it was good. (Genesis 1:1-13, 24-25)

* * * * *

So God formed out of the ground all the wild animals and all the birds of the heaven. He brought them to man to see what he would call them, and whatever the man called each living creature, that was its name. Thus the man gave names to all cattle, to the birds of the heaven, and to every wild animal; but for the man himself no partner had yet been found. And so the Lord God put the man into a trance, and while he slept, he took one of his ribs and closed the flesh over the place. The Lord God then built up the rib, which he had taken out of the man, into a woman. He brought her to the man, and the man said: "Now this, at last--bone from my bones, flesh from my

flesh!--this shall be called woman, for from man was this taken." That is why a man leaves his father and his mother and is united to his wife, and the two become one flesh. Now they were both naked, the man and his wife, but they had no feelings of shame towards one another. (Genesis 2:19-25)

* * * * *

When all things began, the Word already was. The Word dwelt with God, and what God was, the Word was. The Word, then, was with God at the beginning, and through him all things to be; no single thing was created without him. (John 1:1-3)

Extensions

Australian Aboriginal Dreamtime

As happened at the soak of Karora, after many adventures and misadventures, an overpowering weariness falls upon all of the ancestors. And the ancestors return to the earth. But that is not the end of the Dreamtime. The ancestors have left much behind and even now are still present. Mountains and rivers, fire and the moon, animals and humans, various ceremonials, and death itself are now present on the earth's surface.

Like Karora, the spirit of each ancestor is at his or her resting site: a soak, a rock outcropping, a river's bank. Karora remains at his soak. The entire landscape abounds with these sacred sites. These are the ceremonial places, the places of initiation and of honoring the ancestors, the birth places of the ancestors and of the human descendants of those ancestors.

At each of these sacred sites are kept the churinga boards. Within each carved board is the spirit of the kindred ancestor. Karora's spirit is within his churinga boards.

Each ancestor vested his or her spirit in the particular animal or plant that came from his or her body. The bandicoot seen nesting in the nearby thicket has the spirit of Karora within it. All of the life

and all of the landscape we now view is inundated with the spirits of the ancestors.

The ancestors also left the knowledge of the Dreamtime to their human descendants. In the words in song and story, in the actions of ceremonial procedures and in the designs of the churingas, the ways of maintaining the proper relationship with the ancestor and the Dreamtime world are made accessible. In the words, ceremonials and designs are also the spirits of the ancestors. Karora has his particular songs and stories, his ceremonials and designs.

And the spirit of each ancestor is within the human descendants of that ancestor. The human descendants, who share in this kinship, are organized into social clan groupings. The human clan of Karora is the Bandicoot clan, having its own sacred site, churinga boards, songs and ceremonials, and animal kinsmen--the bandicoot. Each is intimately tied in spirit to Karora, their source of life and meaning.

Because of this animal-human kinship, clan members do not eat of their own animal kinsmen. It would be as eating of oneself. But among the various clans, reciprocity predominates, and each shares in the animal kinsmen of other clans. The Bandicoot clan members can eat of the kangaroo, while the Kangaroo clan can eat of the bandicoot. Each sees to the well-being of its own animal kinsmen so that others can eat and so that all life will remain in balance.

Wakan Tanka

"From Wakan Tanka there came a great unifying life force that flowed in and through all things--the flowers of the plains, blowing winds, rocks, trees, birds, animals--and was the same force that had been breathed into the first man. Thus all things were kindred and brought together by the same Great Mystery.... Kinship with all creatures of the earth, sky, and water was a real and active principle.... The animal had rights--the right of man's protection, the right to live, the right to multiply, the right to freedom, the right to

man's indebtedness--and in recognition of these rights the Lakota never enslaved the animal, and spared all life that was not needed for food and clothing."

So wrote Luther Standing Bear in *Land of the Spotted Eagle* (1933).

Nature is the Incarnation of Thought

From Walden Pond came two years of living "deliberately" in Nature. Henry David Thoreau (1817-1862) closely observed and recorded the intricate movements of squirrel and red maple, of clear air and ice, of soil and sunlight, all in their changing seasons. But in going out into Nature, the journey into his own soul had begun. Thoreau, like his friend Ralph Waldo Emerson (1803-1882), was an American Transcendentalist. The natural world of physical objects was a reflection of and given form by the universal spiritual truths of the transcendent reality. The overt beauty of the flower reflects its spiritual essence. "Nature is the symbol of the spirit...the world is emblematic," wrote Emerson. It was then, through the soul and with the application of imagination, that humanity could escape its material forms and know of the spiritual truths. To go into Nature is to go into one's own soul, exploring its depths as the richness and animation of the tree and squirrel are explored.

"Nature is the incarnation of a thought, and turns to a thought again, as ice becomes water and gas. The world is mind precipitated, and the volatile essence is forever escaping again into the state of free thought." So wrote Emerson.

* * * * *

The man was diagnosed with diabetes. The physician put him on a strict diet and told him to come in regularly for insulin injections. It was the treatment.

But dieting is not an easy task in a society that emphasizes the social value of eating and food sharing. And who wants to take injections, especially when you know of a cure?

The man continued to come into the Indian Health Service Hospital for a checkup and to have his blood sugar levels monitored. But it was obvious to the physician that his patient was not losing any weight, and he knew the insulin injections were not being administered.

After several weeks, the physician realized that there was something quite remarkable going on with the condition of his patient. His blood sugar levels were approaching normal, and his diabetic sores had healed!

Curious, the physician began inquiring. It turns out that his patient had also become the patient of an *akbaalia*, "one who doctors," a Crow Indian medicine man. The *akbaalia* had given the diabetic his "brew" to take on a regular basis. The bitter-tasting drink is made from a particular plant that grows only at a certain location.

The physician met with the *akbaalia*, wanting to know more about the "brew" and if perhaps it could be administered by himself. The *akbaalia* told of the "brew" and listened to the request of the physician. But he informed the physician that he, the *akbaalia*, could not make such a decision allowing others to administer the medicine. That was a decision only the spirit fathers of the medicine can make. They are the true owners of the medicine. The human *akbaalia* is simply a caretaker of the "brew." In addition, the effectiveness of the "brew" was only partly the result of the physical properties of the plant. The real power of the "brew" comes from its *baaxpee*, its spiritual essence. It comes from the spirit world. And that is something the IHS physicians have never understood very well and certainly could not administer. The physician left with a better appreciation of his Crow counterpart, but without the "brew."

* * * * *

"Crazy Horse dreamed and went into the world where there is nothing but the spirits of all things. That is the real world that is behind this one, and everything we see here is something like a shadow from that world."

So spoke Black Elk (1862-1950), a Lakota holy man.

* * * * *

"He's dreaming now," said Tweedledee, "and what do you think he's dreaming about?"

Alice said, "Nobody can guess that."

"Why, about you!" Tweedledee exclaimed, clapping his hands triumphantly. "And if he left off dreaming about you, where do you suppose you'd be?"

"Where I am now, of course," said Alice.

"Not you!" Tweedledee retorted contemptuously. "You'd be nowhere. Why you're only a sort of thing in his dream!"

"If that there King was to wake," added Tweedledum, "you'd go out--bang!--just like a candle!"

"I shouldn't!" Alice exclaimed indignantly. "Besides, if I'm only a sort of thing in his dream, what are you, I should like to know?"

"Ditto." said Tweedledum.

"Ditto, ditto!" cried Tweedledee.

He shouted this so loud that Alice couldn't help saying, "Hush! You'll be waking him, I'm afraid, if you make so much noise."

And so Lewis Carroll wrote in *Through the Looking Glass* (1871).

* * * * *

"We are what we imagine. Our very existence consists in our imagination of ourselves. Our best destiny is to imagine, at least, completely, who and what, and that we are. The greatest tragedy that can befall us is to go unimagined."

So wrote the Kiowa poet N. Scott Momaday (1934-present) in "Man Made of Words."

* * * * *

For Samuel Taylor Coleridge (1772-1834), the English poet and author of "The Ancient Mariner" and "Kubla Khan," imagination

is essential for humanity. Imagination is the act of knowing and of feeling the life within all of the world, and of participating in that life.

* * * * *

When can a single event generate opposite impressions by the same observer at the same time? This was the question originally posed by the British philosopher, George Berkeley (1685-1753) in *Three Dialogues between Hylas and Philonous* (1713). Take three basins of water: one hot, one cold, and the third lukewarm. Now place one hand in the hot water, while the other is placed in the cold, and leave them in the water for several minutes. Then plunge both hands into the lukewarm water. Does not the cold hand sense warm water, while the hot hand sense in the very same basin cold water? The world is never as it seems, as something absolute and given. For what appears to us as the world is always influenced by our interactions with it, by what we bring into the experience.

For Berkeley, the world can not be directly known by what is experienced through our senses. But rather, what is knowable in the world is what is first conceived of in the mind. The world is, in fact, what is conceived--*esse est percipi*, "to be is to be perceived." A phenomenon has being and existence to the extent that its properties are a conceived idea, be it a "tree" or a "wilderness."

* * * * *

"Knowledge comes about in so far as the object known is within the knower."

So wrote Saint Thomas Aquinas (1225-1274) in *Summa Theologica*.

* * * * *

"Every person is a special kind of artist." Meister Eckhart (1260-1327), a German Dominican theologian, was convinced of it; and Ananda Coomaraswamy, the eminent scholar of Buddhist and

Hindu philosophy, echoed the same sentiment in his book, *The Transformation of Nature in Art* (1934).

Shadows on the Wall

Behold! human beings living in an underground cave. They have been there since birth, their legs and necks chained to the wall. They can look only to the front, toward the wall opposite them. Above and behind them at a distance a fire burns bright. Between the cave opening and the fire various people pass by, carrying all sorts of things such as vessels and statues and even figures of animals carved of wood. The shadows of those passing by and what they carry are cast upon the cave wall. What is seen by the prisoners is their world, is their truth.

Some of the prisoners are released from their chains. Still in the cave, they look around and, at first, are blinded by the bright light and suffer sharp pains. They are unable to see the realities of what formerly were the source of the shadows. As they grow accustomed to the light, they realize the illusion of what they had seen and the real existence of what they now see. They see the carved images that were being carried by those passing by.

The prisoners are then reluctantly dragged up entirely out from the cave into the world of the sun. Again they are blinded and suffer much pain. But as they become accustomed to the bright light, they begin to see. At first only the shadows of things, then the reflections off the waters, and finally the things themselves are seen. They see the animals that had been the inspiration for the wood carvings. Then the moon and stars, and finally the sun itself are seen by those who once only knew of the shadows cast upon the walls of their cave. What had been reality is now shown to be an illusion, and what was thought to be an illusion is now shown to be reality. It is the ideas behind the overt that are indeed the real. Out from the cave came the prisoners into the light. The sun is seen!

One of the prisoners decides to go back into the cave and free the others. At first he is blinded by the darkness, but then grows accustomed to the lack of light. And then he realizes his foolishness. If he should try to convince the prisoners that the shadows are

illusions, they would only argue that he is wrong, blinded by the bright light. If he should try to bring them up out of the cave, the prisoners would certainly kill him!

And so Plato (428-347 B.C.) told of the parable of the cave in *Republic*, Book VII.

Mind

"Consider a tree and a man and an axe. We observe that the axe flies through the air and makes certain sorts of gashes in a pre-existing cut in the side of the tree...."

To understand this set of phenomena, or any set of phenomena, Gregory Bateson would have us understand the exchanges and flows of "ideas" and "information," or more precisely, the register of the "differences in" the component parts making up the entire phenomena. Following the German philosopher Immanuel Kant, an elementary unit of "information" is but the degree of difference registered within and between entities, a "*difference which makes a difference*." In considering a tree and a man and an axe, we would be concerned with the "differences in" the cut in the face of the tree, the retina of the man, his central nervous system, his efferent neural messages, the behavior of his muscles, the velocity and edge of the axe head, the angle of the cut, the tenacity of the wood fibers, and again, the cut in the face of that tree. Each interaction involved a certain exchange of information, and depending on the nature of that information, what was exchanged is the observed result. For instance, the wood fiber and the edge of the axe were each the recipients of the information of the other. And the "difference in" the two, the information exchanged, even so slight, will alter the character of the cut and thus the entire phenomenon. In turn, each and every interaction and exchange forms an integral part of a continuous and total circuit of information flows which intersects, transcends and abrogates the specific boundaries of any given component. If you want to explain or understand anything, you must comprehend the completed circuit of information flows.

This is an "elementary cybernetic thought," with its "transform of differences traveling in a circuit," and is characterized

as a "total information-processing, trial-and-error completing unit." In turn, it is a part of an all-inclusive "hierarchy of subsystem" networks. This entire cybernetic system is synonymous with "Mind," a mental system. It can be expressed simply, in the messages exchanged between an axe head and the wood fibers. It can certainly be identified in the operations of your own mind. And most importantly, Mind is "immanent in the large biological system--the ecosystem."

We have generally come to know an ecology in terms of its "bioenergetics--the economics of energy and materials within a coral reef, a redwood forest, or a city." But an ecology has another face, that of "an economics of information, of entropy, negentropy, etc," a cybernetic ecology. It is a system not so readily identifiable. For its properties are not discrete, concrete units, that which we are accustomed to viewing. In fact, neither ecosystem coincides with the other, as each is bounded differently. In bioenergetics, the units are bounded at the cell membrane--the skin of a plant or an animal--or "units composed of sets of conspecific individuals." It is within these boundaries that we can measure the "additive-subtractive budget of energy for the given unit." By contrast, informational ecology focuses on the budgeting of messages along pathways and of their probabilities. "The resulting budgets are fractionating," rather than additive-subtractive; while the boundaries must "enclose the relevant pathways," transcending the boundaries of the conspecific units.

"Moreover, the very meaning of 'survival' becomes different when we stop talking about the survival of something bounded by the skin and start to think of the survival of the system of ideas in circuit. The contents of the skin are randomized at death and the pathways within the skin are randomized. But the ideas, under further transformation, may go on out in the world in books or works of art. Socrates as a bioenergetic individual is dead. But much of him still lives as a component in the contemporary ecology of ideas....

The cybernetic epistemology which I have offered you would suggest a new approach. The individual mind is immanent but not only in the body. It is immanent also in pathways and messages outside the body; and there is a larger Mind of which the individual mind is only a subsystem. This larger Mind is comparable to God

and is perhaps what some people mean by 'God,' but it is still immanent in the total interconnected social system and planetary ecology....

If you put God outside and set him vis-a-vis his creation and if you have the idea that you are created in his image, you will logically and naturally see yourself as outside and against the things around you. And as you arrogate all mind to yourself, you will see the world around you as mindless and therefore not entitled to moral or ethical consideration. The environment will seem to be yours to exploit. Your survival unit will be you and your folks or conspecifics against the environment of the social units, other races and the brutes and vegetables.

If this is your estimate of your relation to nature *and you have an advanced technology*, your likelihood of survival will be that of a snowball in hell. You will die either of the toxic by-products of your own hate, or, simply, of overpopulation and overgrazing. The raw materials of the world are finite....

It is the attempt to *separate* intellect from emotion that is monstrous, and I suggest that it is equally monstrous--and dangerous--to attempt to separate the external mind from the internal. Or to separate mind from body....

The creature that wins against its environment destroys itself."

So wrote the anthropologist Gregory Bateson (1904-1980) in *Steps to an Ecology of Mind* (1972).

What's in a Name

Sticks and stones can break my bones, but names can surely kill me.

* * * * *

The medicine bundle is opened, its sacred objects lie upon the elk hide--an eagle-feather fan, leather effigy of an elk and braid of sweet grass. With the tobacco of cigarettes, prayers are offered. The parents bring their infant forward and place it in the arms of the

child's clan uncle. A name had come in a dream and is now being bestowed on the child. If the name agrees with the child, the child will become the words of the name. The name will protect; it will guide. And it will be cherished. Should the name not agree with the child, the child will soon become sickly, and a new name will be sought.

The Crow people have an expression, *dasshussua*, meaning "breaking with the mouth." That which comes through the mouth, words, has the power to affect the world. In the same manner that an "Indian" name protects, a spoken pledge is to be fulfilled or accidents seem to happen; one never says goodbye, for it is too final; and one never speaks of an illness, for it may come about. And not only words, but the symbolic images of art, of ritual dance and costume, and of architecture not only describe and define phenomenon but help bring about that which they describe. All words, all symbols are animated with a power to effect the world.

* * * * *

Locust is the first to come up the "reed of emergence" into this, the Fifth World, the earth surface world, followed by First Man and First Woman, Pollen Boy, Lightning God and Talking God, and all the other *Diyin Dinee*, the Holy People.² All around is water and darkness. There are no peoples, but there are many monsters. There is much *hocho*--disorder and ugliness.

At the Emergence Place, the Holy People decide to build a sweathouse, like a hogan though much larger. First Man brings his medicine bundle with him into the sweat bath, the bundle containing four jewels--turquoise, white shell, abalone and obsidian. In the heat and the steam, the Holy People whisper to each other and, with the knowledge of *hozho*--beauty and harmony, plan the earth-surface

²The story text is a segment from the Navajo Emergence story. For additional ethnographic background, see Mitchell 1978, Witherspoon 1977 and Wayman 1970.

world. They think of the *biiasti*, the "in-standing ones," the inner forms of all things. Then the Holy People speak the words of the world and sing the world into being.

The earth will be,
 the mountains will be...,
 The earth will be,
 from ancient times with me there is knowledge of it.
 The mountains will be,
 from ancient times with me there is knowledge of
 it....
 The earth will be,
 from the very beginning I have thought it.
 The mountains will be,
 from the very beginning I have thought it....
 The earth will be,
 from the ancient times I speak it.
 The mountains will be,
 from the ancient times I speak it....
 The earth will be,
 the mountains will be,...
 and so it will be. (from the Beginning of
 the World Song)

And the rivers and mountains, the sun and moon, come forth; each with *biiasti*. And there is *Saah Naaghahii Bikeh Hozho*, "continual reoccurring long life in an environment of beauty and harmony."

Earth's feet have become my feet
 by means of these I shall live on.
 Earth's legs have become my legs
 by means of these I shall live on.
 Earth's body has become my body
 by means of this I shall live on.
 Earth's mind has become my mind
 by means of this I shall live on.
 Earth's voice has become my voice
 by means of this I shall live on.

Earth's headplume has become my headplume
by means of this I shall live on.

The cord-like extension from the top of its head
is cord-like from the top of my head as by means of
this I shall live on.

There are mountains encircling it and
Hozho extends up their slopes,
by means of these it will be hozho as I shall
live on.

Saah Naaghahi Bikeh Hozho I shall be,
Before me it will be hozho as I live on,
Behind me it will be hozho as I live on,
Below me it will be hozho as I live on,
Above me it will be hozho as I live on.

Hozho has been restored.
Hozho has been restored.
Hozho has been restored.
Hozho has been restored. (from the Blessingway Song)

And there is also *hocho*. Monsters persist--Hunger, Poverty,
Lice Man, Laziness.

In the heat and steam, the Holy People think the world and
then speak the world into being.

The Vital Act is the Act of Participation

In 1905, a 26-year-old physicist by the name of Albert Einstein proposed that light was made up of particles. He called the particles "photons," with qualities that are discrete and incremental, properties belonging to a granular universe. Photons act not unlike a stream of bullets shot from a machine gun. This proposal was proven by the photoelectric effect, i.e., electrons dislodge atoms immediately upon hitting an object. Waves have a delayed effect,

taking several oscillations to occur. Einstein was awarded the Nobel Prize in 1921 for this research.

In 1926, the Austrian physicist, Erwin Schrodinger, suggested that light was made up of waves. In fact, all of nature is a great wave phenomenon. This is demonstrated when electrons are boiled off a hot tungsten filament.

The question is then asked, "How can light be made up of particles and of waves? Isn't that a contradiction?"

In 1927, the Swedish physicist, Niels Bohr, developed the "Complementarity Principle" that explained this dilemma. The mutually exclusive properties of wave and particle are not, in fact, objective properties within light. They do not belong to light. Waves and particles are properties of human interaction with light. Our participation with light creates these properties. Specifically, depending on how the experiment is set up, light can be made into waves or particles. All depends on what the observer wants to see. By extension, reality itself exists as a probability of potentialities, as a wave (or particle) function, until an interaction occurs with the human participant. At that very moment, the "collapse of the wave function" transpires--a quantum jump.

As Bohr wrote, "When it comes to atoms, language can be used only as poetry. The poet, too, is not nearly so concerned with describing facts as with creating images."

* * * * *

"May the universe in some strange sense be brought into being by the participation of those who participate?.... The vital act is the act of participation. Participation is the incontrovertible new concept given by quantum mechanics. It strikes down the term 'observer' of classical theory, the man who stands safely behind the thick glass wall and watches what goes on without taking part. It can't be done, quantum mechanics says."

So wrote the physicist, John Wheeler, in *Gravitation* (1973).

Kangaroo
(Oenpelli Tribe, bark-painting 29" high)



