

**REFLECTIONS ON
NATURE**

NATURE

and

THE EMPTY QUADRANT

SUN AND SEASONS ^{change colors}

STARS AND MOON

CLOUDS AND HILLS

WATER AND STONES

^{Dark Green} TREES ^{TREES} AND GROVES ^{and} ^{light green} CLEARINGS

BIRDS AND BEASTS

NOISE AND SILENCE

SUN AND SEASONS

WATER AND CLOUDS ^{CLOUDS}

HILLS AND STONE

GROVES AND CLEARINGS

BIRDS AND BEASTS

MOON AND STARS

BOOK TITLE : THE EASTERN HILLS

TOYNBEE.WPD

October 2, 2006

NATURE AND HUMAN NATURE

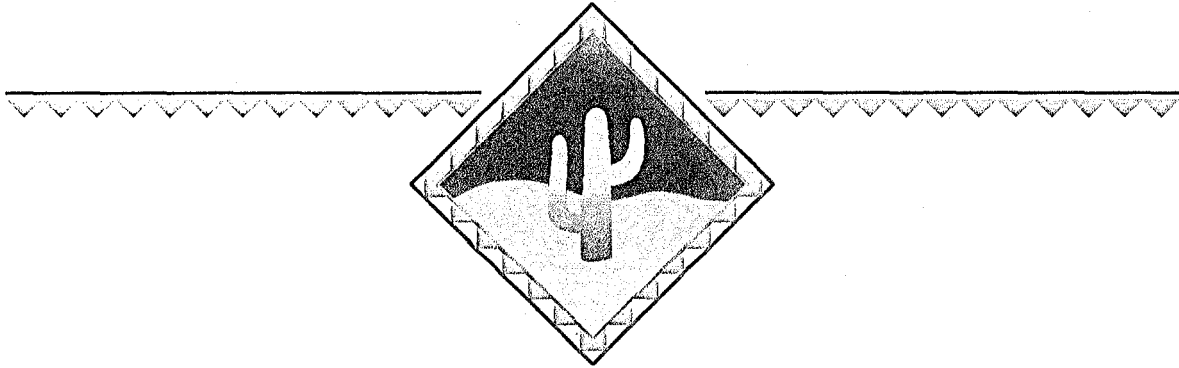
Arnold Toynbee

On an occasion I saw the mighty Himalayas, and my vision of them has made an ineffaceable impression on my mind. I was overwhelmed by their beauty, and their majesty, and at the same time I realised that here Nature was revealing to me something that is beyond herself. The splendour that shines through Nature is imparted to her from a source which is beyond Nature and which is the ultimate reality. If there were not this invisible spiritual presence in and beyond the visible universe, there would be no Himalayas and no mankind either; for mankind is part of Nature, and, like non-human Nature, we owe our existence to the reality that is the mysterious common source of non-human Nature and ourselves.

Man has polluted and marred the more easily accessible parts of the land and water surface of our planet wherever we find this to be economically profitably and militarily advantageous. This brutal treatment of non-human Nature has now been carried to extreme lengths in many countries, but it was Britain that was the birthplace of the Industrial Revolution that has spread all round the globe within the last two hundred years. Within these two centuries, Man has enormously increased his power by harnessing the inanimate forces of Nature on an unprecedented scale. But he has only just begun to realise that, in enslaving Nature, he is threatening to liquidate himself. Man is a part of Nature, and he will not be able to survive if he destroys the natural environment in which his pre-human ancestors became human in the act of awaking to consciousness. From the beginning of this human chapter of his history, Man has been bent on mastering Nature, and he has now succeeded in mastering the whole of terrestrial Nature except himself. This is an ironical achievement and an ironical failure. Self-mastery is, for Man, the key to happiness, to welfare, and to survival. Yet human nature is still recalcitrant to Man's command, and this unregenerate human nature is a threat to Man's existence, now that Man has armed himself with inanimate Nature's titanic forces.

Man has now fallen into conflict with human and non-human Nature alike. This is why, today, his enhanced power and wealth are causing him increasing anxiety and unhappiness. But this present-day disharmony dates only from the invention of mechanised industry. Pre-industrial Man, the hunter and the cultivator, managed to make Nature minister to his needs without going to War with her. Till the Industrial Revolution in England, only two hundred years ago, Man still lived at peace with Nature. He still felt the awe of Nature that he had inherited from ancestors who had been at Nature's mercy. Cannot we regain this lost ancient concord between Man and his environment?

Since Man became conscious, he has been aware that he himself is not the spiritually highest presence in the universe, and he has been seeking to communicate with this higher form of reality in order to put himself into harmony with it. His earliest avenue of approach to it was through his natural environment. He worshiped the ultimate reality through the manifestations of it in mountains, forests, springs, rivers, and the ocean. At the Western end of the Old World and in the Americas this earliest form of religion has been killed by monotheism in the forms of Judaism, Christianity, and Islam. But in India and Eastern Asia the worship of ultimate reality through the medium of Nature still survives.



The Night Chant

In beauty happily I walk
with beauty before me I walk
with beauty behind me I walk
with beauty below me I walk
with beauty above me I walk
with beauty all around me I walk
It is finished again in beauty
It is finished in beauty



O Great Spirit, I raise my pipe to you, to your messengers the four winds, and to Mother Earth, who provides for our children. Give us the wisdom to teach our children to love, to respect and to be kind to each other, so that they may grow with peace and mind. Let us learn to share all the good things that you provide for us on this earth.

THINGS THAT JOIN IN A JOYFUL HEART

*Egrets after long absence returning to the lagoon
Bird and angel shaped clouds floating above the hills
The joy of a three year old girl helping her family
move into their new home
New chicks amidst a flock of wild turkeys.
The exquisite symmetries and colors of autumn leaves.
A Kamakura Buddha restored to a Zen garden.*

*Sharing the wisdom of the trees in a sacred grove
Absorbing the sounds and symmetries of a waterfall
Feeling the silent peace of distant hills
Contemplating the reflections in the glass surface of a lagoon*

*Hearing from old friends after a long absence
The Gospel: "You too can do all that I have done, and more".
Reading again Emma Goldman's timeless challenge
to the hypocrisy of the establishment's institutions.
Guatama's injunction to Ananda:
"Go beyond what I have taught.
Light new lamps".*

THOUGHTS WHILE IN
A SACRED PLACE

Mystery resides at the interface
of the manifest and unmanifest
at the verge of somethingness
and nothingness

Beauty directs us to the Mystery
The Mystery directs us to Beauty

The cloud half hidden by the hill
tells us there is great beauty beyond

We must first see the patterns and textures of the curtain
before we can penetrate the patterns and textures
that lie beyond.

The curtain reveals as well as hides

What grasps our perceptions is more significant
than what our perceptions grasp

Each tree is a messenger
We must sit in silence
to receive its message

Diversity and uniqueness are the
Grail entrusted to the Mystery

We live our lives to be
realizations of uniqueness

Uniqueness is the infrastructure that supports all love
(But it is similarities that allow communication)

~~THOUGHTS.WPD~~

SACPLACE.WPD 04-04-23

ONE DAY THE HILL HALF-HIDES THE CLOUD
ON ANOTHER DAY THE CLOUD HALF-HIDES THE HILL

TRUTH AND BEAUTY

There comes a time in our axiology when we cross the ethics-aesthetics interface, cross a boundary from right vs wrong, true vs false, orthodox vs heresy,,, to beautiful vs ugly. The value of the good or the value of the true is replaced by the value of beautiful.

Roerich felt that adopting the value of beauty could deliver us from repeating the atrocities committed under the values of good and true. But beauty alone can also be a capricious guide. We have the famous quote by Mussolini's son-in-law about how beautiful it was to see the bomb explode and send the troops below up into the air in a flower like pattern. The praises to "bombs bursting in air" and the beauties of mushroom clouds are too common in our heritage. And there is "La belle dame sans merci".

But we also have abundant examples of the failure of 'truth' alone as a guide as in the examples of the inquisition and wars of religion. And in the failure of reason and logic as guides as in the theory and practice of Nazism and of the American military industrial complex.

Is it fair to conclude that no one value alone can safely guide us? The Buddhists require both compassion and wisdom. And some Christian groups have supplemented their scriptural base of 'truth' with the beauties of majestic cathedrals, dramatic rituals, and inspiring music. Are those surrounded by beauty, be it natural or artificial, more safely guided than are adherents to bare boned true-false logics?

OUR PRISON

It has been said that the most secure prison is one you do not know that you are in. The ubiquitous "sleep" described by seers like Blake or Gurdieff tells us of a prison of this type that we all are in. Our social order, our religions, our customs, our life styles and our world views, all inadvertently or by design reinforce the walls of this prison. We are imprisoned both in life and in death unless or until some event awakens us to the fact. Once awake, however, it is not difficult to walk out, for the walls are built only of our ignorance, and awakening quickly crumbles them. Then we know that somewhere on the outside lies our true home.

There is the old Chinese saying: Give a man a fish and you feed him one meal, teach him to fish and you give him a lifetime of meals. So it is with this prison. Tell a man he has a home elsewhere and you give him a glimpse of freedom, but show a man how to escape the prison, awaken him, and you give him ultimate freedom.

Once awake, knowing we are imprisoned, we ask, what is the nature of these walls that confine us? We find that they are walls of illusion, of false images, false entities, false goals, false pursuits. They consist of luminous and sonorous noise created and maintained by our ignorance, obscuring the true signals that lie beyond. Escape is to confront the walls of confinement with silence. It is silence that slowly dissolves the noise.

"Be still and know that I am God"

THE EMPTY QUADRANT

Science does not recognize the spiritual in nature, and religion has removed nature from the spiritual. The result is an empty quadrant in human life. In viewing the quadric diagram (Figure 1) constructed from the dyad pair, nature-culture and matter-spirit, it is seen that the engrossing activities of present day western society all eschew the nature-spirit quadrant.

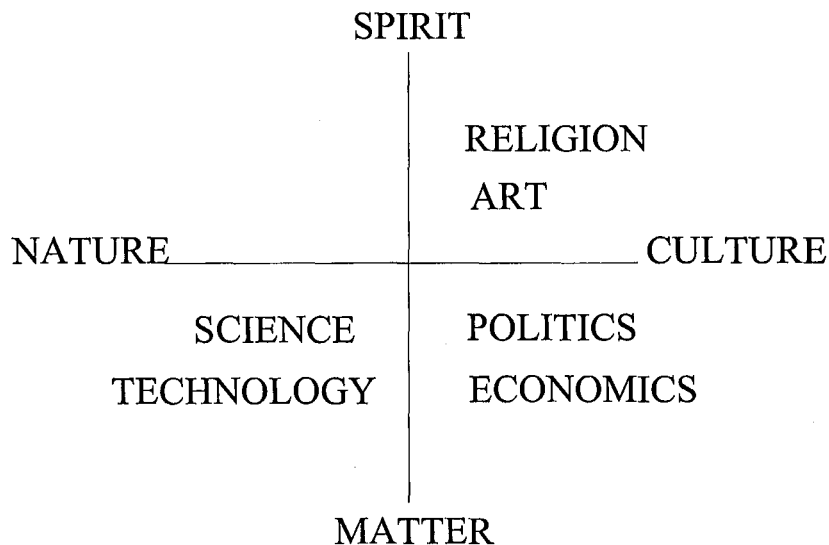


Figure 1

Present day western culture is primarily involved with the two material quadrants in the lower half of the figure. The efforts of science and technology focus on the nature-matter quadrant while the activities of economics and politics take place in the culture-matter quadrant. Art is displayed in the culture-spirit quadrant, but would better be represented as lying along the nature-culture axis. Since pagan times most religious activity lies in cultural traditions, and only in an indirect or token way references nature. And while modern science explores nature there is little in its approach that goes beyond the purely material.

One way of looking at this diagram is to think of it as displaying social evolution. In the most primitive societies, nature and spirit were the dominant cultural concerns (upper left quadrant). Later emphasis was less on nature and more on heritage, adding the social emphasis of the culture-spirit upper right

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Gods real scripture is Nature

The Creator's real scripture is Creation

But Pagans who know this have been
replaced by ~~evil~~ cancerous cults
of homo sapiens centered ideologies

Only scientists have returned to the study [call it worship]
of Nature. - But they ~~refuse to~~ look only at the manifest,
refuse to look at the unmanifest

or have decided that there is only one aspect of the manifest

they will study: the quantitative aspect - that which
can be counted and measured - put into ^{mathematical} equations
and ~~Mathematical~~ ~~form~~ or theories

The essences ~ beauty, awe, laughter, joy - mon-scientific
peace OK

but are still part of
nature's scripture
come from reading nature's scripture

We are more intimately related
to creation than by what can be counted or measured

quarter. With the arrival of civilization, that is cities, the emphasis moved to the culture-matter quarter. And finally in the most recent centuries, the social infrastructure, as exemplified by the activities and products of science and technology, incorporated the nature-matter quarter. But in this series of changes the original quadrant became less and less relevant and today has all but vanished.

In the continuing evolution of the social order, a cyclical process may be involved--a sort of four-fold helical process-- and the time is now ripe to again explore the nature-spirit quadrant. Each time around new and deeper insights into ourselves and the world become manifest.

However, there may be other ways of looking at the quadric diagram. The human motivation of seeking control may lie at the root of what is taking place in each quadrant. Primitive society had no control over nature (nature-spirit quadrant), but a cultural concept of control arose through making sacrifices to the gods. While this may have had little effect on the gods, the sacrificing priests discovered they had gained tremendous control over society (spirit-culture quadrant). This level of priest control prevailed until the time when political and economic controllers wrested it from their hands (culture-matter quadrant). Today another power shift is underway with "technological priests" taking over through their increasing control over nature, achieving for the first time what humans have always sought (matter-nature quadrant). Today there is no desire on the part of the new dominant priesthood to abdicate their advantage by allowing movement into the nature-spirit quadrant. It therefore remains empty.

Still another reason for the emptiness of the nature-spirit quadrant, to enter this quadrant the drive for control must be abandoned. You come into harmony or you do not enter. And it is frightening today as in primitive times because in this quadrant we discover we are not alone. Comforting to some, repugnant to others. A great change is required for all who would enter here.

But the nature-spirit quadrant is not entirely empty, only relatively so. Herein reside the nature poets, scientists like Loren Eiseley and Arthur Eddington, (and even one aspect of Einstein). Here is the abode of mystics from all cultural traditions, and there are vestigial remains from earlier times, such as the liturgical year, sacred times, and sacred places. And much music and art springs from roots in this quadrant.

The difference between the matter-nature approach and the spirit-nature approach is one of attitude: Objectivity vs. Awe; Control and Utility vs. Respect and Reverence for all that has been created.

The quadric may be "morphed" by substituting inner-outer for spirit-matter, and/or individual-collective for nature-culture. Where does mathematics lie in these quadrics? Mathematics is not matter, is it nature? is it spirit? It seems, like music, to exist in all four of the quadrants.

A different way of formulating figure 1 is given in figure 2.

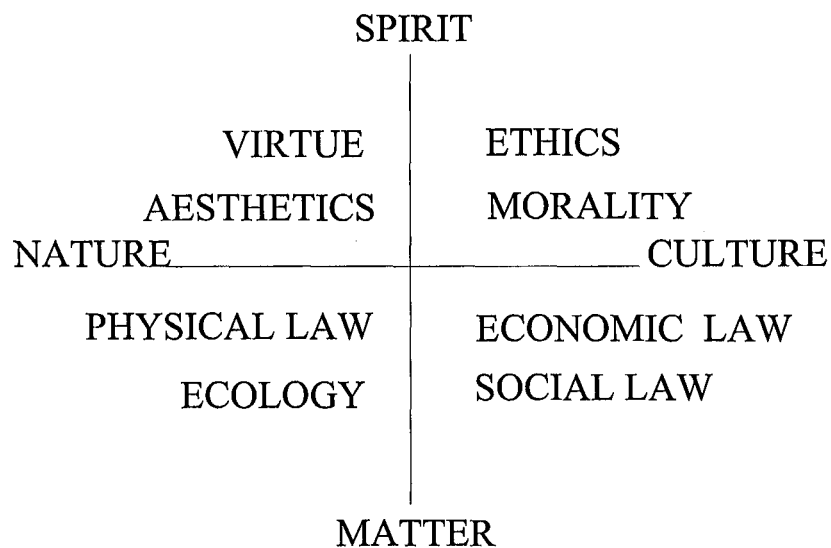


figure 2.

Today in order to enter the "empty quadrant" one must start from a well established position in either the RELIGION-ART, ETHICS-MORALITY quadrant or the SCIENCE-TECHNOLOGY, PHYSICAL LAW-ECOLOGY quadrant. (Preferably from both) Both of these quadrants may be the doorways to the world of transformed consciousness. In his day, Soren Kierkegaard held that the spiritual path began with aesthetics (nature-spirit quadrant), led to morality (culture-spirit quadrant) and then moved into a higher spiritual consciousness, off the diagram.

Specific approaches from the RELIGION quadrant include the re-interpretation of ancient teachings (Biblical, Early Christian, Gnostic, Celtic, etc.), juxtaposition of Eastern, American Indian, and Western spirituality, use of various contemplative and 'meditative epistemologies', exploring the psychological essences and power of symbols, and finally the reincorporation of kairos in our lives. Specific approaches from the SCIENCE quadrant, include juxtapositions of quantum reality, information theory, and spiritual reality, the purifying value of mathematical meditation, acquiring a subjective-objective approach to nature such as developed and exemplified by Loren Eiseley. While all of these approaches are currently being explored, when measured by the energy-information emphases of today's global culture, the nature-spirit quadrant remains next to empty. Yet this quadrant must be passed through in every spiritual path.

THE TWO KINGDOMS OF LIFE

The sun had set. The evening was cooling and the twilight darkening. I walked out to where the little ginkgo tree stood. It amazed me that it had added over a foot and a half to its height this spring, almost doubling its size. I was proud of this tree, not just because I had planted it, but because its health made me feel healthier.

I wondered about trees, whether they had some special kind of consciousness that we were unaware of. In the myth, eating the fruit of a tree led to our own consciousness, maybe the trees were somehow storehouses and stewards of consciousness. Then I wondered about various states of consciousness. I asked the ginkgo tree, "Do you sleep at night?" No verbal answer, but quickly a mental answer: "We trees do not sleep in the night, we sleep in the winter." That is true, I thought, how obvious. But then it is most interesting that the plants march to the beat of the yearly drummer while we animals march to the beat of the daily drummer. Plants are tuned to the earth's revolution, animals to its rotation.

But there are other difference/similarities, such as the "proportion", magnesium : chlorophyll :: iron : hemoglobin. And I have often speculated about the tendency of plants to minimize and animals to maximize the volume to surface ratio. That is plants are tree-like and animals are sphere-like. But we also know that attraction forces, like gravity, generate spheres and repulsion forces like all plus charge coulomb forces generate tree forms. So we have:

PLANTS	ANIMALS
Minimize V/S	Maximize V/S
~ repulsion forces	~ attraction forces
tuned to 365 day cycle	tuned to 24 hour cycle
MAGNESIUM 12 wt. 24.312 (3x8)	IRON 26 wt. 55.847 (7x8)

This table suggests that the nature of a force, attraction vs. repulsion, may in some way be associated with time, with the length of a cycle. Gravity, for example, may operate at certain frequencies and the force of expansion of the universe at others. Contraction and expansion as functions of the frequencies of some cosmic clock.

over time

Stationary
Input CO₂
Output O₂

Movement
Input O₂
Output CO₂

Number	NAME	Weight	$H \approx 2$ hours $C \approx 1$ day
1	Atom	1	day
3	C	12	1
6	Mg	24	2
14	Fe	56	$\frac{14}{3}$
7	Si	28	$\frac{7}{3}$
	N		\rightarrow

We need another and a wiser and perhaps a more mystical concept of animals:

Remote from universal nature and living by complicated artifice, man in civilization surveys the creature through the glass of his knowledge and sees thereby a feather magnified and the whole image in distortion. We patronize them for their incompleteness, for their tragic fate of having taken form so far below ourselves. And therein we err, and greatly err. For the animal shall not be measured by man. In a world older and more complete than ours they move finished and complete, gifted with extensions of the senses we have lost or never attained, living by voices we shall never hear. They are not brethren, they are not underlings; they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendor and travail of the earth.

Henry Beston

Protagoras was wrong

Man is not the measure of all things.

In fact Man is a very poor meter stick.

OF SQUIRRELS AND MEN

Sometimes certain events impress themselves indelibly on our memories becoming clues to what we feel our experience on earth is really about. Such was an event that occurred some forty years ago that keeps coming to my mind making associations and raising questions. Even though it was, and still is, a very common event, one we ignore every day, this particular instance somehow struck me in the heart and made me face what we all sooner or later must face.

Returning home one afternoon after a ten day observing session at the Palomar Observatory, I was driving along a shady portion of the road when I observed up ahead two squirrels in the middle of the road. One was lying flat, evidently just recently hit by a car. The other was standing on its hind legs by the head of its dead companion, motionless, staring into the distance, totally oblivious to my approaching car. My mind was taken over by the scene. I was no longer just observing a moment of pain and tragedy, I was experiencing something that is simultaneously personal and universal.

It has been said that Man is the only creature who is both mortal and knows he is mortal. This particular piece of knowledge is a knowledge we seek refuge from all of our lives. Here, standing upright was a creature, bewildered, not sharing our fatal knowledge, incapable of understanding what had happened. "Why don't you answer my call? Why do you lie there? Why don't you move? Aren't we going back to the woods together?" And here, was this observer, also bewildered, but knowing what had happened, yet trying to digest the full import of this ubiquitous event. Whose pain is greater, those with no knowledge of death or those who carry that knowledge? Was this the real knowledge we acquired in the Garden of Eden, though it is usually called knowledge of good and evil?

In this event I saw again the pain in the countless departures not only from life, but in life. The last embraces in the bus depot, the train station, the airport, off to war, those departures that knew not whether there would ever be a return. Human suffering is not just from our desires and aversions, as a great Sage one taught, there is something implicit in our very condition, going beyond all intention, that reveals a deep unfilled well of longing in our being, maybe best phrased, "Aren't we going back to the woods together?"

If the universe crushes him, man would still be nobler than the thing which destroys him, because he knows he is dying, and the universe which has him as its mercy is unaware of it.

----Blaise Pascal (1623-1662)

When I see the stunned grief of a squirrel standing beside its dead mate on a country road; when I see an ant rescuing and carrying a companion from danger, like Orpheus escorting Eurydice from the underworld; I feel that there is a universal sense of compassion, participated in not only by humans, but extending to all sentient creatures. If, indeed, this manifestation of compassion abides in all sentient beings while the God of the universe is "neutral and unconcerned", as we are taught by a science that would metaphorically render our destiny to be the climbing to the summit of some Aztec pyramid to have our hearts, our meaning, ripped out to appease its neutrality and objectivity, then it is up to us to take over the universe from this indifferent God and replace him with Compassion, Concern, and Love. It is out of these that we must make God.

Yesterday I was much upset that a squirrel suddenly dashed in front of our car and there was no way I could avoid hitting it. Today I am on foot. I stopped to watch with admiration the skillful and safe crossing of the street by another squirrel maneuvering on a thin cable with exquisite balance. On reaching a tree on the far side, the squirrel scrambled up a complex but familiar path, reaching a second cable and continuing across another street.

With more trees being cut down and trimmed back, squirrels are forced more frequently to cross streets on the ground. But squirrel wisdom is not ground wisdom. They are skilled and adept in their medium above the earth, hopelessly vulnerable elsewhere. We humans seem to be the same, and as our environment changes we are forced to spend more and more time in situations in which we are increasingly vulnerable. We are not gods, we have lost sight of where we belong and at what we are skilled.. Humans on foot and humans behind the wheels of cars are really two distinct species. We have restructured our cities for the wheel species, so both old fashion humans and squirrels will soon be without a home.

Originally: Squirrel.wp6 97/06/23, 97/08/21; ecocomp.wp6 97/10/10
Renamed: Squirrel.wp6 on 98/01/06

Subj: **Too good not to pass on....**
 Date: 6/10/2006 2:55:47 A.M. Pacific Standard Time
 From: lynneht@juno.com
 To: lynneht@juno.com

Too good not to pass on

The Whale

[Image removed]

If you read the front page story of the SF Chronicle, you would have read about a female humpback whale who had become entangled in a spider web of crab traps and lines.

She was weighted down by hundreds of pounds of traps that caused her to struggle to stay afloat. She also had hundreds of yards of line rope wrapped around her body, her tail, her torso, a line tugging in her mouth.

A fisherman spotted her just east of the Farralone Islands (outside the Golden Gate) and radioed an environmental group for help. Within a few hours, the rescue team arrived and determined that she was so bad off, the only way to save her was to dive in and untangle her ...

[Image removed]

a very dangerous proposition.

One slap of the tail could kill a rescuer.

[Image removed]

They worked for hours with curved knives and eventually freed her.

When she was free, the divers say she swam in what seemed like joyous circles. She then came back to each and every diver, one at a time, and nudged them, pushed gently around-she thanked them. Some said it was the most incredibly beautiful experience of their lives.

[Image removed]

The guy who cut the rope out of her mouth says her eye was following him the whole time, and he will never be the same.

*May you, and all those you love,
 be so blessed and fortunate ...
 to be surrounded by people
 who will help you get untangled*

*from the things that are binding you.
And, may you always know the joy
of giving and receiving gratitude.*
I pass this on to you, my friend, in the same spirit.

BIRDS

I like to watch the coming and going of the birds on the bird bath and in the maple tree in the front yard. Their activities seem very much like our own, hectic, hastened and even hazardous. Superficially their flights seem random, but on closer inspection there are patterns. One of the more visible patterns is that governed by a "pecking order". This order of precedence is not always a matter of size. Some of the smaller feisty birds seem to have acquired a high rank on the pecking ladder. While the larger birds have unmistakable visible recognition as their source of status, the smaller ones are always having to remind others of their rank by chasing and other aggressive behavior. This is an example of the old Persian adage concerning two kinds of truth: truth which is so only if continually repeated (small bird truth) and truth which is visible whether or not it is ever repeated (big bird truth).

What intrigues me is why is it that birds and sometimes humans indulge in this kind of behavior, while most other grounded animals do not. Are hierarchies peculiar to birds and to humans whenever they are ungrounded? Is this because in the three dimensional world of birds there may be more degrees of freedom than can be coped with and surrogate restraints are necessary? Indeed, hierarchy and freedom seem to be universally antithetical. They are each anecdotes to an excess of the other. If this notion also applies in the realm of the angels, we must assume they possess many dimensions of freedom since they are so tightly structured hierarchically. Or does grounding, rootedness in the earth, play a role in the presence and absence of hierarchy? The structure of the earth is more a complex net of everything being related to everything else than a chain of command hierarchy. Perhaps the basic parameter is determinism. Where there is strong determinism, there is no need of hierarchy. Where there is great choice hierarchy appears. The offsprings of choice are hierarchy, orthodoxy, heresy, and morality. When there is no choice, no freedom, there is no orthodoxy or heresy, there is no morality, and there is no need for hierarchy.

BIRDS AGAIN

I watch birds of many sizes, colors, and markings come to bathe or drink in the birdbath. I do not know the names of these birds and consequently I cannot always be sure that a particular species of bird is new or that I just have never noted it before. Some seem vaguely familiar, but only those whose names I know, like robins and jays, can I be sure are repeat performers. Thus in order for a bird to be really familiar to me I must know its name. Memory just doesn't seem to work on one level. It must be 'sealed' on a second level to be retained, retrieved, and recognized. There must be both the visual experience of the bird and a referent to that experience, such as a name, before the properties of memory, retrieval and recognition can be invoked. And it is this encoding of memory that affords familiarity and hence understanding.

July 4, 1997

See 2001 #14, #18

JOINT MINDS?

We observe the highly integrated movements of flocks of birds and schools of fish and wonder how they can achieve such coordinated motions simultaneously and almost instantly. How are they communicating? An apparently unrelated phenomenon is the fact that sponges can pass through a filter, fracturing into small enough elements to pass through the spaces between the strands of woven cloth, then reassemble on the other side into a sponge again. But putting these phenomena in juxtaposition leads us to the surmise that there exist many possible levels of organization not obvious to us.

We can postulate an organizational scale such as: Individual organisms (lone wolves for example), wolf packs, human tribes, ant and termite colonies, human cultures, ecologies, then the 'semi-organism' level of bird flocks and fish schools, and finally up to an organism again. But an organism of a more sophisticated level of complexity.

We are aware that members of termite, bee, and ant societies appear to be linked to the queen no matter how far separated. Such linkages are also known ~~in~~ among humans. Also we know from experiments in quantum mechanics that elements that have been at one time 'intimately' joined remain so regardless of spatial separation. What seems to be involved here is a communication, a transfer of information, in ways not currently understood. Physical communication, baryon and lepton, appears to be limited by $v \leq c$, but in the quantum experiments this limit may be violated. *non-locality*

Also involved seems to something of the nature of what we call mind. The birds have created a 'joint mind'. Perhaps **mind** is a set of elements, organisms, joined by a different kind of communication than we normally use. This communication does not necessarily require neurons, synapses, etc. as the brain researchers posit as the basis of mind. For no such **wired links** are employed by birds, fish, and ants. Mind uses wireless communication, but not necessarily any emw form. Its instant delivery over any distance calls for something beyond guage bosons.

THE BIRDS PART I

In 1963 Alfred Hitchcock made a movie entitled "THE BIRDS". As with most of his films there were the usual elements of suspense, mystery, and horror. In this picture Hitchcock indulged one of his favorite ploys of having the threats and horror arise in a place ordinarily deemed safe and from agents conventionally perceived innocuous. In this case the innocuous agents that turned threatening were birds. How could this twist of having birds become frightening monsters work against the contrary ingrained experience of an audience? But it did work! I think it worked because of a mystery that surrounds these "innocuous" creatures. In some sense we have always held birds in awe, maybe similar to the awe we bestow on our deities. They can fly and for millennia we have been envious and dreamed of ways we could imitate them. But in the century in which we finally mastered their skill to fly, we look at them once more and see they are masters of other skills that leave us again in awe.

To watch hundreds of birds simultaneously take off from a wetland, rise chaotically into the sky, fly and counter fly in all directions, never colliding; then to suddenly emerge into a pattern that we can perceive as order, all moving in unison to the tick of some unknown clock; then returning to one massive chaotic scramble, only to re-emerge in two or more orderly flocks, flying and counter flying in many directions; repeatedly altering between chaotic and orderly patterns. If flying is one of their skills, their mastery of coherence is an even more remarkable one. The birds seem to know something very basic that we in all of our sciences have entirely missed.

We can only speculate: Do they use some unknown mode of communication? Or is it they possess built in non-invasion zones to avoid collisions? and the size of such a zone depending on their flight speed. Or are they demonstrating pre-scripted dances? Or are all attuned to a single director of a flight orchestra? In any event it appears to us that from time to time they create a super-organism which contains each bird and which in turn each bird seems to contain.

The division between order and chaos as birds perceive the world is apparently quite different from our perceptions. Watching their performance makes us feel that we appreciate only the simplest forms of order. Their level of handling complexity seems far superior to ours. But order is not only an objective mathematical arrangement, it involves the observer and his subjective limitations. Perhaps the explanation lies in dimensions. Human experience, until the present century, has been almost entirely two dimensional. The birds may have evolved their superior abilities for coping with complexity from the demands of motion in three dimensions.

For hundreds of aircraft to fly without a collision in the *relative* close proximity in which a flock of birds operate is beyond imagination. Humans have great difficulty trying to achieve anything resembling laminar flow on a one dimensional freeway. But maybe a clue to the secret of the birds lies in our learning how to turn automobile traffic into a "super-organism".

THE BIRDS PART II

C. G. Jung notes that a flock of birds assembling in an unlikely place bears a traditional mantic symbolism of an impending death. He recounts a typical incident¹:

The wife of one of my patients, a man in his fifties, once told me in conversation that, at the deaths of her mother and her grandmother, a number of birds gathered outside the window of the death-chamber. I had heard similar stories from other people. When her husband's treatment was nearing its end, his neurosis having been removed, he developed some apparently quite innocuous symptoms which seemed to me, however, to be those of heart disease. I sent him along to a specialist, who after examining him told me in writing that he could find no cause for anxiety. On the way back from this consultation (with the medical report in his pocket) my patient collapsed on the street. As he was brought home dying, his wife was already in a great state of anxiety because, soon after her husband had gone to the doctor, a whole flock of birds alighted on their house. She naturally remembered the similar incidents that had happened at the deaths of her own relatives, and feared the worst.....

This same symbol of impending death was experienced by our family. My wife, Donna, had been driving when she had a stroke and was taken to the hospital with minor injuries. For several days she seemed to be in a stable condition. Returning from the hospital one afternoon, I saw on the roof of her book store, where she spent most of her time, a score of crows, sitting or flying back and forth to a near by tree. I remarked the event to others, but none of us at that time had heard of the prophetic symbolism associated with such a gathering of birds. Donna died a day later.

When placed in juxtaposition with other powers that flocks of birds seem to possess, the view becomes compelling that some basic aspects of nature escape the epistemology of science. Part of this may be that individual birds do not possess unusual powers; those powers emerge only in an aggregate. A reductionist oriented science, predicated on the view that explanations are to be found in the parts, will never explain such emergence. But more important is the inference that our particular sensory windows on the physical world are partial. And that no matter how we may extend them with telescopes, microscopes, or other devices, there are parameters that remain inaccessible and unknown to us. And this becomes even more disconcerting when it implies that our way of thinking and reasoning, the processing and assimilation of our experience, may itself be a box blocking us from access to the real nature of the world we live in.

It is here that we must express our respect to peoples such as native Americans, who recognize other creatures as brothers, not as inferiors. All creatures are specialists, some have developed faculties and skills exceeding ours, others have developed faculties and skills totally different from any that we possess. The special development in which Western man exceeds seems to be arrogance.

¹From "The Interpretation of Nature and the Psyche" by C.G. Jung and W. Pauli

*add The Ravens congregating
at Frances' House*

To watch the uncanny synchronization of a starling flock in flight is to wonder if the birds aren't actually a single entity, governed by something beyond the usual rules of biology. New research suggests that's true.

1. Mathematical analysis of flock dynamics show how each starling's movement is influenced by every other starling, and vice versa. It doesn't matter how large a flock is, or if two birds are on opposite sides. It's as if every individual is connected to the same network.

That phenomenon is known as scale-free correlation, and transcends biology. The closest fit to equations describing starling flock patterns come from the literature of "criticality," of crystal formation and avalanches — systems poised on the brink, capable of near-instantaneous transformation.

" "being critical is a way for the system to be always ready to optimally respond to an external perturbation, such as predator attack," wrote researchers led by University of Rome theoretical physicist Giorgio Parisi in a June 14

Proceedings of the National Academy of Sciences paper.

Parisi's team recorded starling flocks on the outskirts of Rome. Some had just over 100 birds, and others more than 4,000. Regardless of size, the correlations of a bird's orientation and velocity with the other birds' orientation and velocity didn't vary. If any one bird turned and changed speed, so would all the others.

In particle physics, synchronized orientation is found in systems with "low noise," in which signals are transmitted without degrading. But low noise isn't enough to produce synchronized speeds, which are found in critical systems. The researchers give the example of ferromagnetism, where particles in a magnet exhibit perfect interconnection at a precise, "critical" temperature.

"More analysis is necessary to prove this definitively, but our results suggest" that starling flocks are a critical system, said study co-author Irene Giardina, also a University of Rome physicist. According to the researchers, the "most surprising and exotic feature" of the flocks was their near-instantaneous signal-processing speed. "How starlings achieve such a strong correlation remains a mystery to us,"

A story related by Khakendra Pun, a Nepalese who lived in a remote mountain village.

"I grew up listening to the crows sing in our village. Over the years I learned to understand the meaning of their sounds. We believed that the crows brought us messages. We were familiar with two of their sounds. Whenever the crows made this sound, 'kaa, kaa, kaa' speaking very fast and flying over our heads it meant, someone was coming home from far away. And if they made this sound, 'kaa, kaa, kaa, kul-dung, kaa, kaa, kaa, kul-dung' in a very soft voice we knew they meant someone was sick and was going to die in our village."

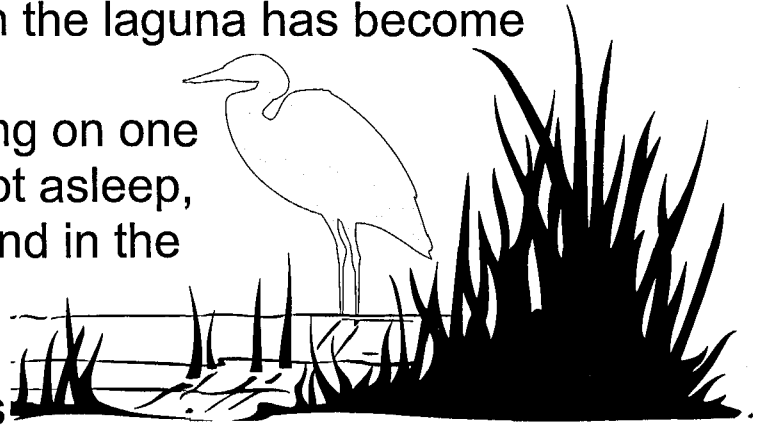
But such anecdotes are just lore, because only standardized repetitive events can be called scientific. Nonetheless, many of those unstandardized events that repeat here and there from time to time remind us that much of reality lies beyond the grasp of science.

Flocks of crows collect before death to assimilate th BEING of the one to die
Flocks of vultures collect after death to devour the flesh of th one who died

BEING vs DOING

The White Egret who lives in the laguna has become my guru.

I watch her patience, standing on one leg for long hours on end, not asleep, but intensely alert, awake, and in the present. When the fish moves then the egret strikes. The lack of motion is



not the sign of inactivity, rather it is the preparation for activity. In our world of ubiquitous noisy activity, most of it has little significance. The fish is either scared away or is caught at great expense of energy. We have much to learn from the white egret.

I sometimes speculate on whether the egret centuries ago observed the Buddha and adopted his wisdom, or the Buddha observed the egret and emulated her wisdom. Perhaps they both independently discovered the proper way to retrieve life's fish. And this perhaps was the source of the old adage: don't give someone a fish, teach them how to fish. Tell them to watch the egret.

cf The 5 Tathagatas

12/12/89, 8:00 a.m.

This morning winter was in full bloom (so far as is possible in California). The temperature dropped to the low twenties, the bird bath was frozen solid and a thick frost whitened the orchard. The frost on the shingles created the illusion of snow on the roof and the junipers and cedars bending under the weight of the heavy frost conformed to the greeting card shapes of trees burdened with snow. A thick fog settled all around shrinking the world into the intimacy of a cozy room. The lagoon loomed through the fog dark, frozen, and bleak. Last year's solitary egret whose whiteness stood in stark contrast to the December darkness was missing this year. But even in the absence of that luminous symbol of life, the scene paradoxically radiated a strange warmth and coziness. Some invisible presence suffused the world with peace. How strange this affinity of closure with completeness, of solitude with joy.

I think we have never understood the true nature of winter. We glimpse its inert beauties and briefly behold its transforming spirit, but its real power eludes us. What we glimpse of winter we attempt to subsume with our cultural symbols, but we only capture a spoonful of the ocean. To recognize the warmth in winter's bleakness and the joyfulness in its solitude requires a different kind of sensitivity than that inculcated by our urban culture. It requires the sensitivity of Mila Repa sitting alone under the stars naked on a lofty glacier. Or the sensitivity of the white egret standing alone on one leg enshrouded by fog in the frozen lagoon.

One of the joys of living in the country is viewing the visits of various species of wild life. Where I live we are frequently visited by deer, foxes, racoons, and wild turkeys. Some visits are random, some quite regular. Over the past year we have noted the regular appearance of a flock of wild turkeys who evidently have a tour route that takes them about 10 days to cover. When first noted we counted about 25 adult birds in the flock. But over the months their number gradually decreased. It dropped to 9 and held steady at 9 for several cycles, then dropped to 2. We could only speculate on the causes of their diminution, was it something wild or domestic killing them? And for the last few weeks I have been saddened when only one turkey showed up.

Today has been a difficult day for me. A tooth infection, a back problem, feeling down all day. Now it is evening, about 7 PM. A few minutes ago I went to close a window and saw something moving in the yard. Then it appeared several things were moving among the grass and weeds. Then a turkey came into view from behind some brush. Immediately I saw that the things moving in the grass were chicks. I started to count them and more and more appeared following the mother turkey. There were at least a dozen wandering around but always remaining near mom. Then a second turkey appeared bringing up the rear. This turkey was making sure there were no stragglers and was on the lookout for any danger. This must be dad doing just what fathers are supposed to do.

My mood had changed completely. Suddenly my feelings of depression were gone, replaced by a knowing joy. Seeing this archetypal family somehow reassured me that God was in his heaven and all was going to be right on earth. The missing turkeys were here again. Life was going to continue with both guidance and protection. And the message was that the guidance and protection are ever present and at all levels.

ABOUT DUCKS AND QUACKERY

A few weeks ago, I believe it was September 20, Rupert Sheldrake was in town and we went to hear him review his recent book on Dogs. He related many curious anecdotes regarding the "telepathic" powers of dogs and cats. According to his stories, animals can not only pick up on human thoughts at a distance [eg master's or mistress' intent to return home at an unusual time] but can perceive human intentions [eg we will be going to the vet]. Many of these cases were done under strict controls and could therefore be considered scientific results, some even being repeatable.

Yesterday [October 7] I was in Rohnert Park and driving past a large artificial pond noticed numerous water birds—ducks, geese, even a couple of swans—out on the lawn. They were scattered, but in groups, resting, some sleeping. A great photo-Op! Being about 1:30 pm I guessed they were taking their afternoon siesta. I got my camera and approached carefully. They were unconcerned and indifferent to my wandering among them shooting pictures. I was grateful to all the humans whom they had previously encountered for engendering in them such an attitude of trust. My picture taking didn't disturb them, except here and there one or two would wake up look me over and go back to sleep.

On my way back to the car after taking about a dozen pictures, I felt that I should thank them for being so cooperative. So I stopped a short distance away, turned toward them, stood silently and sent them a mental message, a silent blessing of love and oneness. Almost immediately a great many of them got to their feet craned their necks up and began clucking and quacking. A great chatter seemingly in response to my silent message. After a short time they fell silent but still stood erect as though waiting for me to reply to their response. I left, but later looking back saw that they had settled back to their siestas.

My physical presence did not disturb nor arouse them, but my mental message did. Is there some medium by which living organisms can communicate but is unsuspected by physicists? It is not sonic communication nor is it making use of some part of the electromagnetic spectrum. Is it possible that there may be some entirely different "spectrum" that emerges only at the level of complexity of life? If so, some animals have developed it far more than have humans. For those ^{of us} who drive on the freeway the coordinated movements of flocks of birds and schools of fish is nothing but awesome. .

Legend has it that at least one human, St Francis of Assisi, mastered this mode of communication. So, with humility perhaps humans can learn from our animal brothers and sisters something about ourselves we have long ignored.¹

By the way, What is the origin of the term "Quackery"?

¹I checked, October 4th, not October 7th, is St. Francis' feast day

BIRDS AND OMENS

By David La Chapelle

The Birds Part 5 2003#
" " " " " "

In August of 1939, only few days before the outbreak of war, two hundred and fifty pigeons attacked each other in Trafalgar square in London. That same week scores of blackbirds were found dead, washed along by the waters of the Danube. At the time these unaccountable deaths were considered an omen of war. A recent spate of robin deaths across Central Texas is under investigation by the Texas Parks and Wildlife Department's Kills and Spills Team of environmental scientists. Observations of dead and dying robins were first reported near Dallas in mid-January and have tracked the bird's migration as far south as Gonzalez. The incidents range from a few dead robins observed in suburban back yards to several hundred in a five-block area in Waco. (From the Texas Parks and Wildlife web site in February of 2003)

Omens might be conveniently dismissed as the imaginings of the deranged except for the fact that Einstein is turning in his grave. We live in a non-local universe and we now have scientific proof of what we know from the wisdom of our souls. There is a way in which life unfolds as if it were aware of what is happening within and around us. Events large and small confirm the undeniable intelligence of this unfolding. As we move through our world the world reflects back our progress in the form of synchronizations, accidents and omens.

When the space shuttle Columbia broke apart, it broke apart not over India, nor Asia, or Europe, nor even the Pacific. The first pieces hit the coast of America and the bulk of the debris fell upon Texas. The state that is the home to the President that is launching a war to ensure our freedom. Omen? You decide.

What we do know now about the Columbia is that engineers envisioned the precise pattern of action that accompanied the disaster before it happened. In the end the warnings were dismissed as the worst case scenario and nothing was done. The result was disastrous. The robins' deaths and the Columbia's terrible end may only be accidents. But then again, in this highly charged time, they may not be.

The arrogance, unilateral insistence, bullying, refusal to listen to other points of view and rush to action without a compelling case for such speed is the mark of hubris. And as the Greeks, the progenitors of our western civilization, understood only too well, when hubris flies high, it must come crashing down to earth. The robins' deaths and the Columbia's terrible end may only be accidents. But then again, in this highly charged time, they may not be.

Paul Tillich, a theologian and a deeply soulful man, described this process as Kairos: An outstanding moment in the temporal process, a moment in which the eternal breaks into the temporal — shaking, transforming it, creating a crisis at the depth of human existence.

If this is a non-local universe, one interconnected and intent of evolving a self reflecting image of its own inherent unity, then the omens of the physical world become important signposts of humanities progress. Freedom appears as true alignment with the self revealing nature of consciousness. Illusion appears when man's ego projects his own agenda onto the world and hopes to control the outcome of his ambition.

*These paragraphs are excerpts from David La Chapelle's article:
A NON-LOCAL UNIVERSE, FALLING BIRDS, AND THE RUSH TO WAR*

THE LANGUAGE OF THE TREES

A few years ago when returning through southern Oregon the road led through a magnificent forest of firs. As I drove south a light rain began to fall and a mist gathered around the tops of the trees. Continuing on I became aware of what seemed like a choir singing, but there was no sound. I felt I was in the presence of a great chorus which was exulting in joyous harmonies. There were definitely no such sounds, but something evoked in me the same feelings that such music would. I began to sing responding to a strange feeling of joy or happiness that I could not explain. The road suddenly left the forest and entered an inhabited area and the feelings shifted from the joyfulness I had been feeling to concerns about traffic. Further south the road again entered the forest and after a few miles I was again caught up in this strange euphoria of the forest. I decided it was the particular beauty of the forest that was inspiring me. But no, it was more than that. What I was tuning to was the singing of the trees. The forest was rejoicing in and with the rain. There was no doubt in my mind that I was in the presence of something like a psychic field of joy. I could definitely feel it. It is not unusual for the forest to speak to us through its visual beauty, but on this occasion I was somehow able to eavesdrop into the spiritual spectrum with which the trees themselves communicate.

We humans think of ourselves as the most intelligent of all species. Perhaps we are, but there may be attributes, unknown to us, that are equal to or superior to our kind of intelligence. And there may be entities, unknown to us, that possess these superior attributes. For example, it has often been proposed that the earth itself may be an entity possessing such attributes. But our arrogance precludes our seriously considering or investigating such hypotheses. [Confirmation may even lie beyond the limitations of our brand of intelligence.] But the totality of human experience with trees suggests that the hypothesis they possess some form of communicable quasi- or meta-intelligence has merit. The sacred groves of the pagans, the myths describing the spirits that reside in trees, the timeless praise of trees by poets and painters, and the affection sensitive humans today have for trees, all point to some subtle kinship between our two species.

The key to communication may lie in our developing a certain kind of sensitivity we all possess but have allowed to atrophy for lack of use. Trees speak the language of feeling, not our language of symbols. And to the extent we can feel, the trees can speak to us. And how can we speak back to them? I believe we speak to them by not speaking, by simply hearing in silence. Or if we can somehow radiate what we call gratitude, we can join with them. For their message seems to be filled to the brim with feelings of gratitude. And what is gratitude? It is the realization and expression of an inclusive precious oneness that we all share.

THE WISDOM OF TREES

There is more wisdom in the tree outside my window than in all the halls of government and board rooms of business. The branching of limbs and roots, is for establishing the alternatives and redundancy essential to survival, and to prevent monopoly that would surrender life to the power of central control. Even the central trunk is not a control center, but a distribution channel. And the leaves follow the adage: "From each according to his ability, and to each according to his needs." Though both political hierarchies and trees are constructed with levels, the former is a pyramid of power and control, the latter a vajra of diversity and endurance. In a tree, administration is for coordination and distribution not for acquisition of power. While there is profit and growth it is distributed and shared by every portion of the tree, not reserved exclusively for any part. And the business of a tree is to carry out the will of Heaven, succoring all of life by being a bridge between ground and sky, worshiping both Earth and Sun.



Synecdochic to a tree, in life we are each leaves. In old age we are the leaves of autumn. Some of us dry up and turn brown, others retreat to yellow, or compromise into orange, and still others turn a brilliant red. It is my wish that as I age I might become one of those fiery reds. As my chlorophyllic usefulness ends may I continue to serve by awakening beholders to the essence of red that resides in each of us, the warmth of compassion, the bonds of sharing, and the glory of sacrifice.

GROVES AND CLEARINGS

There is a curious symmetry in nature between a grove and a clearing. Myths and the folklore of many peoples speak of sacred groves, sacred to various gods or goddesses. And there are legends of clearings in a forest where one meets a deity in some form or other. Both groves and clearings are associated with supernatural beings, groves with their abodes, clearings with their manifestations to mortals.

I have reported elsewhere my experience of encountering a *vajra* in a magical clearing that I could never find again. But on another occasion I had a different kind of experience with a manifestation in a clearing. This occurred at a Cirstacian Monastery near Whitethorn, California. This is a monastery founded by Belgian nuns who were refugees from the Nazis in world war II. They built their chapel with one end having a glass floor-to-ceiling window that opened onto a clearing which was surrounded by firs and redwoods. The nuns always meditated facing this clearing which had a grassy floor and a single deciduous tree in its center. From time to time there would be retreats at Whitethorn and we secular types could join the nuns in their meditations. On one occasion when I was there on retreat we were all gathered in the chapel doing the afternoon office. Suddenly in the middle of the clearing standing next to the central tree stood a huge stag, with shining antlers. The nuns gasped. We were all awed by the sudden presence of this beautiful animal. It felt as though he were some messenger who had appeared to bring us a special spiritual message. While we were all absorbed in this event and its symbolic significance, the stag disappeared as suddenly as it had come. All of us felt that there was some sort of a theophany in this event.

But the manifestation of a stag with a spiritual message has historic precedents. St. Eustace in Roman times, and St. Hubert in the eighth century both reported encounters with a stag that occurred at critical moments in their lives. Their legends both mention a glowing cross shaped form on the stag's head between his antlers. If the Whitethorn stag had a cross we missed seeing it, but we did feel a euphoric spiritual presence.

In thinking about a spiritual message in the manifestation of the stag, I recalled a passage in the children's book, "Bambi", by Felix Salten. There is the final scene where the old Stag is trying to get a message through to the younger deer, Bambi. They have come across a human who has been shot, probably a poacher. The old stag says:

"Do you see, Bambi, He is lying there dead, like one of us. He isn't all-powerful as they say. He isn't above us. He's just the same as we are. He has the same needs, the same fears, and suffers in the same way as we. He can be killed like us. Do you understand, Bambi?" "Then speak."

Bambi was inspired, and said trembling:

"There is Another who is over us all, over us and over him."

"Now I can go", said the old stag.

November 14, 2004

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Some thoughts on a visit to the Armstrong Redwood Grove November 10, 1987

Upon entering the grove, one is very aware of entering a different space. The vibes suddenly change. It is difficult to articulate the message one receives. First, one gets the feeling that one is an intruder, not exactly welcome but of necessity tolerated. Then there is the feeling of being regarded somewhat contemptuously, of being judged, or rather prejudged. The mood is most solemn and there seems to be a soporific spell cast on everything. The primary message of the grove is DO NOT DISTURB, a message also passed on by the forestry people who undoubtedly have come under the spell of the grove and serve unconsciously as agents of the giants, independent of any of our national conservation values. My reaction is to try to avoid coming under the spell and maintain "scientific objectivity" which is to say to keep inviolate my own subjective prejudices. Certainly I could not rock their boat if I wanted to.

These giants have created an environment in which they can indefinitely survive. Ring counts reveal many to be over 1300 years old. But the number of species in their ecological complex is surprisingly limited. They are almost a self sufficient species depending only on each other for the preservation of the environment which sustains them. Some mosses and ferns together with their own droppings seem sufficient to maintain the moisture and soil conditions necessary for equilibrium. What prevents a proliferation of other species who would thrive in this type of "rain forest" environment is the absence of light. In fact the giants have removed practically all competition by appropriating all the sunlight and monopolizing the source of energy. But they have also cut off light from their own offspring. Only here and there a very limited number of young redwoods survive. And what is most significant, there is no "middle class". There are only the giants and very young, only those centuries old and those a decade or two or less. Evidently aspirations of the young to become part of the grove are illusory. Upon reaching a certain size their energy requirements can no longer be met and they fail to survive. I am sure that the remains of smaller trees have been removed by man. Only here and there on the forest floor are the remains of giants, who have succumbed to fire, wind or the vandalism of man.

How did such a configuration come about? More typical ecological complexes are dynamic. There is birth, ageing, death and recycling. Young trees sprout, grow up, and eventually, if all goes well, reach a maximum size, then in time succumb. The key that differentiates a dynamic ecology from that of the redwood grove, seems to be the limit to maximum size.

Variety is also an important parameter in every complex. The grove ecology appears to function with very restricted variety, but also there are only a limited number of giants. More dynamic ecologies have both a greater variety of species and greater numbers of members within each species. There seems to be some sort of "equipartition" relation between numbers and variety. The number allowed within each species depends on the breadth of the variety of species. The greater the variety, the larger the permitted population of each species.

From one afternoon's observation, I have generalized to the extent of surmising that number within a species, $n(s_1)$, $n(s_2)$,... the variety of species i.e. the number of different species, $v(s)$, the maximum sizes (masses, heights, ...), $m(s_1)$, $m(s_2)$,...and the dynamism or maximum ages $a(s_1)$, $a(s_2)$,...are all parameters of basic ecological significance. **Some functional guesswork:**

I. The equipartition relation:

$$n(s_1) = n(s_2) = n(s_3) = \dots = kv(s)$$

Which is to say the greater the variety, the greater the numbers within each species.

II. The maximum size-maximum age relation:

$$m(s) \text{ varies directly with } a(s)$$

What is revealed here is that there are two basic types of organism. 1) Those that follow Sigmoidal growth curves, reaching maxima, and 2) those whose size appears unbounded. The above relation is for genre 2)

III. The maximum size-variety relation:

$$v(s) \text{ varies inversely with } m(s)$$

It follows from the first relation that $n(s)$ also varies inversely with $m(s)$.

IV. We finally suspect some bound on the entire mass of the complex.

See Science & The Future Year Book 2000 p 320

re Prairie chicken

Number & Variety

ie. if diversity ↑, multiplicity ↑

ABOUT CLOUDS

From BELVKNOW.WPD March 3, 2001 #28

I live in a region surrounded by mountains and these mountains in turn are often surrounded by clouds. The constancy of the mountains and the variety of the clouds make this special part of the earth a very rich place. The mountains and the clouds seem to find fulfillment in one another. The permanent hills find release from their ^{fixed} ~~fixed~~ness through their adornment by the **clouds**; and the ephemeral **clouds** find meaning in their impermanence through their enhancement of the hills. The mountains and the clouds symbolize for me the world and our lives, our knowledge and our faith.

From LSTPSC01.P51 March 23, 1991 #23

What I have learned has been gleaned from that which happened to come my way, not only people, but books, places, hills, birds, **clouds**, lights and sounds. Behind it all there seemed to be an invisible guiding hand.

From DIARI.P51 January 18, 1993 #1

Only when I look at the hills and **clouds** do I feel related and in harmony.

From SAMHAIN.WPD March 28, 2000 #15 [January 18, 1999 @ 6704]

We share the same world with mountains that tune to a drummer who beats the tempo with eons, and with **clouds** who dance to a drummer who beats the tempo with minutes. We discover who we are when we contemplate the majesty of the mountains or the protean forms of the **clouds**.

From SHARING4.WPD May 23, 2000 #35 [FDMA]

Clouds come and go in a matter of a few minutes. They are transient phenomena to humans as are humans to mountains.

lasting
 While The eternal hills are freed from their ~~fixed~~ ^{fixed} form
 by the ^{crowns} ~~adornments~~ of fleeting clouds
 The Ephemeral clouds find meaning in their impermanence
 by enhancing the ~~lasting~~ ^{lasting} hills
 eternal

Do the Math
 Lifetime
 $\frac{\text{cloud}}{\text{human}} = \frac{\text{human}}{\text{mountain}}$

ONE DAY THE HILL HALF-HIDES THE CLOUD
 ON ANOTHER DAY THE CLOUD HALF-HIDES THE HILL

CLOUDS

Tomorrow is the date of the crossing when the sun moves into its southern lobe, and the clock and sundial are in agreement. A tropos, the beginning of a forgotten season lost between Summer and Autumn. The magical time of the Harvest Moon, even the beginning of a new year in one culture [Rosh Hashana]. Today I saw the first red leaves on a maple, at least the plant world recognizes what humans have forgotten. And today I sat by a fountain and watched the clouds as they changed their forms. A cloud can become anything, it has boundless potential. Is this what the Buddhists mean when they say "Form is emptiness"? But the forms of clouds are not the forms of thought, they are the forms of feeling. Being like music which also contains the forms of feeling, just as mathematics contains the forms of thought, and silence contains the forms of recognition. As I looked at the white clouds and the blue sky, I thought of those pictures the astronauts have taken of the earth from the distance of the moon. The earth a small blue and white disk, the same blue and white we see when we look up. The clouds divide the inside from the outside, they are the fulcrum of symmetry between earth and cosmos.

Sometimes I also wonder about life spans. Seeing clouds resting on a mountain top causes me to reflect that we are able to simultaneously view clouds whose lifetime is measured in hours and mountains whose lifetime is measured in millions of years. And when we do the numbers, we find that the lifetime of a cloud is to the lifetime of a human as the lifetime of a human is to the lifetime of a mountain. So our lives form a bridge that allows us to experience not only the small and large but also the brief and the long lasting. We live in a temporal zone that has been defined by Herakleidos on one side and by Parmenides on the other. Change is only perceived against the backdrop of the changeless.

THE FENG SHUI OF CLOUDS

風水

The interface between a human being and the world consists of two principal channels: The channel of perception—the physical senses, sight, sound, smell, taste, touch; and the channel of feeling which delivers to us fear, anger, angst, power, security, peace, humility, love, joy, awe, etc. [Both channels deal with the static and dynamic, the slow and the fast.] In the case of perception the specific sense channels are identified, while the messages may be quite varied. In the case of feelings the specific messages are identified, while the channels are unidentified and may be quite varied. It might be said that perception reveals the visible aspects of the world and feeling reveals the invisible aspects of the world. Perception discloses the forms, feeling discloses the spaces created by those forms. We see the forms, we feel the spaces they create. Feng Shui relates the two, the feelings to the perceptions, the “empty” spaces to the visible forms. And Feng Shui has catalogued an extensive set of equations between form and feeling. Where to place a wall, a bush, a stone, a pond, a street, etc. to give us secure space, peaceful space, dominating space, euphoric space, etc.

Where I live, in a broad valley rimmed with hills with a single high mountain, feeling is not only tuned to the constant terrain, but varies widely with what is ephemerally present in the sky. In the creation of the “empty” space which governs our feeling, the forms and densities of the clouds overrule the features of the earth. But most powerful of all are the varied effects that the interplay of clouds and mountain produce. The resulting feelings make it easy to understand how the ancients could associate mountains and their cloud garments with the abode of gods. Feelings are the result of forces and forces are unseen, only felt. And what are gods? They are invisible. They are anthropomorphized forces. [Even the physicist with his four physical forces must agree that they are not seen, only felt.] Feng Shui tells us of the many forces, or gods, that can exist in each emptiness.

the

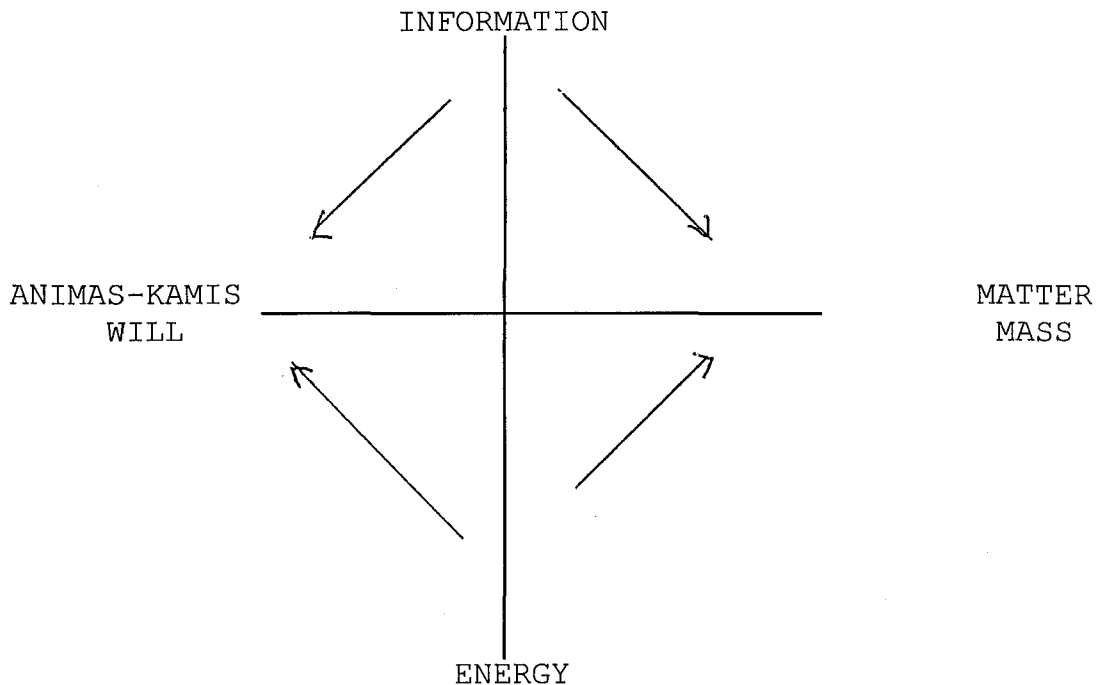
2002-06--229

see CLOUDS.WPD 2000 #63 and CROSSING.WPD 1999 #41

The numerous forms that clouds assume are manifestations of the strength and directions of various invisible forces. This involves more than conventional meteorology. For the forces at play comprise not only winds and thermodynamic forces, but include impacts from non physical dimensions. When the shaman observes the forms of the clouds, it is not just to predict the weather. He sees in the clouds the portents of the day in all its aspects, because the clouds receive their forms from the same source that shapes the moods and fortunes of all life.

At some abstract level, both the forms of clouds and the forms of life are the same. Some clouds are animal like, in having the maximum volume for a given surface area [cumulus], other clouds are plant like having maximum area with minimum volume [cirrus]

Although we observe clouds from positions in P-SPACE, the clouds themselves are independent of P-SPACE. While there are orographic clouds influenced by terrestrial terrain, in general clouds can assume their protean forms anywhere in P-SPACE. Clouds are denizens of H-SPACE. Their form and morphing being governed by those forces peculiar to H-SPACE. Form in H-SPACE is analogous to place in P-SPACE, and morphing in H-SPACE corresponds to movement in P-SPACE.



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2002-

see CLOUDS.WPD 2000 #63 and CROSSING.WPD 1999 #41

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CLOUDS

Message = Messenger

Form \Rightarrow Energy

Rates of change differ in P-SPACE [Movement]
from
Rates of change in H-SPACE [slope]

2006

Inaugurating not only a new year, but a new vision, this morning's dawn broke meteorological precedents and displayed a euphoric panorama assuring us God was still in charge and all would again be right with the world.

The ~~the~~ sky and hills were different from any I had ever seen before. From low in the southeast a red glow gradually diffused the sky. As it brought forth its light, the usual hills in the east were outlined, but immediately behind them emerged a second range of higher hills, undoubtedly a cloud bank, but having an f¹ profile making them appear as real as an actual mountain range. Then above this range appeared even higher peaks, white with cloud-snow on their isolated summits, a trans-placed Himalayan landscape.

With this serial regression of cloud-mountain ranges came an important message. It revealed the true nature of the world: A sequence of successive realities behind each illusory reality. But most startling was the increase in beauty and grandeur at each successive reality. My eyes were repeatedly drawn up from the familiar hills to the magnificent heights and lights beyond. On one precious morning, it seemed the true nature of the world stood revealed.

June 28, 2006

Today the sky manifested its spiritual powers: diversity, diversities, everywhere. On ordinary days the sky exhibits but one species of cloud—cumulus, stratus, cirrus or perhaps none at all. But today the diversity of species and the diversity of form within each specie revealed a splendor of nature that reaches down and rescues us humans from our synchronic tyrannies. There was fog, orographic mists, thunder heads, cumulus, alto cumulus, and meta cumulus recursions, and above all thin high cirrus. And the hills were the supporting cast in this great drama of clouds, along with the grass, the trees, the groves, and the forests. All joined together, a melodic chorus.

I wanted to reach up and embrace the sky, but it was not necessary for the sky had already embraced me. I was loved and I was in love. I found oneness with the Sky and Earth Goddesses, surrounded by their choirs of attendants all singing and inviting us humans to join with them.

Oneness revealed itself, not as a completed whole or a One to be praised and worshiped for what it is, but as an ever expanding diversity that was to be joined with and accompanied in exploring and creating ever greater diversities of beautiful forms and relationships. A new theophany!

AUGUST STORM

The billowy host assembled in answer to the Air God's rumbling call.

Towering cloud anvils borne by dark horizontal vanes
moved like stately ships before the wind.

The bright gaps of blue, the washed pillows of white,
and the misty sheets of gray merged
and dark began battle with light.

From deep within the darkest cloud cave
suddenly came a flash followed by
a mighty barrel rolling loudly across the cloud roof.
Then descended a calm and stillness.

But the great symphony was only about to begin.

The Air God sent a faint breeze with moving wisps.

The first drops arrived large and diffident
but were soon followed by the lesser ranks in increasing numbers,
a growing crescendo awakening the leafy chorus
to a harmony of heaven and earth.

Then from the mingling dark and light
the heavy bass of the Fire God began its roar.

A cloud cavern split and hurled a flash that arched the sky.

Another rending crack and the battle was joined.

The caverns opened and closed flashing and roaring
and the drops sped their fall
beating the earth into soggy submission.

The first movement belonged to the Air God,
the second to the Fire God,

but now new tones arose as the Water God
practiced a multitude of melodies

--rushing, swirling, gushing, splashing.

Soon the liquid harmonies drowned all others
and Air and Fire fell silent listening.

Without their support the drops became hesitant and less certain
then took council to withdraw.

Water continued the third movement
with new melodies--babbling, gurgling, bubbling, dripping.

Then the Earth God took over
and conducted the long fourth and final movement--
the sounds of silence.

BLUE AUTUMN AND GRAY AUTUMN

With what sense organ does one hear the singing of trees? I don't know, but I do know that on many occasions I can hear the trees sing. Their songs always seem to be in harmony with the sky, the clouds, the rain, or whatever the weather brings. And, whatever the weather, all their songs are songs of joy. It is as though trees live in a world of great unity with one another, all being members of a vast chorus or orchestra skilled in rendering the moods of the moment into an appropriate symphony.

The bright yellows, reds, and oranges of autumn leaves, change their mood when the blue sky turns to gray. They come together, seem to huddle. The grayness makes the world smaller and in the higher density the contrasts are amplified. The power in the colors changes with sky, they sing one song when the sky is blue but a different song when the sky is gray. I listen trying to detect what they are singing.

Figure and ground, color and background, How is it that the ground, the background, the infrastructure alters the figure, the colors, the mood? Like the mood in music, major and minor, same notes a different feel,

We may control the figure, the domain of choice, of free will, but we have no control over the Parmedidean ground, the infrastructure which both limits and enables all figures.

NOVEMBER

The sky must be gray.
The air cold and still
with the faint fragrance
of cedar smoke hanging
lightly over all.

The leaves moist
yet bright with the colors
of Autumn--Gold, Orange, Red,
Yellow and Brown.

The wild geese passing
overhead in fluttering arrows
and long ribbons of wings.

The world pressing close to
that para=world where
the best of all Autumns past
has been preciously preserved.

To cross between the worlds
at this point in time would
be to cross into the highest
glory of all that is mortal.

This is the Harvest, when each
bequeaths its lifetime's work and
bestowes its valedictory fruits
upon those who shall carry the
seeds of renewal.

This is the celebration of
climactic achievement in which all
stand in solemn awe of each.

And Love manifests itself in
its humble facet of gratefulness.

SOME DECEMBER RAMBLINGS

The sky is a December sky, unlike the sky of any other month, overcast with gray clouds so heavy they droop to rest on the crests of the hills. And a few tall evergreens stand in bold contrast, not defying the clouds but complementing them. Both the clouds and the trees seem joined in some celebration that a human can only vaguely sense. And here and there on some scattered maples are a few red leaves marking the change of seasons that is taking place.

As I watch the trees I feel their contentment and composure. They radiate, or should I say, share their self assurance. Perhaps it is a property of all members of the plant kingdom that they can *be* without moving about and can *function* without having continually to go to some other place. It feels they have found in stillness and silence what we seek in motion and noise. Trees and humans live in different spaces. We live in the space of motion, and our sense of time derives from change resulting from movement, speed, and acceleration, –linear change. The trees live in a space of forms, and their sense of time derives from changes that take place in form, –cyclical change, seasonal change. Indeed, the seasons are their kingdom, not ours. We can only passively watch, but they gladly share their celebrations with us. And for the most part trees seem unconcerned with their location in our space of position and movement. A sacred grove only exists in form space, but it may be projected onto many places in our space.

And suddenly, there is a sign in the heavens. A flock of egrets flying overhead in a beautifully symmetric V. Birds must dwell in both motion space and form space, there is movement yes, but there is also such grace in the forms they collectively create. And now the gray mists move slowly along the crests of the hills and change form as they move. Clouds too must exist in both spaces. At this moment the trees, the birds, the mists, and the hills all seemed tuned to some transcendent consciousness that is beyond human grasp.

Why is it, when all nature goes together, that only man chooses to “go it alone”? Seeking, not to belong, but to dominate.

THE MYSTERY

The Mystery is the total embracing context that encompasses all matter, all life, all thought, and all time. We encounter the Mystery daily, but fear to engage it for it is a realm of uncertainty and confusion. However, when we do have the courage to enter the Mystery we experience a brief glimpse of a euphoric essence. Sometimes this brief glimpse is of our familiar world but perceived from an entirely different perspective. Sometimes the glimpse is a bridge between our familiar material world and a world of unfamiliar but beautiful images. We cannot grasp or capture these glimpses, nor can we even begin to articulate them, but somehow we recognize that they possess a profound reality. They escape the prisons of continuity and contiguity that delimit material reality, and they transcend the consistencies imposed by logic and reason. Yet the residue they leave in our consciousness is euphoric, and their uncertainty is far more reassuring than any of the certainties associated with our material world. What a strange paradox: A reassuring uncertainty!

MYSDIR.WPD

06-08-24

2006 #41

"The MYSTERY vs MONOLATRY
WHOLENESS vs ONENESS

Confronting
Engaging the MYSTERY leads to PEACE
WHOLENESS

WHOLENESS TRANSCENDS CERTAINTY

But we choose to Confront each other
Engage
which brings conflict
war
destruction
termination

We seek certainty through oneness, the obliteration of alternatives

Whereas the MYSTERY contains all alternatives
yet gives a security that
is devoid of certainty

Dup

HARMONIC CONVERGENCE--POST SCRIPT

Last Friday evening I gave a lecture critiquing the Harmonic Convergence. I pointed out that it had no relation to its supposed roots--the prophecies and myths of the Mayans and Nahuatl peoples. Its dates were in error and its selections and interpretations of archetypes were in error. Nonetheless, if for whatever reason, thousands were going to join to celebrate the sacredness of the earth, planetary peace, and a new consciousness to replace the outworn worldview of the troglodyte "brightest and best" I would certainly join in.

I did not have access to one of the counter-establishment's sacred sites, so early on the 16th I drove a few miles to the one remaining open field in the city, where there was an unimpeded view of the range of hills that bordered the valley on the east. There I waited for the dawn and sunrise.

The silent city was not yet awake. The faint glow in the east outlined the profile of the hills. Lone birds were on pre-dawn errands between the scattered trees. Then as the glow spread, groupie birds took to the air. A party of seven centered themselves above and across on a wire, sitting as motionless as the trees. The birds, the trees, the field and I all waited and watched. A halo appeared above the hills and arched skyward, crepuscular rays shot upwards revealing the hidden clouds. All nature focused watching the hills as the expanding halo transformed the sky. Something was about to happen--something that would change the world.

Suddenly the birds took wing as a fire-dragon appeared on the crest of the highest hill and began to crawl along the ridge. A birdsong broke the silence, the hidden became manifest. Where but a moment before there had been only anticipation and hope, there was now assurance and confidence. Life and movement appeared everywhere. There was no longer any doubt as to what would be. The world had changed masters but without loss of its earthness.

Was it a special day, a day that occurs only once in 468 years? Yes, it was a special day, a day that occurs once in 24 hours. The magic moment of opportunity and transformation is there every day waiting for us to join the lonely shaman of the First Mesa to greet it and to take up our share in shaping the world that can be.

Full Moon names date back to Native Americans, of what is now the northern and eastern United States. The tribes kept track of the seasons by giving distinctive names to each recurring full Moon. Their names were applied to the entire month in which each occurred. There was some variation in the Moon names, but in general, the same ones were current throughout the Algonquin tribes from New England to Lake Superior. European settlers followed that custom and created some of their own names. Since the lunar month is only 29 days long on the average, the full Moon dates shift from year to year. Here is the Farmers Almanac's list of the full Moon names.

- **Full Wolf Moon - January** Amid the cold and deep snows of midwinter, the wolf packs howled hungrily outside Indian villages. Thus, the name for January's full Moon. Sometimes it was also referred to as the Old Moon, or the Moon After Yule. Some called it the Full Snow Moon, but most tribes applied that name to the next Moon.

Full Snow Moon - February Since the heaviest snow usually falls during this month, native tribes of the north and east most often called February's full Moon the Full Snow Moon. Some tribes also referred to this Moon as the Full Hunger Moon, since harsh weather conditions in their areas made hunting very difficult

Full Worm - March Moon As the temperature begins to warm and the ground begins to thaw, earthworm casts appear, heralding the return of the robins. The more northern tribes knew this Moon as the Full Crow Moon, when the cawing of crows signaled the end of winter; or the Full Crust Moon, because the snow cover becomes crusted from thawing by day and freezing at night. The Full Sap Moon, marking the time of tapping maple trees, is another variation. To the settlers, it was also known as the Lenten Moon, and was considered to be the last full Moon of winter.

- **Full Pink Moon - April** This name came from the herb moss pink, or wild ground phlox, which is one of the earliest widespread flowers of the spring. Other names for this month's celestial body include the Full Sprouting Grass Moon, the Egg Moon, and among coastal tribes the Full Fish Moon, because this was the time that the shad swam upstream to spawn.

- **Full Flower Moon - May** In most areas, flowers are abundant everywhere during this time. Thus, the name of this Moon. Other names include the Full Corn Planting Moon, or the Milk Moon.

- **Full Strawberry Moon - June** This name was universal to every Algonquin tribe. However, in Europe they called it the Rose Moon. Also because the relatively short season for harvesting strawberries comes each year during the month of June . . . so the full Moon that occurs during that month was christened for the strawberry!

• **The Full Buck Moon - July** July is normally the month when the new antlers of buck deer push out of their foreheads in coatings of velvety fur. It was also often called the Full Thunder Moon, for the reason that thunderstorms are most frequent during this time. Another name for this month's Moon was the Full Hay Moon.

• **Full Sturgeon Moon - August** The fishing tribes are given credit for the naming of this Moon, since sturgeon, a large fish of the Great Lakes and other major bodies of water, were most readily caught during this month. A few tribes knew it as the Full Red Moon because, as the Moon rises, it appears reddish through any sultry haze. It was also called the Green Corn Moon or Grain Moon.

• **Full Harvest Moon - September** This is the full Moon that occurs closest to the autumn equinox. In two years out of three, the Harvest Moon comes in September, but in some years it occurs in October. At the peak of harvest, farmers can work late into the night by the light of this Moon. Usually the full Moon rises an average of 50 minutes later each night, but for the few nights around the Harvest Moon, the Moon seems to rise at nearly the same time each night: just 25 to 30 minutes later across the U.S., and only 10 to 20 minutes later for much of Canada and Europe. Corn, pumpkins, squash, beans, and wild rice the chief Indian staples are now ready for gathering.

• **Full Hunter's Moon - October** With the leaves falling and the deer fattened, it is time to hunt. Since the fields have been reaped, hunters can easily see fox and the animals which have come out to glean.

• **Full Beaver Moon - November** This was the time to set beaver traps before the swamps froze, to ensure a supply of warm winter furs. Another interpretation suggests that the name Full Beaver Moon comes from the fact that the beavers are now actively preparing for winter. It is sometimes also referred to as the Frosty Moon.

• **The Full Cold Moon; or the Full Long Nights Moon - December** During this month the winter cold fastens its grip, and nights are at their longest and darkest. It is also sometimes called the Moon before Yule. The term Long Night Moon is a doubly appropriate name because the midwinter night is indeed long, and because the Moon is above the horizon for a long time. The midwinter full Moon has a high trajectory across the sky because it is opposite a low Sun.

THE MOON ILLUSION

Albert G. Wilson

It has been experimentally demonstrated that the moon illusion, the apparent enlargement of the diameter of the moon when near the horizon, is a psychological, not an atmospheric effect. Several hypotheses have been suggested, including the effect is due to the angle our head makes with horizon, the effect arises from comparisons with the sizes of more familiar objects such as trees and chimneys, the effect has something to do with rods and cones, etc. None of these proposals is very satisfying.

My interest in the illusion began when I lived in Topanga Canyon in California. Our house was located half way up the side of a hill and we could look across the canyon at a symmetric mountain of roughly pyramid shape. This mountain was interesting because it changed size at night. In the full light of day, the mountain was seen to be covered with brush and trees and it extended to cover a sizeable portion of the direct cross-canyon view. At night, however, when only little more than outlines were visible, it shrank down to being but a small fraction of the canyon view. It occurred to me that this effect was related to the apparent change

of size of the moon as it climbed from the horizon.

The common ingredient in both cases was information. In the daytime the view of the mountain was filled with detail, shapes of trees, rocks, etc, an abundance of information. The same for the moon when near the horizon, lots of information in the view, roof tops, trees, poles, etc. In both cases the mountain and the moon were enlarged. At night the details on the mountain disappeared with much loss of information. And when the moon is higher in the sky there is also much less information in the view. In both cases the mountain and the moon appear to be smaller. In toto we have, when there is lots of information present, the central object of view becomes enlarged, with less information present, the object shrinks.

One way of explaining this is to postulate two diaphragms or 'cones of view'. One diaphragm or cone is the sensory or optical field of view, the field optometrists study when they check peripheral vision. The other diaphragm or cone is a cognitive or informational one defined by the amount of visual information that can be processed in some physiological time unit. The

angular size of both cones is limited, but the ratio of their sizes varies. When the 'density' of information is large, the angular field of the cognitive cone narrows resulting in the object of view occupying a larger fraction of this information cone, i.e. the object appears enlarged. Conversely, when the density of information is smaller, the angular field of the cognitive cone grows and the central object appears relatively smaller. The apparent size of an object is determined by its angular relation to the cognitive cone, not the optical cone.

There is also a rod-cone illumination factor affecting the size of the optical cone, but this is apparently a much smaller effect than the angular changes taking place in information processing. A small cognitive angle of elevation effect may also be present, a vestige of primitive man's survival adaptation.

More formally, in a cognitive cone we postulate a bound to the number of bits of information that can be processed per scanning time unit. If σ = the information density measured in bits/(arcsec)², and if Ω = the angular field size of the information cone, the total number of bits is $= \sigma\Omega$. The value of Ω will adjust so that the bound, $\sigma\Omega/t \leq B$, is satisfied, where B is the maximum amount of information that can be processed in time t. For t fixed, (the static case), a large value of σ forces Ω to be smaller, which in turn makes a centrally viewed object occupy a larger percentage of Ω . Conversely, a small value of σ allows Ω to be larger and a central object appears smaller. In summary, the moon illusion is the result of the existence of a limit to our visual information processing capacity.

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Use frame for cone

THE NIGHT OF THE HUNTER'S MOON

There are many kinds of moon: new moons, full moons, first quarter and last quarter moons, crescent moons, half moons and gibbous moons. There are blood moons that occur during an eclipse, and there are blue moons that occur whenever there are two full moons in the same month, (once every 2.73 years). There are June moons and August moons. There are harvest moons (the full moon closest to the autumnal equinox) and hunter's moons (the full moon following the harvest moon). All these moons have been described together with their mystiques and symbolism in folk lore, song, and literature.

Tonight is the night of the hunter's moon. As twilight fell I went up the hill looking over the lagoon and watched the cattle slowly wending their way home, a scene whose quiet and timeless mood was poetically captured years ago in Gray's solemn Elegy. As darkness fell the lights of the distant city began to flicker on and off and behind them the outline of the hills gradually softened. Then replacing the day's fading weariness, a magical energy emerged and the lights of the city were joined by a myriad flashing points that danced along the hill tops. What was this? I had never seen the like before. Were these tips of flames of some hidden fire behind the hill, alternately disappearing and reappearing and then racing back and forth along the ridge? They were not flames, they were fairies celebrating an enchanting reality that mortals who have great good fortune may once in a blue moon be allowed to glimpse. How is it that we can recognize that reality from only a glimpse? We know it is real, more real than the world of day. It calls to us and reminds us who we are. In it we catch a view of our long lost home whose beauty and mystery moves us to tears.

But hold. Now a faint glow rises behind the ridge. It brightens and suddenly a spot of brilliant orange appears. Everything stops and for the next few moments remains transfixed as the orange globe of the hunter's moon majestically mounts into the sky.

It is Samhain, the night when our world and the magic world of the fairy lights are in communion. It is the season when we can see a transcendent reality of transforming beauty and know for a brief moment who we really are. This the Celtic peoples of long ago well knew. We have since forgotten, though we celebrate it still. We call it Halloween.

July 6, 2004

THE EASTERN HILLS

Sometimes when viewing hills that lie to the east, we feel that our destiny lies beyond them. Not in the valley that lies on the other side of the hill, but beyond the hill into some unknown dimension. As our view sweeps up the slope to the ridge, at the summit the world splits into two worlds. One world goes over the hill and into the valley beyond and on over the next hill and on and on, following the surface of the earth, a finite sphere whose curvature is closed. But the other world separates at the summit and bends upward into a space of infinite extent whose curvature is open. While both of these worlds are real, we live for the most part in the closed world. But from time to time we are able to glimpse the open world, as we can when watching the harvest moon mount above the ridge of an eastern hill into infinite space.

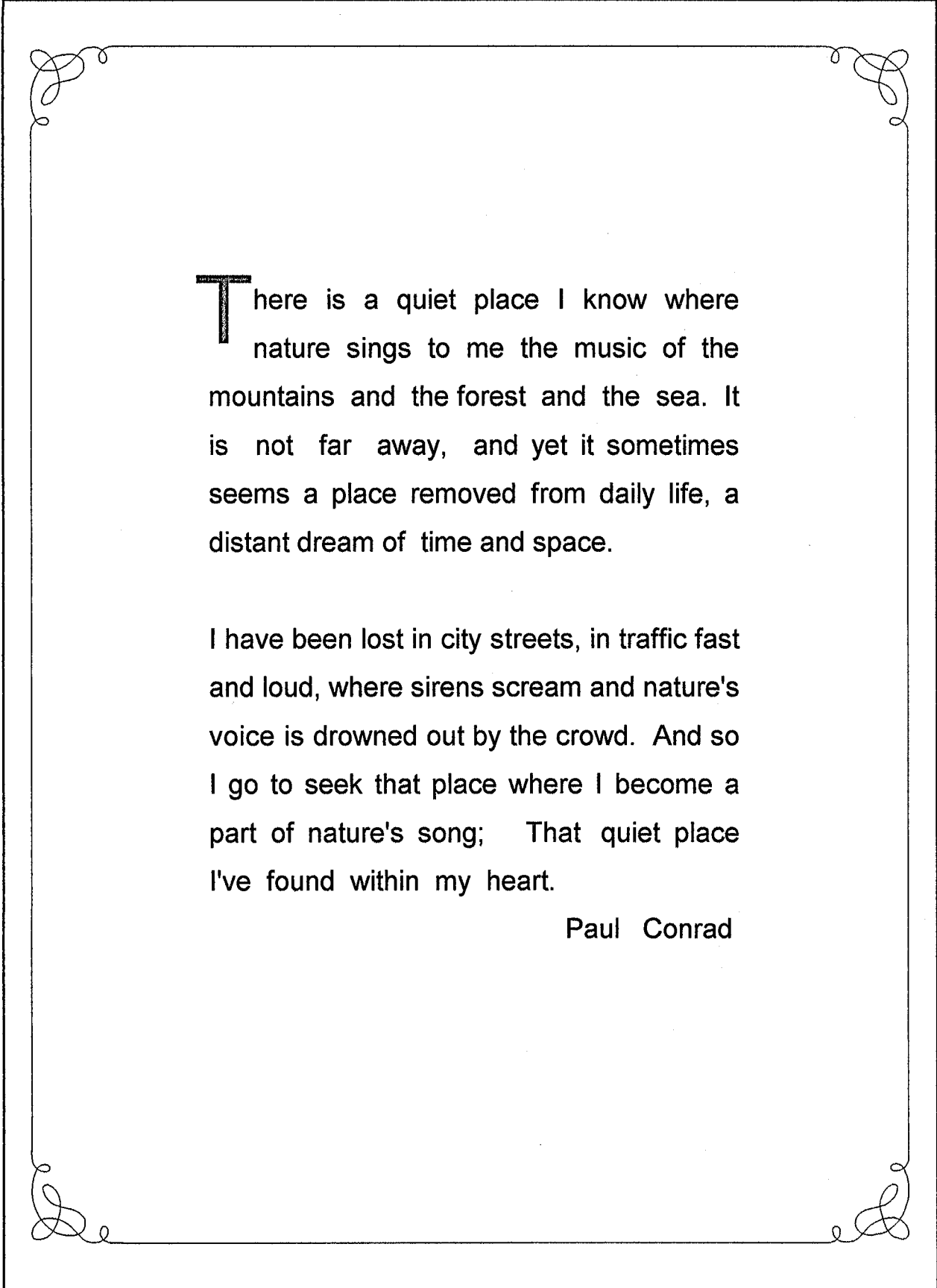
NOTE 09. WPD

THE EASTERN HILLS

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Yesterday I had surgery on my right eye to remove cataracts. And today as my eye begins to recover I see two worlds. The left eye still sees the cataract dark world with sharpness. The right eye sees a cataract free bright colorful world but with fuzziness. However, the two worlds are displaced, the bright world of light a few degrees above the dark cataract world. Indeed, these are two worlds, one darkened by the partial blindness of the cataracts of traditional prejudice but from long experience seen sharply; the other brilliant, colorful, but lacking all the sharp edges of this/not-this, us/them, for/against that constitute the dark world.

The way my eyes see today is thus another metaphor for what I was trying to say about the hills. Sharpness of our physical world derives from repetitive experience. On the other hand, the higher world of Light will never be seen sharply, not only because we experience it less frequently, but because it does not narrow down to the dyadic, but remains eternally open.



There is a quiet place I know where
nature sings to me the music of the
mountains and the forest and the sea. It
is not far away, and yet it sometimes
seems a place removed from daily life, a
distant dream of time and space.

I have been lost in city streets, in traffic fast
and loud, where sirens scream and nature's
voice is drowned out by the crowd. And so
I go to seek that place where I become a
part of nature's song; That quiet place
I've found within my heart.

Paul Conrad

This book is dedicated to Sir Edmund Hillary, Urgyen Jigme Rabsel, and

TO SEE THE GREATNESS of a mountain, one must keep one's distance; to understand its form one must move around it; to experience its moods, one must see it at sunrise and sunset, at noon and at midnight, in sun and in rain, in snow and in storm, in summer and in winter and in all the other seasons. He who can see the mountain like this comes near to the life of the mountain, a life that is as intense and varied as that of a human being.

—Lama Anagarika Govinda

THE NIGHT SKY

When we can no longer see the stars, what within us will die?

Today I received a flyer in the mail from the International Dark-Sky Association. This is a non-profit organization dedicated to reducing the amount of nighttime scattered artificial light, which they point out is not only wasteful but threatening to steal from human experience the majesty and mystery of the starry heavens. At the core of this group are astronomers, both professional and amateur, who have correctly analyzed the waste and cost of lighting the night sky. Thirty percent of nighttime artificial light is scattered upward where it provides no utilitarian function for either activity or security. They estimate the annual cost of this wasted light to be in excess of \$1.5 billion. But what is the real cost?



THE NIGHT FACE OF NORTH AMERICA
(International Dark Sky Association)

For millennia our ancestors have watched the steadfastness and the movements of the night sky. This continuing spectacle of permanence and change has played an immense role in the intellectual and spiritual development of humanity. The starry sky has been our window onto that which is beyond ourselves, it has been our link to the "Other". At this time we are becoming aware of how many of our activities are eroding and threatening our home, the Earth. But in our narrow obsessions we are also closing the window to the prime source of our being and to the dynamic of our becoming. The receiving into our being of the light of the stars has for ages been a sacrament uniting us with all of which we are a part. Starlight is the stem cell of humanity's spiritual essence. If the window closes, what within us will die?

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THE WORLD OF SILENCE

After many years observing the stars, I finally realized what my desire to be an astronomer had really been about. It was a need for a time of solitude, a time of silence, a time to let one's consciousness go beyond the immediate, the local, the ephemeral. When years later I discovered more traditional forms of meditation, it seemed very much *deja vu*. I had been there before when seeking the Great Silence that lies beyond the shutters of an observatory dome.

Now many years later as I lose my sensory hearing, the sounds that are closest to the Silence disappear first, the soughing of the wind in the trees, the songs of birds, and the many melodies that are sung by the voices of water. Last to be lost are the sounds that belong least to the World of Silence, horns, engines, trucks...

But as outer hearing fades, it is slowly replaced by an inner hearing. I begin to "hear" sounds from some nearby hidden world, a world that fleetingly manifests itself at unexpected times and places, always accompanied by a moment of awe and wonderment. There is brief recognition of vistas of great beauty, an instant of presence in which one beholds the world as it really is unobscured by the curtains of illusion that we, as physical beings, have by consensus drawn about ourselves. At times I can hear bells, great and small, ringing in a random harmony. They swell, then fade. At their peak their pealing subdues all the noise of this world. And when evening falls the darkening sky frees the light from other secreted worlds, and when the earth falls silentward it sets free the sounds of these other realms. It is thus that we begin to perceive how we are imprisoned by the luminous and sonorous noises of this world.

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THE ASTRONOMY OF SILENCE

Astronomy is the science in which we do not speak, only listen, listen to the starlight. It is true that we listen selectively, and that we understand only part of what we hear. But in having to remain silent we are not so likely to confuse our own voice with the voice of the cosmos. It is curious that with access to such purity, we nonetheless seek to extend our prejudices to encompass the whole universe by assuming that as it is here it is so everywhere and that as it is now it will always be.

Are we really ready to encounter the stars? Until we realize our identity with our parents, the Earth and the Sun, and know all the members of our family, we have not the wisdom to meet with any who may dwell beyond our home. Only when we come into oneness with all that live here, all that here support, all that endure in our midst, will we be able to hear and respond to the wondrous variety that inhabits the Cosmos.

It has been asked, Why have we not been contacted? Perhaps we are unprepared to know what lies beyond. Is it that we are not ready to receive, or is it that we have nothing to give? So long as we are intolerant and uncomfortable with local variety, we are not ready to encounter true variety. So long as we seek to render the world in our own image, we are not ready for coexistence with pluralities of images.

Only through the astronomy of silence, hearing what the starlight is seeking to tell us, will we reach the maturity for cosmic companionship.

~~seconds direct view of the spectaele.~~ Here we were suspended half way between heaven and earth and there was the amazing corona of the sun and adjacent were stars and planets that would not be visible again until another time of year. The whole universe was displayed above and beneath us. I had the strongest feeling that if I could just look at this spectacle long enough I could penetrate further into the truth than with all the data we could ever collect with our instruments. In that moment of deep darkness, I felt for the first time the oneness of all things, the earth, the sun, the stars, and we ourselves in the middle of it all. This was enlightenment. This was a glimpse of God.

[You know, today I can't remember what the purpose of our observations was. We collected and reduced our data, wrote and published the report and it sits on some shelves in some libraries. But that does not matter.] The exploration began with a telescope, but the message was received with the heart. For me now darkness is not fearful nor depressing. It has become through the path of knowing a way to the mystic's 'cloud of unknowing'. And this is what the darkness of Advent can be.

I often think about the astronauts and their encounter with darkness. In outer space all is black. But this is curious because space is filled with light. Light is everywhere and nowhere, and only when it strikes a bit of matter does it manifest itself. This give us a different way to look at light and dark, perhaps closer to the way it was before God separated the light from the darkness to make day and night. It is only on the surface of the earth that light and dark are so separated. Elsewhere they are intimately intertwined. I think this is why it is said that 'to God light and dark are as one'. I feel the time has come for us to venture into the darkness knowing that in its depths we will find a light greater than any we have known.

THE STARS

One of the earliest memories of my childhood was an evening walk with my parents. As I recall we had left the city and were in the country walking along a railroad track. My father took my arm and pointed out to me the stars up in the dark sky. For some reason I became very excited, as though I had just been told I was going to receive a present, a new puppy or even a pony. I just had to look and look and look at the stars. Then my mother taught me the little verse, "Twinkle, twinkle, little star, ..." And I kept saying it over and over all the way home.

Today I sometimes wonder if, with the stars obscured and our eyes constantly trained on ourselves, we inevitably limit our identities to "me and mine". The stars teach us humility, but they also give us a sense of being an important part of an unfathomable profundity. When we look up at the stars we cannot help but feel a oneness with them, we recognize that we are part of them and they are part of us. Not only because in their wombs the carbon basis of life was incubated, but that from their selfless radiance our lives are sustained.

As we contemplate voyaging to their abodes, our "me" focused identities dissolve. And as we join hands in this enterprise with those we once thought of as foreigners or even enemies, and launch the human venture into space, we find that our oneness with the stars has brought us a oneness with ourselves.

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DISK:LASTPISCEAN

April 28, 1994

KINDERGARTEN COSMOLOGIES³¹⁵
PRE-SCHOOL

I am often asked how I decided to become an astronomer. Unlike a lot of other things I did and know not why, I have a very clear memory of why I decided to become an astronomer. The story goes back to Denver, Colorado sometime around 1924.

We lived in a small upstairs apartment on Franklin Street between Colfax and 16th Ave. Across the street was a large vivacious self confident family whose name was Lunt. The youngest son in this group was a boy my age named Horace. We were to attend kindergarten together in the fall at the old Wyman School. We had developed a close relationship which involved not only play but discussions on all manner of things which challenged young boys.

One day the subject of the world came up. And somehow a dispute arose over whether we lived on the inside of the world or the outside. I held that we lived on the inside of the world. My cosmology was that the world was shaped like a hamburger bun, flat on the bottom, round on the top. It was a hollow bun, the earth was the flat part beneath and the sky was the round part overhead.*This was the observational cosmology of a five year old. But against this was the well informed cosmology of a teacher's youngest son. He knew that the world was shaped like a ball and that we lived on the outside not the inside. This stunned me, it violated all my personal experience. I could not imagine this. To settle the dispute we took the matter to authority, an older Lunt sister. I was wrong. The earth was a sphere and we lived on the outside. Furthermore there were other spheres, the sky was full of them. They were called planets and stars. How could I be so wrong? I guess I felt I had not given the matter adequate consideration. So starting right then and there I began to give the matter consideration. I learned all I could about the earth, planets and stars. By the time I was in the fourth grade I was the recognized authority on all matters astronomical. The momentum of this launched me into a career in astronomy in which I was an observer, a theoretician, a professor, the director of an observatory. But though I taught astronomy for many years, I never took a course in astronomy.

And
The modern
view
could be
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Ptolemy
Copernicus
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Although my observational model as a five year old was wrong, I have never given up the value that personal experience is to be trusted. And all my life I have have placed my personal experience, not against conventional wisdom, but in juxtaposition to it. And when there are differences, I have to assume both are somehow right and search for a larger framework that contains them both.

I question both

and tend to the one that is most liberating

* I, of course, did not know that the ancients had the same idea, but used the turtle as the cosmic symbol flat on bottom rounded on top.

[They evidently didn't have hamburger buns in those days and had to substitute turtles.]

HORACE GRAY LUNT III

went on to become an outstanding linguist.

He became a professor of Slavonic Languages at Harvard

and one of the world's foremost scholars on

Old Church Slavonic.