SCRAPS

1997

1a

See Also
1998 #44
1995 #47

LIBERTY AND FREEDOM

"Only those who have found freedom have earned liberty"

There is an important distinction to be made, one which is generally lost in English usage: the difference between liberty and freedom. Liberty is getting the King George, the bureaucrats, the busy bodies, off your back. Freedom is getting your fears, your ignorance, resentments, your desires off your back. In short liberty is getting oppressive institutions and persons off your back, while freedom is getting your ego and hormones off your back.

Americans are well aware of the threats to their liberty and have guarded it for over two centuries. Perhaps it would be better put to say that Americans are alert to external threats to their liberty, but have been mollified into ignoring the internal threats. This not only the threat to liberty from continuing intrusions of government, but equally important the threat to liberty from the pervasive pressures of conformity and uniformity. Early in the life of the nation, de Tocqueville noted that Americans had replaced the tyranny of a royal sovereign with the tyranny of a home grown conformity. Evidently liberty was recognized as being too dangerous for those who have not acquired freedom. That is why there are jails.

We view freedom as doing what we want when we want, going where we want when we want, and saying what we want when and where we want (so long as it isn't yelling "fire" in a crowded theater), but this is confusing freedom with liberty. The first amendment has to do with liberty of speech, not freedom of speech. It refers to the constitutional provision that the government is not to proscribe what we say. But recently Larry Flynt sought in the courts to extend this sector of liberty, to include not only government off your back, but Jerry Falwell off your back, that is, public opinion in general off your back. In this he sought to break the home grown tyranny of conformity, but only succeeded in confusing the issue further. Did he break the back of the conformity heritage, thereby extending liberty, or was the result an unwarranted extension of the Constitution to take away the right of the people to censure in order to stabilize society, thereby reducing liberty? Remember, the Constitution refers only to the government.--"all other rights are reserved to the states and the people". But all of this has to do with liberty, getting other parties, the government, the public, and those advocating such restraints as ethics, morality, etiquite, good taste, etc. off your back. It reveals that in America while we are consumed with liberty we still have little understanding of freedom.

What then is freedom? A story told by Robert McNeil illustrates the existence of freedom in a place where there has been no liberty. At the time of the beginnings of Glasnost in the former Soviet Union, McNeil interviewed the poet Yevtushenko. He asked, "Now that free speech is coming to the Soviet Union, what do you think?" Yevtushenko, was thoughtful, then replied, "When free speech comes, I only hope that I shall have something worthy to say."

3° Testament Muggeridge p. 192

On three occassions Dietrich Bonhoeffer wished to extricate himself - obtain liberty - but in each case refused because he would lose his freedom

Could have stayed in England with his parish 1933
Could have stayed in America 1939
Could have escaped from prison 1944 (guards would let him) but would have endangered his family

How few have found freedom!

A drug addict when released from prison will gain liberty, the basic question is, will he gain freedom.

Liberty is getting King George, creditors, and parents off your back.

Freedom is getting your ignorance of desires & aversions off your back. ~~(and desires & aversion)~~

Liberty is owning a motorcycle.
Freedom is knowing how to maintain, repair and safely use it.

We must always support freedom fully & freely
Liberty must be earned through developing freedom.

Perfect freedom is when you have done what is expected
- Colette Crosby

Liberty is release from the prison you know you are in.
Freedom is release from the prison you don't know you are in.

LK

Those who understand freedom have said:

- Who overcomes himself, his freedom finds.
  Goethe, Die Geheimnisse

- Only without desire or aversion are we free.
  For whatever we have either desire or aversion
  has power over us.
  The Buddha

- Serving one's own passions is the greatest slavery.
  Thomas Fuller, 1654-1734

- O God, who art the author of peace and lover of concord, in knowledge of whom standeth our eternal life, **whose service is perfect freedom**: Defend us, thy humble servants. . .
  Book of Common Prayer

Because of the trade-off between external restraint and liberty, we presume there is also a trade-off between internal restraint and freedom. Not so. Paradoxically, our freedom increases with the restraints that allow us to escape the dominance of our ego. When we "do what we want to do", we are deceived. We are doing what that petty master, the ego, wants. In a kindergarten the children were given paints and allowed to do what they wanted, the result was paint everywhere, including the ceiling. One of those same children entering into a disciplined study of color, form, perspective,.. later in life acquired freedom, creating an inspiring mural in a capitol building. This was the freedom to express his inner truth, his fullest being.

That which is a matter of law, what is legal or illegal, is clearly a matter of liberty. But the Larry Flynt question remains: Is what is moral, what is ethical, what is good manners, etc., a matter of liberty or of freedom? Flynt was in part right. Morality, ethics, etc even when not imposed by law, are societal impositions restricting our liberty. However, if the source of morality and ethical behavior is not social pressure but is an inner choice, then morality is freedom.

∃ a Liberty - Freedom Inversion

Freelib2.WPG 97/05/22

rev. from Freelib.WPG 97/01/01

The automobile has introduced a new dimension into this subject.
What has it given? Liberty? yes From Parents, . . .
Freedom? yes - a meditative tool
a teacher of ~~morality~~ overcoming ego
with visible penalties
Freeway "Oneness"

Tim goes into confinement in order to become free
- a paradox? no

The only true freedom is that of the spirit, and this is found in imagination. Hence the greatest tyranny is suppression of imagination (of alternatives) for imagination is the author of hope. (and fear)

These blacks who found their freedom while being deprived of their liberty have given to America some of its greatest gifts

Levels of Freedom:

1) Liberty - freedom from Kings, IRS
Laws
Customs
Social Mores

The Jews replaced the servitude imposed by Pharaoh with the tyranny of Jehovah.

The Jews are a people permanently enslaved - they seek freedom

Those Jews who become free have all been seen as geniuses

2) Freedom of the Spirit - imagination - creativity

3) Freedom from the ego - from desires + aversions

4) Freedom from physical Law
i.e. from the physical components of natural law

5) Freedom from the archetypes, from SAT

97/12/18 The real problem:

Liberty → reducing restraint
Freedom → increasing restraint i.e. discipline, but self-discipline

It is confusing to have Liberty and Freedom moving in opposite directions with regard to restraint. Especially when the terms have been garbanized. [Confusing all thinking on the subject in English]

Liberty should be granted as Freedom is acquired

> We live in a times of garbanized discriminations and illusory choices.
> L.K.

Those who are not free reject liberty. They quickly replace the dominance of the king with the tyranny of conformity.
Liberty frightens those who are not free.
Those who are really free find their genius

LK

44

COPIED FROM 1998

LC

See 1997 #1 1995 #47

LIBFRE2.WPD

October 24, 1998

LIBERTY VS. FREEDOM

In confusing liberty with freedom great mischief is done. While the component of rights is preserved, the component of responsibilities is lost. As Edmund Burke said:

> Men are qualified for civil liberty in exact proportion to their disposition to put moral chains upon their own appetites. Society cannot exist unless a controlling power upon willfulness and appetite be placed somewhere, and the less of it there is within, the more there must be without. It is ordained in the eternal constitution of things that men of intemperate minds cannot be free. Their passions forge their fetters.

It must be understood that liberty has to do with the external restraints and freedom with the internal restraints. Burke speaks of a trade-off between the restraints of liberty and those of freedom, but paradoxically inner restraints enhance rather than inhibit freedom. This is a paradox that is almost universally misunderstood. But the allowing of liberty through the self imposition of inner restraints is quite secondary to the winning of freedom from the tyrannies of desire and aversion and fear and anger that emerges from the adoption of those same inner restraints. The mastery of self is thus a win-win proposition It wins liberty for the social order, freedom for the individual. When humans can achieve perfect freedom, then and only then can there be true liberty. Only those who are perfectly free have the right to seek anarchy as the ideal form of government. Those who are slaves to greed and avarice have no right to seek deregulation of those public restraints that reduce everyone's liberty. ~~The~~ They claim deregulation will lead to freedom. Wrong! It is freedom that will lead to deregulation. **Deregulation can be had only when there is complete freedom.** It is seen that the paradoxical nature of this slogan arises out of our illicit equating of freedom with liberty.

A drug addict when released from prison will gain liberty. The real question is, will he gain freedom?

THE LEVELS OF FREEDOM

4) Liberty Removal of the restraints imposed by kings, customs, and tradition.

3 2) Freedom of the spirit Release of the imagination

1 1) Freedom from the ego from desire and aversion

2 3) Freedom from the rational from conditioned ways of thinking, from ignorance

4 5) Freedom from the archetypes, from the natural order, from Brahman

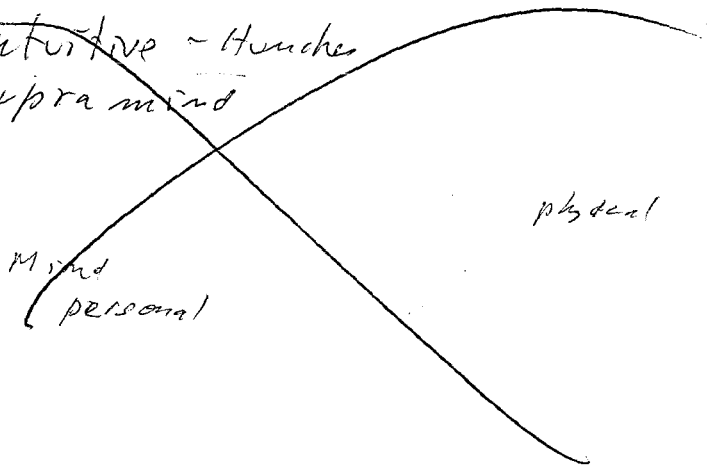
Per intellect only Know God apophatically.

Per Imagination we can know what GOD IS

trans-rational for Foucault's "madness"

Arrobando: trans-rational

Overmind
Illumination
Intuitive ~ Hunches
Supra mind



1995 47

See also 1998 #44 1997 #1

LIBFREE1.WP6 July 4, 1995

LIBERTY AND FREEDOM

Liberty is getting others off your back: the Feds, the IRS, your parents, mother-in-law, creditors, ...

Freedom is getting yourself off your back: your habits, desires, prejudices, aversions, blind spots, ...

Liberty is taking responsibility for the establishment and protection of the rights of others (all sentient beings);

Freedom is taking on personal responsibility as a citizen and a human being.

Liberty is to have a vision

Freedom is to have a conscience, a clear one.

Liberty is to have higher identifications.

Freedom is to serve the highest identification.

ON MONOTHEISM

Historically there have been two theological approaches to the interpretation of sensory and spiritual experience. The first was to postulate a different god to symbolize different aspects of experience: a god of sky, earth, sun, moon; of fertility, the tribe, war, and death; of love, wisdom, beauty, and peace; etc. In addition local gods were postulated associated with particular mountains, groves, waters, and beasts, or if not a special god for each place, then assigning such places as sacred to one of the *global* gods. The second approach was to call selected aspects of our sensory and spiritual experience a facet or attribute of a single God. The theological difference in these two approaches is that with multiple gods the inconsistencies experienced in the world, can be explained by each god having his/her own agenda, and not being particularly concerned with how it affects the agendas of the others. But in the case of one God, monotheism, many problems arise because of inherent inconsistencies. Either this one God is not in full control, or this one God is schizoid and capricious, or this one God's agenda is too complex for us to understand.

In view of these issues inherent in monotheism and not contained in polytheism, it is difficult to understand why monotheism came to be held a higher or more advanced theology than polytheism, (or even animism.) Is it because monotheism fits some inherent human drive to oneness, an aspect of the Principle of Plenitude? In the West the paradigm of monism, theologically derived from a Hebrew covenant and organizationally derived from Roman imperialism, continues to dominate thought into the 20th century. It is manifested in science in the search for "a single theory of everything", and in society with the march to global homogenization.

It may seem anachronistic to raise again a question that was presumably settled centuries ago: many gods or one God? But this question has never been universally settled. Only in religions of the Hebrew genus has monotheism been exclusively adopted. Eastern religions prefer to stay with multiple gods (Hinduism), or stay away from deities altogether substituting psychological principles or tathagatas (Buddhism).

Specifically, what are the arguments for and against monotheism?

The pro-monotheism case:

- Perhaps a single God with internal struggles, having contradictory attributes and conflicting agendas most accurately represents humanity and the human condition and therefore is more suitable as an anthropomorphic symbol than is a zoo of diverse gods. We each are many personalities

97/02/07

From polytheism, the gods are melded into one God in each person according to his/her selection and emphases.

$\exists$ a {Deity Archetypes}
which ones do we invite to abide in us?

Monotheism is a particular attempt to organize and order the set.

If $\exists$ but one temperature, then there is no temperature
If $\exists$ but one color, then there is no color
If $\exists$ but one God, then there is no God

Monotheism has taught its followers to create and live in a world that reconciles conflict, contradiction, and absurdity

struggling to form a unified character, so should not our divine counterpart also be thus? For He created Us in His image, and We recreate Him in Ours.

- At some level we intuit the cosmic unity of all things. Whether this is fact or belief, we wish it to be so. Therefore the proper symbol for this ~~fact or belief~~ is a single Deity representing a unified and harmonious whole. Thus we are led to select the single higher God, the God above all gods, whose very arms are the symbols of other gods.
- The God of monotheism in all His inconsistencies and contradictions, is a paradox. And we know that paradox is the door to higher understanding. Thus the one God, in being a paradox, opens the path ~~the spiritual~~ to spiritual knowledge.

The anti-monotheism case:

- The adoption of a God who possesses the attributes we wish to project on Him results in a set of inconsistencies that do violence to reason and make belief in such a god difficult. For example, a god that is both omnipotent and all good would not permit the evil and suffering that suffuse the world. (Yes, we are aware of the specious arguments raised to defend such a deity, 'He gave us free will', etc.)
- ~~Metanoia is bounded by~~ Belief in one god limits metanoia. For there to be full metanoia our image of god, as well as our relation to god must change. Monotheism's one unchanging god stands against new images. To have god change is no longer monotheism, it is a series of gods in time, i.e. temporal polytheism.
- Monotheism does not provide alternatives when a dilemma such as described in the Book of Job arises. With alternatives, the question, 'Why do bad things happen to good people?' has reasonable answers not available to monotheism.
- Most seriously, monotheism contains the seed of its own destruction. Monotheism is an homogenizing concept, compressing all spirituality into one box. One box is easy to discard, many boxes, less so. Pythagoras held that **ONE** does not exist. As all is forced into one, the one disappears. Atheism is the ultimate destiny of monotheism. We see this already taking place in the West. Spiritual experience is rich and multifaceted. It must not be given a single or limited interpretation. Interpretations can be either beacons or prisons. If there is but one, the risk is great. And if there is but one, criticism is either withheld (from individual uncertainty) or suppressed (by institutional policy). But understanding and wisdom come from criticism and criticism flourishes with comparisons. We need pluralism!
- Finally, monotheism doesn't work and never has. Else why are Satan, devils, angels and saints brought in as supplements.

Monotheism may have been adapted as it is easier to control a populace under monotheism
Get quote re Roman Empire
" --- equally useful "

In U.S. Separation of Church + State → No God ≅ ONE God

Metanoia requires a new theophany
Metanoia is a new theophany

Parmenides version of monotheism
"As it was in the beginning, tis now and ever shall be"

Monotheism resorts to: You didn't try hard enough
i.e. Do more intensely what you have been doing
even if it doesn't work
≠ Change

2 kinds of Polytheism: Diachronic and Synchronic
successively at one time

God must change, or like in the Chinese Temple — we must be able to change gods
there must be alternatives: polytheism
Throw out the god that isn't working

The message of the Transfiguration is that
God does change. ∃ {theophanies}

As god is reduced Many, 3, 1, 0
mankind is reduced - alternatives are a measure of our wealth
need guides, angels, proctors, ...
∴ saints

After all God is but one interpretation of our spiritual experience.
The experience is valid, interpretations are hilfsmittel
The Buddha went so far as to hold it to be a waste of time to make interpretation, build theologies, cosmologies, ..
Better to develop our experiences, enhance them glimpse → grasp
But an interpretation is one mode of enhancement, a mode that must even be iterated, transcended
dissolved by wine, iterated in bread

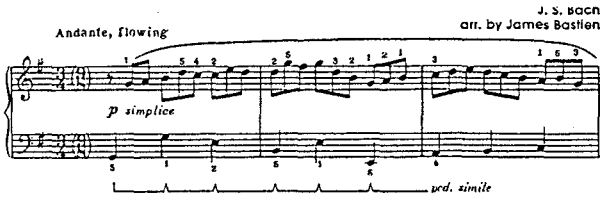
Science is an interpretation of sensory experience with nature

MUSICTF.WP6 January 6, 1997

See 1994 #5
1997 #32

ON TIME AND FREQUENCY

Whenever I look at a piece of sheet music, I am intrigued by how the symbolism of music shows us ~~that~~ where we invariably discriminate and separate time from frequency (or pitch as musicians prefer to call it).



In written music, time moves from left to right horizontally, while pitch goes vertically from bottom to top as frequency increases. We understand that pitch or frequency is the reciprocal of time, f = 1/t. So pitch and duration are just two different ways of looking at time. Why do we view time in these two distinct ways and how do we decide where to stop viewing time as duration and changeover to view time as pitch? Is there more involved than just inverting the 1/t equation? The equation tells us that there are as many frequencies between zero and one as there is time from one, or now, to infinity. But what is **one**, what does **one** stand for?

Depending on the loudness, the average human ear can hear sounds from about 20 hertz (cycles/second) to 16,000 hertz. Depending on the tempo there can be up to about M.M.240, that is at extreme prestissimo, about 240 quarter notes per minute. This value is equivalent to a quarter note having a duration of one quarter of a second, an eighth note one eighth of a second, a sixteenth note one sixteenth of a second, etc. Here the time durations of notes are approaching the same values as the frequencies we hear at the lowest levels of pitch. So it appears that somewhere in the range say 8 to 16 hertz we make the switch of preference between time and frequency.

The second is the shortest time unit that humans find useful to measure sensory experience, (nanoseconds and femtoseconds are for computers). We express time periods longer than a second in numbers of seconds, (or in units of multiple seconds, such as minutes, days, years). But we express time periods shorter than a second in frequency units or hertz. (There is, however, an ambiguous region between about 1 second and 1/20th second (or 20 hertz) where both systems are used. Also note here that the number of motion picture frames per second needed to create for us the illusion of continuous motion is from 8 to 16). Evidently then, there is something fundamental in the internal human clock that switches in this zone.

One hypothesis is that humans use the Schuster Electron Time[1] [SET] of 0.121 second as a zeitgeber. Since this value is very close to 1/8 second, we might say that [SET] is the metronome that governs our time sense. We switch to frequency representations at times shorter than [SET] and to duration representations at times longer than [SET]. It is probably not fortuitous that the duration value of the second is near this period, but it does seem fortuitous that this value is related to the rotation period of the earth.

Another matter of interest in the musical utilization of time and sound is that in both the duration and pitch zones there are intervals of silence. In the horizontal zone, there is a brief silence between the sounding of each note. (One classical composer held that the whole purpose of music was to give quality to these intervals of silence). In the vertical zone there are non-pitch intervals between the values of pitch that are set by scales or modes. All of this is present in our music, but somehow musical notation obscures it from us. But then there are no symbols that carry all the reality of that which they symbolize.

---

1) The Schuster Electron Time [SET] is a period associated with an electron based on the electron's mass rather than on its charge. The frequencies we usually associate with atomic phenomena derive from coulomb forces and are of the order of 10^{16} hertz. The [SET] derives from mechanical forces and has a value close to perception times of ordinary experience. The value of [SET] is given by

$$t = 2\pi\sqrt{\frac{r_e^3}{Gm_e}} = 0.121\text{sec}$$

where r_e is the radius of the electron, m_e is its mass and G is the gravitational constant.

TIMENER1.WP6 January 14, 1997

TIME AND ENERGY

One of the forms that the Heisenberg uncertainty inequality may take is:

$$\Delta T \times \Delta E \geq h$$

where T is time, E is energy and h is Planck's constant. The conventional interpretation of this result is if the time interval is known precisely, the amount of energy is uncertain or if the energy is precisely known, the time is uncertain. But as with all mathematical results many interpretations are possible. In fact that is the power of mathematics--the same equation can be applied to many things. Here we look at two additional interpretations.

This inequality is in all its interpretations a description of a tradeoff. Heisenberg's initial interpretation was about a tradeoff in certainty. Another interpretation is a tradeoff in efficiency. Time efficiency is inversely related to energy efficiency. If we want something done in a short time, its costs in energy go up. If we want to be economical with energy, then we must be prepared to be patient. A jet across the continent is quick but energy expensive; a bus with the same load, longer time, less energy. In all of our efforts to save energy we must realize that we are first going to have to give up our demand for instant results. But we have become the 'now' generation and we have yet to realize the cost in energy. Hence:

If you want to save energy, you are going to have to slow down.

A second tradeoff implicit in the equation has to do with the future. Let us call it a tradeoff in influence. A small effort by an individual or group can in the long run effect tremendous change. Or as Margaret Meade said: *"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever does".* This point has been emphasized in chaos theory. In fact the so-called butterfly effect, *"The manner a butterfly flaps its wings in Kyoto today will alter the weather in London thirty days hence",* is an essential part of chaos theory. There are many historical examples of the time-energy tradeoff in influence, such as that of a handful of Palestinian fisherman, or a man in the English country side observing an apple fall. The closer to the present you want your influence, the greater the energy required. We need only point to such as Genghis Khan and Hitler who wanted the results in their own life time. Ideas with low energy cost of diffusion, such as word of mouth, require longer times to spread, while rapid diffusion demands expensive media costs. Hence:

If you want to influence, act now in moderation but ignore the time table.

5-a

95-#33
#23

MESMES1.WP6 January 16, 1997

See 94 #61

MESSAGE AND MESSENGER

History tells us that King Darius would put to death a messenger who brought bad news. At the opposite
History also records instances of the deification of a messenger with a profound spiritual message. And in our time, McLuhan affirms, "The media is the message". However the message and the messenger are not entities of the same level. The letter I am reading is not the Postal Service. What I am hearing on the telephone is not the Bell System. Why then has there been this confusion of message with messenger? Perhaps it is because when there is but one messenger and one message, discrimination is not possible. Only when one messenger brings many diverse messages or when many messengers bring the same message, can messenger and message be discriminated. [A parameter having but one value is never perceived.] The importance of this discrimination is crucial despite the fact that the media does delimit the messages it can transmit. But as with many discriminations, once the first has been made others follow:

The First Discrimination:
Deity, Truth, Wisdom,... reside in the message not in the messenger. Reside in the Scriptures, not in the scribes who wrote them. In the water, not in the pipe. In the stars, not in the astronomer.

The map is not the terrain

The Second Discrimination:
Nor is it the message itself that is the Deity, Truth, or Wisdom. It is in the process of decoding the message, interpreting it, challenging it, wrestling with it, that can bring about transformation, which in turn allows the perception and reception of God, Truth, and Wisdom.

The Third Discrimination:
It is not this process alone, but the commitment to it and the sacrifice for it that brings God, Truth, Wisdom,...

The Buddha said:
Rely on the message of the teacher, not on his personality
Rely on the meaning of the message, not just on the words
Rely on the real meaning, not just on a provisional one
Rely on your wisdom mind, not on your judgmental mind.

Apophasis:
It is not the messenger, but it is the message
It is not the message, but it is in the message
It is not in the message, but it is in the interaction of the receiver with the message
The message and the receiver are like sperm and egg
If there is fertilization, a child is born

What McLuhan means in his broad sweeping statement is
that how the message is delivered is part of the message.

Message + Messenger
A problem in entification

see 1993 #17 On Dance and Dancer
1993 #9 On Design and Designer
1995 #33
1995 #23
1994 #61

Apophasis also applies to a love relationship:

Your love is not of the other person, it is of the love that is in that person.
It is not of the love that is in that person, it is of Love itself.
It is not of Love itself, it is your response to Love itself.
Treasuring that response, carrying it always with you,
will enable you to eternalize the relationship
even though the other person departs

It is the existence of a thing that matters,
not what it tries to teach, but what it is.

A Jerusalem Rabbi

Jerusalem City Book p 44

Judaism produces many views but no dogma.

People focused on the pointing finger,
not to what it was pointing
Then on the pointer him/herself

Having received both the Gospels and the Dharma, we can discriminate Jesus from the Gospels and Buddha from the Dharma. In both cases we can discern that the Deity, Truth, Wisdom is in the message rather than in the messenger. Then, it is up to us to take the message from there.

It is in the water not in the pipe. Why then are we always concerned with which pipe, rather than with the water. And why do pipes want to take the credit for the water? Perhaps Darius was weary with pipes seeking credit, and decided to teach a pipe a lesson.

A single photon is an insufficient messenger to bring us the message of the value of a red shift.[absorbtion line] It requires many photons. A context is needed to decipher the message (a laboratory comparison spectrum) The receiver must possess the code book in order to understand the message.

The perfection envisaged in the Gospels is unattainable in earthly terms, whether through good works or revolutionary changes. It is aspiring after this perfection that our intrinsically imperfect nature can be redeemed, and the world made a happier, more just and harmoneous place to live.

Leo Tolstoy

EXGEN.WP6 January 16, 1997

EXCERPTS AND NOTES RE GENESIS

From TIME 96/10/28

"The problem in Genesis is not a lack of meaning, it's too much meaning." Charles Johnson

"If I could make the patriarchs sacred again maybe I could make some sense of my own life." Burton Visotzky

God intended them not as paragons but as paradox; badly flawed but nonetheless blessed. We must mediate this dissonance. "It is not the narrative of Genesis that makes the work sacred, rather it is in the process of studying Genesis that the transformation takes place." Burton Visotzky

"The point isn't so much about belief as about whether you're willing to take the risk of study. Study leads to conversation, and conversation leads to community, and that's what we're desperate for." Burton Visotzky

With regard to the flood:
"God is not some nice cozy daddy in the sky, He is behaving in an evil way, effectively introducing mankind to the idea of justified genocide." "Noah comes out of the ark and lays the seeds for a new holocaust." Karen Armstrong

"The point is that humans can use their freedom in such a way as to make God sick and tired. 'It grieves my heart--BAM, We're going to start all over again.'" " We must hurry up and get to the bow in the cloud and the **new beginning**, that's the main story in the story." Samuel Proctor

"At 40 I did more wounding than I was wounded--parents, brother, wife, children. At 60, I'm wounded. Once you are wounded, you don't want to wound anymore. You want to heal."
Bill Moyers

"If one is disinclined to surrender to God, one is inclined to read the text in the light of our own culture. Are we submitting to the picture of God in Scripture or are we putting ourselves over scripture and rewriting it in terms of our own preferences?"
Kenneth Mathews

SOGYAL1.WP6 January 17, 1997

NOTES FROM THE TIBETAN BOOK OF LIVING AND DYING

The bardos are particularly powerful opportunities for liberation because there are certain moments that are much more powerful than others and much more charged with potential, when whatever you do has a crucial and far reaching effect. The greatest and most charged of these moments is the moment of death. p11

What happens at the moment of death is that the ordinary mind and its delusions die, and in that gap the boundless cosmic nature of our mind is uncovered. The essential nature of mind is the background to the whole of life and death. p12

Man's thirst for survival in the future makes him incapable of living in the present. Chuang Tzu

Planning for the future is like going fishing in a dry gulch.
If you have to think about the future,
Make it the uncertainty of the hour of your death.
Gyalse Rinpoche

Rely on the message of the teacher, not on his personality
Rely on the meaning of the message, not just on the words
Rely on the real meaning, not just on a provisional one
Rely on your wisdom mind, not on your judgmental mind.
Buddha

Give all profit and gain to others
Take all loss and defeat on yourself.
Geshe Chekhawa

Loving as He loves
Helping as He helps
Giving as He gives
Serving as He serves
Rescuing as He rescues
Touching Him in his distressing disguise.
Mother Teresa

FOR WHATEVER WE HAVE EITHER DESIRE OR AVERSION HAS POWER OVER US.

ONLY WITHOUT DESIRE OR AVERSION ARE WE FREE

also Edmund Burke quote on freedom

THE WISDOM AND COMPASSION OF SHANTIDEVA

Whatever joy there is in this world
All comes from desiring others to be happy,
And whatever suffering there is in this world
All comes from desiring myself to be happy

The childish work for their own benefit
The buddhas work for the benefit of others
Just look at the difference between them.
If I do not exchange my happiness
For the suffering of others
I shall not attain the state of buddhahood.

Whoever wishes to quickly afford protection
To both himself and others
Should practice that holy secret
The exchange of self for others.

May I be a protector to those without protection
A leader for those who journey
And a boat, a bridge, a passage
For those desiring the further shore

May the pain of every living creature
Be completely cleared away
May I be the doctor and the medicine
And may I be the nurse
For all sick beings in the world
Until everyone is healed

Just like space
And the great elements such as earth
May I always support the life
Of all the boundless creatures

And until they pass away from pain
May I also be the source of life
For all the realms of varied beings
That reach unto the ends of space.

SHANTIDV.WPG 97/01/17

Shantideva, an 8th century Rama

Garton Medium 12 pt.

ON TRINITIES

Jews, Muslims, and some Christians have great difficulty with the notion of the "Trinity". Those who subscribe to monotheism, one God, find the idea of a three-in-one deity contradictory, confusing and unnecessary. The Christian Trinity seems to have been the work of a committee that had to reconcile diverse interpretations of scriptures, and come up with a compromise acceptable to all parties, but not really understood by any. Father, Son, and Holy Ghost, what does it mean? What is it saying about the nature of God?

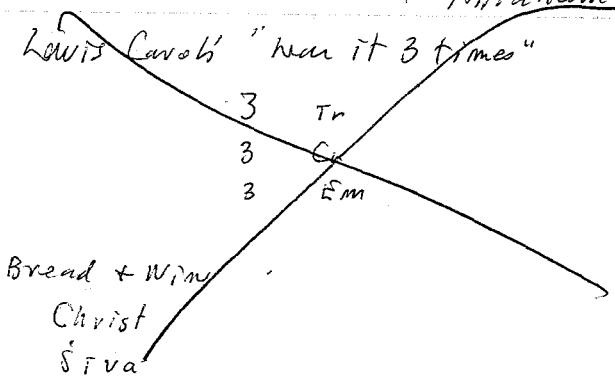
The historical roots of the Christian trinity lie in the Lord God of the Hebrews. This Hebrew God was a blend of several gods, not just three. In this case, many spiritual and material attributes of neighboring gods were packaged in a single anthropocentric being. This would have posed no problem for humans had these attributes been self consistent and mutually supportive, but they were contradictory and conflicting, creating rational problems for the monotheistic view. So in the sense of reduced inner contradiction, the Christian three-fold god was a step closer monotheism than the multi-fold God of the Old Testament. However, it was not until Islam that monotheism reached its peak. Here the attributes of Allah serve to project a rationally consistent, powerful and merciful one-fold being.

But in a deeper sense, the Christian Trinity makes more sense than other forms of monotheism. This can be seen when the Christian Trinity is put in juxtaposition with the Trinity of the Hindus. The Hindu Trinity and the Christian Trinity afford examples of two approaches. The Hindus reasoned that three gods were primary. These were Brahma, the creator; Vishnu, the preserver; and Shiva, the destroyer. We experience Creation in many contexts, so we postulate a creator god, in the Hindu case named Brahma. We experience ongoing existence and evolution of the natural order, so we postulate a protector or preserver god--Vishnu. We experience impermanence, the ending and termination of world views and perspectives, we postulate a destroyer god--Shiva. This is a trinity of three distinct gods, not a single three-in-one God. The Christian trinity on the other hand is based on the second approach. The same three facets of God are again emphasized: The Father, God transcendent, the Creator; The Holy Spirit, God immanent, the preserver and comforter; and The Son, God incarnate, the redeemer, but all within a single God-Head which implies the cooperation and mutual support of these three aspects.

At first sight there might appear to be some question regarding the parallelism between the redeeming god, Christ, and the destroyer god, Shiva. But if the redeemer is seen as bringing a higher vision and calling to humankind, and the destroyer is seen as destroying the ignorance and inhibitors that keep humans locked to lower visions and standards, then Christ and Shiva are the two sides of the same redemptive coin.

The three who visited Abraham

Lewis Carol's "Sum it 3 times"



Bread + Wine

Christ

Śiva

THREE VIEWS OF EVIL

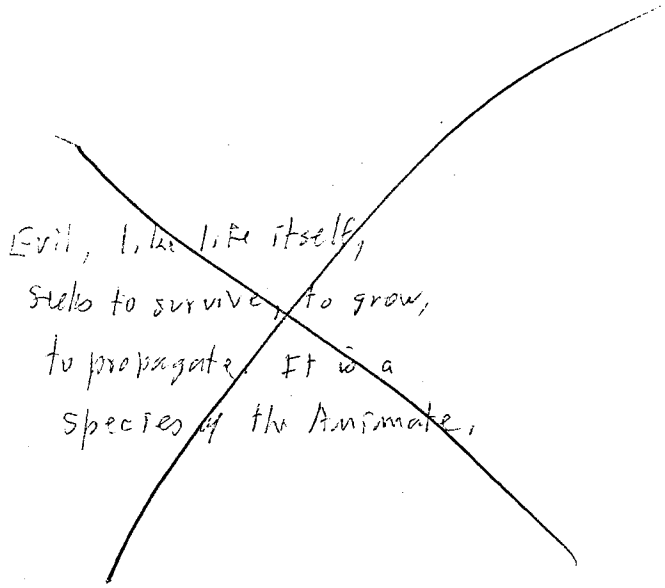
The question of the source of evil has been among the most perplexing of metaphysical questions especially to those whose theology is based on an all powerful and all loving God. Answers have ranged from the Zarathustrian theology of the existence of two cosmic aspects: Ahura Mazda, the Lord of Light, and Ahriman, the counter Lord of Darkness; to the materialist position that good and evil are but subjective projections on the world according to our own sense of pleasure vs. pain, gain vs. loss, etc.

Thinking more restrictedly, not of Evil, but of human evil, two answers have been given. A Hindu view, summarized by Shankara (c 850 C.E.), holds that at root is the confusion of our empirical self with our true self (atman). Desire originating in ignorance creates the illusory mental image of a locally centered self. The localism of sensory inputs obscures the true nature of Self which has a center nowhere, i.e. everywhere. Actions based on the illusory entification of a self obscure the true nature of Mind and violate the cosmic harmonies implicit in true Self. Hence the origin of human evil.

According to a Western view, Hebrew and Greek, innate human evil is not due to ignorance, but to knowledge gained at one's own initiative replacing knowledge given by God. This is the original sin, an act of disobedience to God, metaphorically described by eating the fruit of the tree of knowledge of good and evil. We are thus born with and in sin preferring our own knowledge to that of God. It is this choice that lies at the root of human evil. Today, we might put it, seeing the world our way instead of the way it really is. True, this is the condition we are born with. How do we transcend it?

Both of these views have in common that the source of evil lies in our distorted way of looking at things. The Eastern view emphasizes the distorted way we look at ourselves, the Western view the distorted way we look at the world. While we can readily agree with both as regards distortion, the connection of distortion to evil is not so clear. Certainly there is a clear connection between distortion and error. But are we prepared to equate evil with error? A subset of evil undoubtedly arises from error, but there is also the evil of **intent** which seems to grow from a different source than that caused by error. (Note here that Buddhism recognizes there must both be wisdom to counter error and compassion to counter intent).

A third view does take into account the existence of intent in evil. Lord Acton once said that power corrupts and absolute


Evil, like life itself,
seeks to survive, to grow,
to propagate. It is a
species of the Animate.

power corrupts absolutely. As an example of Lord Acton's observation, here is a quotation of Joseph Stalin's from 1912 before he was anywhere near a position of power:

> "A strong full-blooded movement is unthinkable without freedom of controversy. Only in a cemetery can total identity of opinions be achieved."

How Stalin changed after his usurpation of power! In his regime any suggestion of controversy was an immediate ticket to the cemetery. Why do people so change when they have power? One answer is they already contain the seed of evil before they acquire power. This was sensed by Confucius who held,

> "All those who desire political office should automatically be disqualified."

He recognized that those who seek power are primarily those who contain some seed of evil in the first place. Now, in addition to the proposal to equate evil with error, we have the proposal of equating evil with the desire for power. We may accordingly ask, "Is the exercise of power, originating from the base of an illusory self and an illusory picture of the world, a manifestation of an evil that exists to some degree in all humans, or does the human exercise of power itself constitute evil in that in its very self seeking nature it violates the basic harmony of the world?

For an alternative explanation, we might here return to Zarathustra, and claim that there exist demons as well as angels. These demons know that the best place to exercise their influence is through those who have power. They do not bother with ordinary people, only with those in power. So any who wish for power immediately come to the attention of the demons and become vulnerable to their machinations, and when a demon takes over the manifestation is corruption. Certainly this is an economical way for the forces of Darkness to control the world. While this may explain Acton, to explain Confucius we must recognize that there are those who have developed an immunity to demons, and they are never interested in power.

What may we conclude? Do we go so far as to say Evil itself is an illusion? Or do we say Evil is not an illusion but it results from illusions? Evil is associated with error. Does it derive from some primal error, not on the part of Adam and Eve but on the part of God? Evil is associated with power. Is this because the exercise of human will conflicts with God's will and erodes the harmony of the world? Or may we only conclude that Evil, whatever its source, is a virus, a disease, that debilitates the natural and holy order of the world?

ON FISH AND ENLIGHTENMENT

FISHPLUS.WP6 January 29, 1997

There is an old Chinese adage that goes:

> If you give a man a fish, you have fed him one meal.
> If you teach a man to fish, you have fed him a thousand meals.

But there is more to this adage that has not been reported:

> If you allow a man the glimpse of a fish and the knowledge that it is good to eat, then, if he is sufficiently hungry, he will seek to convert glimpse into grasp. He will search for fish and discover for himself many ways to catch them.

And this is exactly what the World's greatest teachers have always done. They did not give us a fish, nor did they teach us how to fish. They only told us that fish exist. They gave us the glimpse, a greater gift than either a fish or a way to catch fish.

Salvation is not in the teacher, it is in the teaching

Salvation is not in the teaching, it is in pondering the teaching

Salvation is not in the pondering, it is in the transformation that ensues from pondering

Salvation is not in the transformation, it is in the clarity that arises with transformation.

Salvation is not in the clarity, but the clarity shows the path to salvation.

Li Kiang

(In the West, it is called salvation; in the East, enlightenment).

See Also:

1979?	1990#7	CLC1980.WPW (p5)	FAITH, SCIENCE, and the FUTURE
93/02/01	1993#7	2UNKNOWN.AGW	INTO THE UNKNOWN
95/09/23	1995#63	FISHLEV1.WP6	FISH LEVELS
97/01/16	1997#5	MESMES1.WP6	MESSAGE & MESSENGER
97/01/30	1997#12	FISHHOOK.WP6	ON FISH AND CAPITALISM

The third aspect, of Great Teacher, is born out in the life of Jesus by IKOUS

There is an old Chinese saying that goes:

Give a man a fish you feed him one meal.
Teach a man to fish you feed him many meals.

Capitalism looks at the obverse side of this wisdom, from the point of view of the giver rather than the receiver.

Giving a fish is what is done for the poorest sector of society, because giving a fish helps keep them in their present status, ignorant and non competitive, which in turn keeps inflation down and portfolios up. It pays off well.

Teaching how to fish is what is done for the middle sector of society, because it hooks them into the system. They must invest in rods, reels, flies, fly boxes, boats, boots, vests, nets, lures, and licenses. This keeps them busy paying the interest on their loans.
It pays off well.

Revised 97/05/26

CAPIT03.WP6 February 4, 1997

ON CAPITALISM

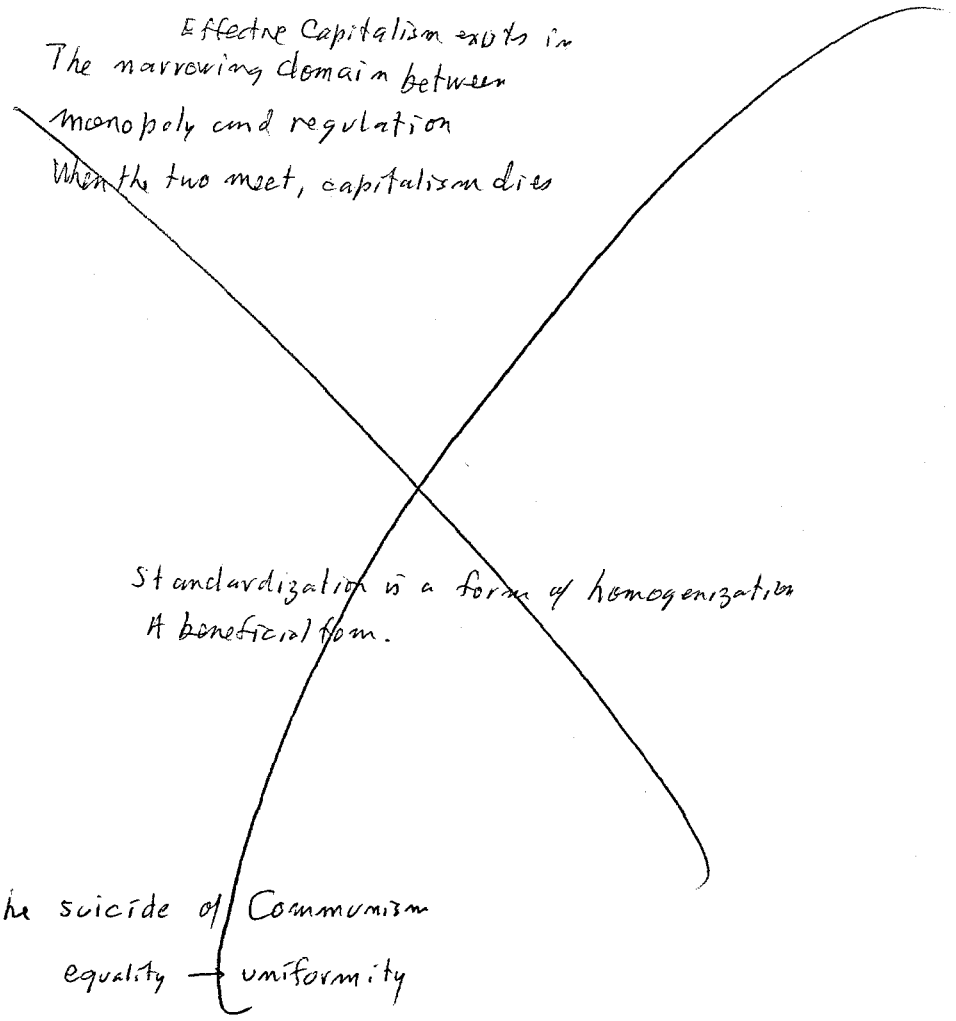
The principle fallacy of capitalism is its premise that every enterprise, every activity, should be free to make a profit. This position is as extreme as its polar opposite that one central group should have the sole power to plan and control and regulate all economic activity. Both views are advocates of the principle of plenitude: The entire earth should be remade in their image, whether this be the World October Revolution or the globalized market place. Neither of these extremes serve the well being of society. With the failure of the system in which one group monopolized all enterprise, the opposite view felt that its position was validated. Not so!

Some basic questions involved have to do with the costs and benefits of homogenization. How far should homogenization go? What alternatives besides total centralization and total laissez-faire are available? How can egos and the pursuit of power be removed from the economic realm so that society can have its physical needs adequately and equitably met?

Part of the answer lies in ascertaining which specific economic functions should be provided redundantly and competitively and which monopolistically. For which functions is efficiency paramount and for which is safety and security paramount? Who plans for what and on what scale? Where in any function is the proper interface between regulation and laissez-faire? What must be preserved and protected and what left to face Darwinian consequences? And most important, how is the line to be adjusted between cultural pluralism and economic inclusion? After all economics, though a basic part of human society, is not the fulfillment of all human aspiration. We are more than our physical needs. "Man does not live by bread alone".

There are many today who dismiss all of these questions as irrelevant. They maintain that global free market capitalism is inevitable. The economies of size, the role of global telecommunication, human nature being what it is, etc. are all forces that are leading us inevitably to global capitalism. How much this sounds like the Marxists of the 20's and their proclaiming the inevitability of the world revolution.

But every system, however doctrinaire, evolves and now capitalism is taking on an even more extreme form, in moving toward a "winner take all" principle. This vision of the future becomes difficult to distinguish from that envisioned by the party in power in the Kremlin from 1917 to 1991. It will turn out that Big Brother will be a single global corporation, having a


Effective Capitalism exists in
The narrowing domain between
monopoly and regulation
When the two meet, capitalism dies
Standardization is a form of homogenization
A beneficial form.
The suicide of Communism
equality → uniformity

directorate with complete power over resources, production, consumption, jobs, livelihood,life. But the reality of this will certainly be well camouflaged.

Capitalism has now invaded the domain of values through an all out effort to substitute the possession of greenbacks for other measures of human worth. Having bucks has replaced character, compassion, courage, knowledge, artistic skill, relationships, etc...as the definition of who you are. In the fields of sports and entertainment, its victory has been almost complete. Players and actors are measured primarily by their monetary takes. Capitalism is currently fighting to take over the courts--bucks buy verdicts-- and next up is the area of health care. Even in the materialistic trinity of wealth, fame, and power, capitalism has successfully competed, making wealth the universal path to both fame and power. Capitalism's invention of the vacuous concept of 'celebrity', that is, fame for no reason, has eroded the traditional idea of renown as an earned reward for achievement. Today any award to be meaningful must now consist of a large number of bucks, and there is no renown unless it is accompanied by having big bucks.

Even Adam Smith, the attributed god father of capitalism, had many reservations regarding its functional validity in serving society's needs. And while Marx was widely off base in what he proposed as an alternative to capitalism, he was right on in delineating its flaws.

What others have said:

> Capitalism is the privatization of profit and the socialization of cost.
> --Noam Chomsky

> Capitalism is the legitimization of theft and the deification of greed. --Li Kiang

> Capitalism is concerned with what makes dollars, not with what makes sense. --Li Kiang

The real difference between communism and capitalism is that with communism party politicians direct the corporations, while under capitalism CEO's of corporations direct the government.

02/03/16

2nd page added 97/11/26

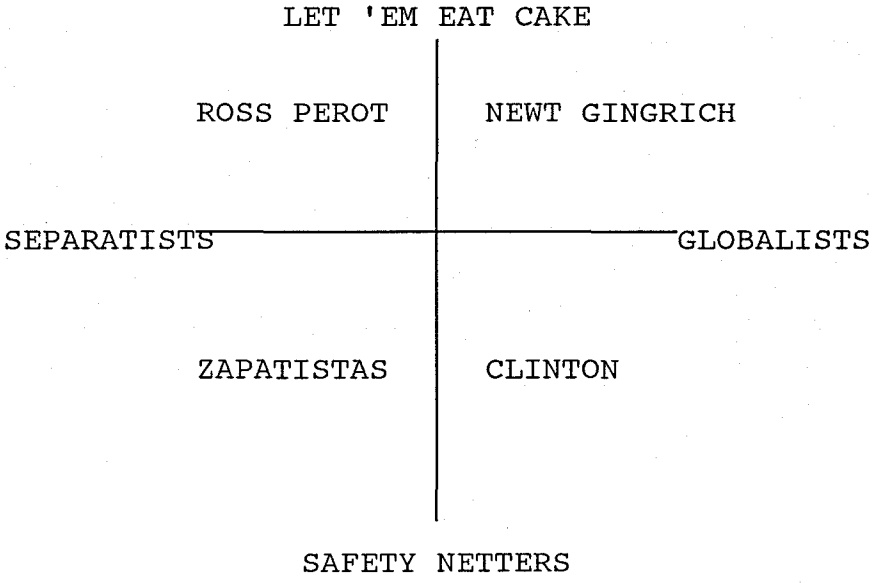
QUADRIC1.WP6 February 5, 1997

See Also The Empty Quadrant 1996#35

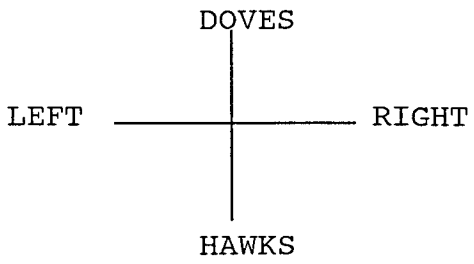
ΚΥΑΔΡΙΚ ΔΙΑΓΡΑΜΣ

One of the most useful tools for synthetic thinking is the Quadric Diagram. This consists of placing two dyads in juxtaposition generating a fourfold matrix whose quadrants reflect the values of the parameters composing the original dyads. This type of diagram is most useful when measurement of the values involved is not possible beyond the assignment of a plus or minus. A recent example is given by Thomas L. Friedman, a columnist for the New York Times.

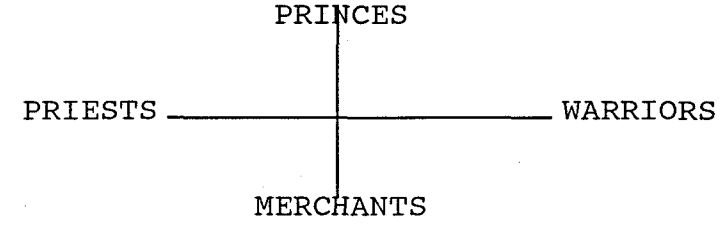
Friedman defines two dyads. The first is that of integrationists, those who want unregulated globalization of world trade; and separationists, those who support protectionism and economic boundaries. The second dyad is that of 'safety netters', those with concern for human values; and winner take all economic Darwinians whom he labels, 'let them eat cakers'.



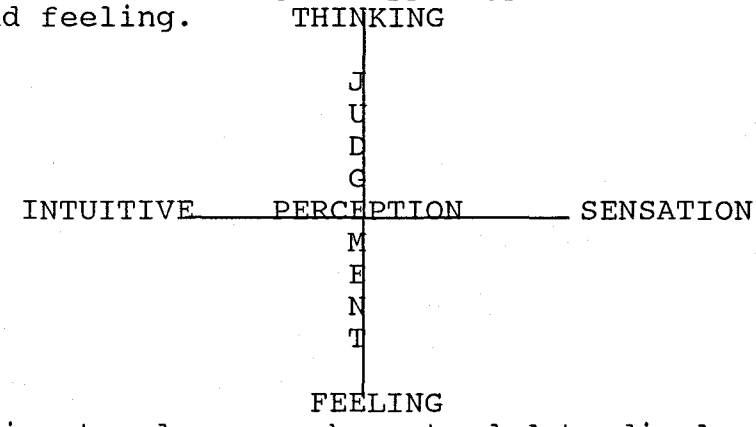
This type of diagram explains why we sometimes have strange bed fellows: Agreement on one aspect of an issue, disagreement on the other aspect of the issue. Friedman maintains that this quadric is now our central one, replacing the cold war quadric of left and right and doves and hawks.



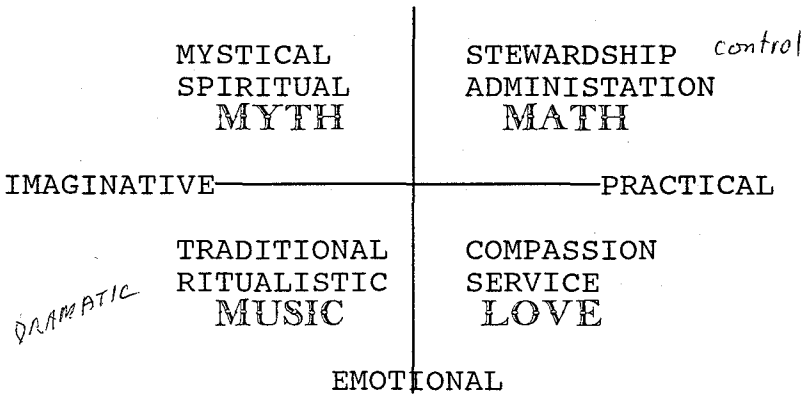
In addition to the pairing of dyads, intrinsic four fold structures display many of their features in a quadric diagram. Examples include the four fold organization of the social order:



Another example is the four fold nature of psychological typologies. Such as the classical: Phlegmatic, sanguine, caloric, and melancholic. Or the Jungian typology: Sensation, thinking, intuitive, and feeling.



The Jungian typology may be extended to display the structure of an organization such as the Church:



As in many quadric diagrams, the opposite quadrants form a symbiotic pair. Thus the Administrative-Traditional quadrants form a pair which is quite diverse from the Spiritual-Compassion pair. A diagonal going from upper right to lower left could represent the evangelical aspects of the Church. A diagonal going from upper left to lower right could represent the metanoia or transformational aspects of the Church. In addition, the four ~~outer~~ paths tend to fall into respective quadrants: MYTH, MUSIC, LOVE, MATH.

14b added 97/11/28

TRUTH01.WP6 February 7, 1997

One of the ways that truth betrays that it is truth is in the care it takes to remain elusive.
--Huston Smith [Forgotten Truth p41]

The story is told that after her fame had spread throughout France, the Dauphin invited Jean d'Arc to come to his palace. However, he wanted to trick her. He had a servant wear his robes and sit on the throne while he hid behind a row of court dignitaries. When Jean entered the room she went directly to the throne and knelt. She then looked up, immediately stood up and looked around the room. She then walked to before the place where the Dauphin was hiding and again knelt. The crowd parted and the Dauphin came forward. He was amazed as she had never seen him nor knew what he looked like. (There were no photos in those days). Perhaps it is no wonder that with such perspicuity she was later burned as a witch. This story illustrates that we look to the throne for the truth, but it is usually hiding in some inconspicuous place. And only those who have learned how to see through camouflage will find it.

After converting to Christianity, St.Helena, the mother of Constantine, went to Jerusalem to locate places sacred to the life and death of Christ. Today churches and shrines mark the places she designated for the crucifixion, the entombment, the nativity, etc. But these locations are not the true locations. They are for pilgrims and tourists to invade and infect, while the truly sacred places themselves remain hidden. For example, in the case of the crucifixion ~~from~~ the scriptures report$ that Jesus was crucified at Golgotha, the place of the skull. There is a large rock shaped like a skull still very much in evidence in a part of Jerusalem quite removed from St. Helena's designated site for Calvary. We cannot know exactly what her role in this displacement was, but in effect she was a faithful agent in the universal practice of hiding the truth from the superficial.

Personally, I have always noticed this same displacement, not only of place, but of time, of activity, of ideas, of persons. It is never happening where popular attention, the media, the fads are focused. These are all distractions to keep the superficial from contaminating the real drama of existence. Why was a stable selected for that most significant of events, the incarnation? Because the sacred could unfold away from all interference. Only the humble and those whose disciplined preparation guided them to the event were privileged to be witnesses. What is recorded by historians is like St. Helena'a designations, an obfuscation to prevent interference with the terrestial manifestation of the Divine Plan. With humility and disciplined preparation we too can become witnesses and even participators in that Plan.

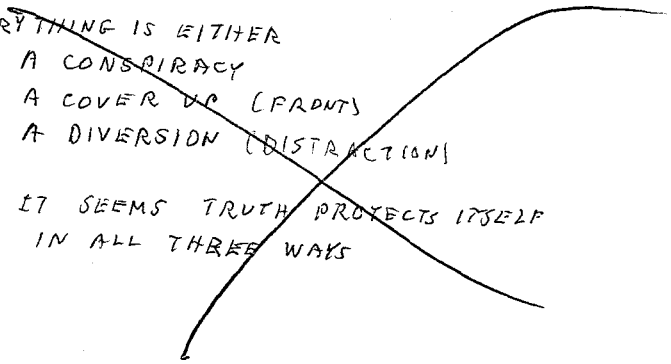
EVERYTHING IS EITHER

A CONSPIRACY

A COVER UP (FRONT)

OR A DIVERSION (DISTRACTION)

IT SEEMS TRUTH PROTECTS ITSELF IN ALL THREE WAYS



This camouflaging of the truly significant is not only perceived, but is practiced by those who have tuned to the songs of the spheres. Jesus was skilled in telling stories that carried both the camouflage and the truth in the same words. Few there were though that had the ears to hear.

This same spiritual essence sometimes assumes what at first appears to be a distinct form in the wisdom and practice of certain native Americans who "pass through the forest in such a manner that no one will ever know they passed that way". No one that is except those who have learned to read the truth from years of disciplined practice.

The Buddha said that he had never concealed anything, he had never taught with fist closed. However, it is up to you to take the teaching and develop it into your own teaching, otherwise all will pass you by.

HUBBLE1.WP6 January 14, 1997

THE FIRST TIME I SAW HUBBLE

Recently, probably because of the fame of the telescope named for him, books and other biographical material about Edwin Hubble himself have appeared. There is no question that Hubble is the most famous astronomer of the 20th century. Not every astronomical discovery gives us an entirely new view of the universe. Copernicus (1473-1543) took us from a geocentric to a heliocentric universe. Thomas Digges (1543- 1595) recognized the stars as suns and as being spread through space rather than located on a single sphere. Thomas Wright (1711-1786) perceived the fuzzy patches in the sky as other milky way systems. Harlow Shapley (1885-19) measured the extent of the milky way. Edwin Hubble (1889-1953) proved the external nature of the spiral nebulae and discovered the expanding universe. But such momentous discoveries are never the work of one man. There are many whose names are hardly known who contributed to the discoveries, or perhaps made them first. But Hubble is famous not only because of his role in important discoveries, but because Hubble knew how to play the role of celebrity.

The occasion of my first meeting with Hubble was in 1946 at the first seminar at Mt. Wilson Observatory following World War II. Hubble and several other astronomers had just returned to Pasadena after war time service. Hubble called the seminar to discuss the state of research, to review where we were when interrupted by the war, and to plan projects needing to be finished and others needing to be initiated. Much of the planning was in anticipation of the completion of the 200 inch Palomar telescope.

The seminar was held in the old library at the Santa Barbara street offices and included not only the staff of the observatory but physicists and astronomers from CalTech. I was still in the navy stationed at the San Pedro naval shipyards, but fortuitously was able to attend because of the timing of the seminar. Hubble called the meeting to order and proceeded to outline in considerable detail the state of knowledge of extragalactic astronomy. I was fascinated with the scope of the problems to be solved and with the implications of the answers when forthcoming. Was the universe open or closed? Would it continue to expand forever or collapse back for continuing repeat performances? When Hubble had finished he said he would appreciate any comments. No one said anything immediately, but after a half minute Fritz Zwicky stood up and waving his arm at the blackboard said, "Dot's all wrong." and sat down.

The room fell silent. There were suppressed coughs, people looked at the floor. Hubble turned red, slowly removed his pipe from his jacket pocket, took his time lighting it, took a couple of puffs, then said, "Perhaps Professor Zwicky would favor us with some amplification of why he thinks this is all wrong." Zwicky then stood up and went through item by item pointing out assumptions that had not been tested, measurements that were unreliable and should be repeated, and raising some questions regarding the Doppler interpretation of the redshifts. Hubble listened and when Zwicky finished, rebutted some of his remarks. A dialog ensued in which a synthesis of ideas emerged. Everyone present, Hubble, Zwicky, and the others all profited by the exchange. I was very impressed. We had witnessed a clash of giant egos, and Hubble had proved his caliber by transcending the provocativeness in the situation and turning it to exploratory discourse.

The biographical material coming out on Hubble emphasizes his towering ego. But this one event showed me that whatever the power of his ego, when research itself was involved, Hubble could subdue it to second place.

Hubble patterned his personality somewhat after that of Richard Harding Davis, the WWI correspondent

16C 1999 #37

FZWICKY.WPD AUGUST 28, 1999

FRITZ ZWICKY

Fritz Zwicky came from the canton of Glarus, that part of Switzerland exemplifying the extreme independence and individuality typical of those whose lives are blessed with the presence of towering mountains. Perhaps it is not coincidence that the 16th century monk, Henricus Glareanus, (Heinrich Loris) who took musicology beyond its prescribed and proscribed bounds, and Fritz Zwicky, who did the same for astronomy, both came from Glarus.

Zwicky's contributions were numerous: Identification of supernovae, prediction of dark matter, identification of alternate modes of jet propulsion, designer and manager of the first attempt to place an object in orbit (1946, 11 years before sputnik), and what he felt to be the most significant, morphological analysis, a new way of thinking. And it was Zwicky's new way of thinking that was the infrastructure of all his other contributions.

Today, some 20 years after his death, professionals who derided him during his lifetime, have come to recognize that Zwicky's ideas may have a greater shelf life than had theirs. However, Zwicky was controversial, indeed dedicated to controversy. This not only because his proposals conflicted with conventional ones, but because Zwicky appreciated the value of controversy itself. His credo was that any party-line was stagnating. Disagreements led to deeper insights and heresies led to the destruction of dogmas. But Zwicky paid the price required of heretics: isolation and repudiation. He acquired the reputation of being abrasive and belligerent. But those who knew him saw through this facade, seeing that Zwicky, like Gurdjief, chose shock as a prod to keep awake the otherwise somniferous.

Zwicky thought of himself as a "lone wolf". He would not hear to having disciples. Disciples and lineages denigrated the power of freedom and independence to view the world anew and think about it in new ways. Indeed, the only way one could be considered a disciple of Zwicky would be to become also a lone wolf, not necessarily agreeing with anything he did, but continuing on one's own the search for meaningful alternatives.

I consider those years in which I had the privilege of working with Fritz, to have been the most rewarding of my life. Even though he loudly boasted that he was a lousy teacher, he was a great teacher. Students in his classes complained that Zwicky didn't teach the listed subject but each lecture was on what he was currently thinking about, and unless you already knew all the necessary mathematics, physics, and astronomy, you were left in the penalty pen. No, Zwicky certainly did not exposit ideas with clarity or entertainingly, but he was a great teacher, in the sense of example, to those who wanted to learn to think. Einstein once said that we shall require an entirely new way of thinking if we are to survive. I believe that Fritz Zwicky took the first step toward that goal.

EPISTOL1.WP6 February 10, 1997

ESCAPE FROM THE WEST

"Nature is by no means silent. Like some distant orchestra it tantalizes us with individual notes and fragments of music., But it does not tell us the organization of these notes, nor reveal the secret of their melody. Somehow we have to unravel the secrets of that hidden melody, so that we can listen to the composition in all its entirety."

Trinh Xuan Thuan in "The Secret Melody"

As Thuan says, we are tantalized with the realization that there is a complete melody sounding through the cosmos, but we have only heard snatches of it, seen glimpses of it. This is because we try to piece together this "melody of the universe" from the perspective of a single epistemology. And more seriously our projections on the power of our favored epistemology make us opaque to its limitations and imprison us in our demand that the particular sacred cow epistemology of our choice do it all and be the only acceptable path to knowledge.

I see this insistence on a single epistemology deriving from traditional Western monotheism. The Western mind set goes beyond its intellectual dogma requiring logical consistency, it projects on the cosmic order the restriction that the universe in all its aspects shall affirm the **sufficiency** of its chosen epistemological approach. This type of assertion follows from such Western religious patterns of thought as a particular people proclaiming themselves "chosen", particular writings exclusively proclaimed divinely inspired, or a Pope proclaiming himself infallible. In a similar pattern, today Science proclaims its epistemology as the sole path to "first class" knowledge.

Whatever our preferences, in view of our ignorance it is best to assume that the cosmos is far richer than we can perceive, imagine, or access through any single epistemology. No matter what our best efforts may reveal, it is prudent to adopt the view that we should employ every epistemology to which we might have access, abandoning constraints of consistency as being purely anthropomorphic. When the results from all the epistemologies are put on the table, we may then and only then, select from the whole that with which we resonate. In other words do not start with the selection process as we do now, but postpone selection until the end. We may then perceive those percepts which appear to us as inconsistent are but harmonious facets of an intellectually incomprehensible whole.

Boot-strap Ontology - Auto-referential loops

In 1870 Pope Pius IX declared papal infallibility - proclaimed

The Supreme Court proclaimed its authority on constitutional matters
In 1803 in Marbury vs. Madison

The U.S. supreme court ruled itself the final interpreter of constitutional issues.

Divine Right

Chosen People

Napoleon crowning himself: - Most honest of all

PREFACE1.WP6 March 16, 1997

PROPOSED PREFACE FOR THE ULTIMATE SELF HELP BOOK

The level of dissimulation in our culture has reached the point where there is a growing market in books with titles such as: What Your Travel Agent Doesn't Want You To Know, What Your Stock Broker Doesn't Want You to Know, What the Government Never Wants You to Know, What the Church Never Wanted You to Know, etc. The present book is an addition to this category. Its most accurate title perhaps should be: What **YOU** Don't Want ***you*** to Know. yourself ~~yourself~~

If ***you*** feel **YOU** are well adjusted, feel **YOU** are on **YOUR** way to where **YOU** want to go, are satisfied with the state of things, then this is not ***your*** book. Put it down now. If on the other hand ***you*** have some doubts, feel perplexed, wonder where **YOU** fit in, do not trust what is being printed and broadcast, are anxious that the culture made a wrong turn back there somewhere, then read on.

Conversely,

If **YOU** have some doubts about **YOUR** life and relationships, feel perplexed, wonder where **YOU** fit in, do not trust what is being printed and broadcast, are anxious that the culture made a wrong turn back there somewhere, then this is not **YOUR** book. Put it down now. If, on the other hand, **YOU** feel ***you*** are well adjusted, feel ***you*** are on ***your*** way to where ***you*** want to go, are satisfied with the state of things, then read on.

Either way, ~~I.=OR=II.~~, this book is on **YOur** side. It will enable **YOUR** fulfillment OR ***your*** liberation. PUT IT DOWN NOW, and then read on

ONDREAMS.WP6

March 23, 1997
PALM SUNDAY

DREAMS:

RE-ENTIFICATION
THE PLAY WITHIN THE PLAY
CHUANG TZU: PLAY ⊃ ⊂ PLAY
MULTIPLEXED PLAYS

Yesterday I was perusing the book, "The Defiant Chiefs", a brief history of those Indian leaders who resisted the pressures and deceit of the Whites. In one part was a description of the Hopi and a picture of the Grand Canyon. In another was a Kiowa chief who had penetrating eyes, and whom, I wondered might at some time have gone to the summit of the Elbert Mesa and communed with the Great Spirit. I became very angry reading about the repeated betrayals and breaking of treaties by the Washington government. I was moved by the courage, wisdom, and suffering of some of the tribes, especially the Cherokee.

A few days ago I talked on the phone with Nan. She and Doug will come to visit me on Saturday, April 12th. We frequently talk about religion when they are here. They are fundamentalists, of the oldest Old Testament sort. I am a Buddeo-Christian and in very subtle and indirect ways talk of the values of meditation, 'listening to God', which I feel leads to a deeper and grander level of spiritual experience.

This morning I awoke remembering this dream:

Nan, Doug, and I were walking in the country side and came across a stream and an area where excavations were being made. On the other side of the hill (north? side) we came to where the stream bed had been bulldozed to the north. To the south a deep gorge had been cut in the hill. It was apparent that what we had first seen on the south side of the hill was to be connected by a deep gorge cut through the hill through which the stream would flow. That appeared to me to be an excellent compromise, if we had to alter the terrain at all.

I left Nan and Doug sitting by the stream and pushed on the the East. There were very precipitous cliffs and summits to be climbed. But after a surprisingly short distance I came to the Grand Canyon. I thought of Nan and Doug whom I had left by the stream and the ~~huge~~ large trench which had been started in the hill. I climbed to a near by summit and could see them. I called out if they wanted to see a real trench, a genuine gorge, they should come over here. They started and climbed some of the rocks. In one place they had to come down on this side. It was a precipitious descent. Doug slid down the cliff, Nan hesitated. I returned to help. Further progress seemed impossible, so we decided to go back. But when we had returned to the original hill, we saw that the excavations were not for the stream at all but were for easing the grade of a new road over the hill. And at the top of

the hill a town had been built, a most typical and redundant drug store and filling station town. I became angry watching the Whites and their activities, from the kids on skate boards to the shoppers coming and going in cars. I felt that the ~~gorge~~ trench that had promised to be maybe 'a little Grand Canyon' had turned into the typical white man's road and enclave. The stream had disappeared. I felt betrayed, but I was betrayed by my illusion, not by what had been intended by the Whites all along.

This dream had blended the images from the Defiant Chief's book with my religious experiences and relationship to Nan and Doug. It revealed to me the ultimate use of the white man's trench (=religion) was a road to commercialism and materialism. Although at first appearance the diggings had seemed an attempt to emulate nature's grand gorge, (but which at best could have been only a feeble surrogate), at some point the excavation had turned to an entirely different objective. The dream translated into excavational symbols my experience with church religion (the excavations), Buddhism and beyond (the Grand Canyon), and my relation with Nan and Doug.

Dreams do seem to be a form of re-entification. A recasting of the entities but with preservation (or revelation) of the true relationships. Do dreams show that this life is a play within a greater play, as the dream seems to be within this life? Or is the dream the real play, the question of Chuang Tzu*. In any event we can say that dreams and waking life are a form of TDMA multiplexing. But may they not also be other forms of multiplexing, FDMA, ADMA, or most intriguing, CDMA?

* Chuang Tzu had a dream that he was a butterfly. When he awoke he was perplexed and asked: "Am I a man who dreamed I was a butterfly, or am I a butterfly dreaming that I am a man?"

LOVEHATE.WP6 March 23, 1997

THE LOVE-HATE PARADOX

Gandhiji once said, "Love the person ~~forgive~~ oppose the behavior". It is not easy to separate the dancer from the dance, the actor from the character, el aviso de el avisadero. We package certain people with certain behaviors, certain verbs with certain nouns, certain terrains with certain maps. This is the root of much of our prejudice. It seems inconsistent to love and hate the same package. Actually it is not inconsistent, but it is paradoxical, the therefore a key to deeper understanding.

I have made the following list of my own love-hate packages. Someday I hope I shall be able to resolve it all.

I LOVE	I DO NOT CARE FOR
TEXAS	MOST TEXANS
ASTRONOMY	MOST ASTRONOMERS
AMERICA	MANY AMERICANS
THE NATURAL ORDER	MANY SCIENTISTS
FREEDOM	FREE MEN
GOD	THEOLOGIES
THE SPIRITUAL	RELIGIONS
THE TEACHINGS OF JESUS	CHRISTIANITY
SOLITUDE	LONELINESS
WINTER	COLD
LIFE	SOME PHASES OF LIVING

What is reflected in this list? Attraction to the potential but aversion for the actual? Respect for *being* but concern with what *being* chooses to do? Awe for the template but disappointment in its manifestation? Identification with the cosmos but alienation from our cosmology? Trust in the goodness of God but bewilderment in what God permits to occur?

But there is another list, a love-love list, in which there is no inconsistency, no paradox, but still much yet to understand. In this list is beauty, devotion, compassion, sacrifice, and that for which we have a word but which nonetheless remains ineffable:

LOVE

EMERGENCE

Emergence is not about resurrection, it is not about restructuring or metanoia. It is beyond cycles and repetition, beyond growth and iteration, beyond evolution and recursion. It is not possible within a system or organism, nor is it possible without what lies dormant but already within the system. It is effected only by the interaction of content and context through the removal of intrinsic inhibitors. Emergence is the result of an intentional apophatic and synthetic dialectic. A portion must be destroyed in order that a portion may emerge. An extinction must precede a radiant. Inhibitory templates must be identified and rejected before access to additional pages of the code book is possible.

The phenomenon of emergence has acquired widespread cognizance as a result of researches in bio-evolution. The origin of new species was seen to be beyond the actions of natural selection alone. While the biological processes are not fully understood, a compulsion for the production of organisms of increasing complexity is pervasively evident. As a part of life, this same compulsion is shared by human beings. This was made manifest 25 centuries before the study of emergence in bio-evolution in the life and teachings of the Buddha. In his vocabulary inhibitors were called 'illusions', living organisms were called 'sentient beings', and emergence was called 'enlightenment'.

Today the compulsion to break out to a higher level is again becoming manifest. Paradoxically, the central thrust of the present search for liberation comes from the same discipline that spent three centuries reinforcing the inhibitors--western science. The experience of science in the 20th century reversed the construction of the mechanistic, materialistic world view to which science had previously been devoted. The reality implicit in quantum mechanics proclaimed **illusion** to some of our most sacred cows. As all of this is currently being digested, many of the foremost researchers are searching for a transcendent worldview that will liberate them from the inhibitive assumptions that presently dominate our culture.

EMDEFI.WP6 97/03/31 DISK: CODEX EMERGENS and Scrap97

Conti. Galoria Brooklyn

Recursion and Emergence

See also 1990 #14
1995 # 51, #65

EMERG01.WP6 APRIL 3, 1997; rev May 1, 1997

ON EMERGENCE

EMERGENCE: THE CREATION OF SOMETHING NEW, IN BOTH ITS TEMPLATE AND ITS MANIFESTATION LEVELS. or THE DESTRUCTION OF INHIBITORS THAT FORBAD SOMETHING THAT ALREADY EXISTED IN ARCHETYPE OR TEMPLATE FORM TO BECOME MANIFEST.

We begin with a set of experiences, say those that are permitted by our biological structure. Soon some of these are emphasized (usually those with a large repetition rate) which results in the negation of others. This is like a rut in the side of a hill. The future flow of water will choose these existing ruts and develop them into gorges. Which is to say that whatever is selected operates through the Principle of Plenitude, confirming itself and blocking other choices. Or as the Law of Hardening puts it, whenever information concerning a particular area is extracted this precludes information being extracted from other areas. That is, SELECTION CREATES INHIBITORS, which is to say that selection destroys access to that which is not selected. This process results in an ever narrowing and increasingly static world.

We may paraphrase the Law of Hardening: ACTUALIZATION REDUCES POTENTIAL, this not only in the sense of fulfilling potential, but in actually recucing remaining potential. Ultimately when actualization through successive selections has completely exhausted potential, an extinction occurs. The inhibitors are destroyed and a new potential becomes available. With the slate wiped clean, a new emergence can occur. This is an iterative process: Emergence, Selection, Actualization, Extinction. Thus to keep the world from ossifying, the circumvention of the law of hardening involves the necessity of extinctions, mortality, and death. Something existing must be sacrificed in order that something not yet existing can be born,

The Duty of Śiva

WITHOUT AN EXTINCTION THERE CAN BE NO RADIANT.

[cf Rubik's CUBE]

The law of hardening and the emergence-selection-actualization-extinction cycle also apply to natural selection and bio evolution. Natural selection by itself cannot generate new species. Its ultimate results are to fulfill and exploit the possibilities inherent in what already exist, that is, to fill all the existing niches. Of course, it is not quite this simple, since the evolution of species also effects and alters the gestalt context in which the evolution is taking place, which in turn alters the path of evolution. In time the changes reach the boundaries of the potential. Then there is either stasis, no further evolution, (turtles), or an extinction occurs that liberates the configuration allowing for the emergence of new species.

ORGAPRCH.WP6 April 3, 1997

AN APPROACH TO ORGANIZING

First we collect and assemble a pile of documents, files, numbers, experiences, whatever. After the pile reaches a certain size we find we can no longer link each item with its location, this is because in our heads the locations are linked to one another through random associations which were derived in a different ways, some by source, some by date, some by an attribute, etc. Humans, having finite informational processing capabilities, reach the limit of their ability to cope with a set of random associations after the set reaches a certain size. This is manifested to us by the difficulty of retrieval of particular items. At this point we are forced to **organize.**

And what does this mean? What does it mean to organize?

In assembling the pile we **pre-organized** by taking the mental step of associating each item with a location. But to organize we must now go beyond these [item-address] links. We must build an [address-address] set of linkages. That is the addresses them selves must be ordered in a more regular way than exhibited by our original set of random associations. This requires an abstract infrastructure possessing certain symmetries. (Since symmetries have the property of simplifying an arrangement to our perceptions.) After we have put together such an ordered address infrastructure, we can then link each item to an appropriate address. We thus see that organizing has two operations: A) The construction of an infrastructure, and b) the mapping of the items onto the infrastructure.

And how do we go about making an infrastructure?

A man who had observed some Buddhist monks, asked what do you monks do? A monk answered saying, "We eat, we sleep, we walk, we sit". The man replied, "So what? I eat, I sleep, I walk, I sit". The monk said, "Yes, but when we eat we are aware we are eating, when we sleep we know we are sleeping, and when we walk we know we are walking. That is the difference". In organizing at each step we must be aware of what we are doing.

One way to create an infrastructure is 'bottom up'. This involves beginning with the items themselves. Items are put in juxtaposition with one another and commonalities and differences are recorded. After much re-juxtaposing, the records will point to 'commonality clusters'. These clusters or categories must then be given labels. Items are then given a surname which is that of the category cluster to which they belong. But the process must be iterated. The items within each cluster are again discriminated and sub-clusters formed. The sub-clusters are labeled and these labels become the second name of the items. The process is continued as far as resolving power permits. The result is an infrastructure known as a tree. An outline is a common example.

TABLES FROM THE HANDBOOK OF BRAHMA

HUMAN INITIATIVE	HUMAN PERCEPTION	REALITY
EPISTEMOLOGY	ONTOLOGY	METATAXIS
HISTORY, RECORDS	DIALECTICS	METADIALECTICS
EMERGENCE	NEXT CONTAINER	BRAHMAN

IN THE BEGINNING WAS **SAT**			
COSMIC	ARCHETYPE	PLOT	TRUE
GLOBAL	TEMPLATE	SCRIPT	VALID
CULTURAL	MYTH	SETTING	IMPORTANT
PSYCHOLOGICAL	MANIFESTATION	CAST	INTERESTING
PHYSICAL	EVENT	ACTION	PLEASURABLE

FACETED **BRAHMAN** MULTIPLEXED				
PERCEPTION↓	ACCESS↕	SELECTION↑	INFLUENCE↑	INFLUENCE↓
sensory	epistemology	potential↓	thought	miracles
recognition	belief	ruts	prayer	
		believe	hope	
			action	
reality				

BRAHMAN			
STATES	PATHS	FIELDS	LEVELS
0 DIMENSIONAL	1 DIMENSIONAL	2 DIMENSIONAL	3 DIMENSIONAL
STABLE	DYNAMIC	OPEN	DEPENDENT
UNSTABLE	RATES	BOUNDS	INDEPENDENT
ADD OUR INTERACTION: CAUSE; IS; OUGHT; DESTINY			

BRAHMTAB.WP6 97/04/06

see also 1997#42

At this stage
We know two things about Brahma:
1) He breathes
2) He is intrigued with variety
cf S.F.C and Bio-evolution

WHEN I GROW UP

Here I am almost 79 years old and I still don't know what I want to be when I grow up. This has been my problem all of my life. Now at last I realize the facts are: I am never going to grow up. So why worry about what to be. In one sense I am still very much a child. I "play" at many games, whatever comes to my attention, whatever is thrown into my cage, like a child wandering through a garden, examining a flower, a bug, a stone. I have been accused of trying to analyze everything. To me every part of the world is filled with wonder and the wonderment would cease if we were to write a last page. On any particular day I can get deeply involved in some project and lose account of time and what needs to be done. But then another project comes up and my attention switches, leaving the first project suspended in mid-air. My note books are filled with suspended in mid-air projects. My cognitive space is like an atmospheric space filled with balloons of many sizes and colors, but all just hanging there, none going anywhere in particular, no finished products.

Perhaps the trouble is I do not have deadlines. But I hate deadlines. I truly feel that nothing should ever be closed off, it should always be left open ended. In terms of my BREAD-WINE metaphor, I am awash in wine, always dissolved and dissolving, always open and opening. Too long now I have frolicked with Dionysus and shunned Apollo. Paradoxically, one of my favorite games or projects is the Apollonian construction of infrastructures in which to order and organize everything. But this too is suspended in mid-air.

The trouble is that we cannot consume an unfinished product. The unfinished has no bottom line; how is it to be evaluated, communicated, marketed? The unfinished creation is of value only to itself, and to its partner, its creator. By what right does a finite mortal indulge in such a caper. Is there not a responsibility to the natural order, to the culture and society that gave him the toys with which he plays? Yes, and I feel this responsibility deeply, but another responsibility seems to be even more important: The responsibility to the internal integrity of the product, a responsibility that demands continue until the product itself says, "I am finished". The responsibility of the living to that which is yet to be born. A higher responsibility than to the demands of the market place of the day.

THE RESPONSIBILITY TO THE SEARCH

"We can, sometimes with considerable difficulty, rationalize any behavior no matter how anti-social, illogical, or perverse."

Li Kiang

LPGROWUP, WP6

97/04/30

SOME TEACHINGS OF SRI SIVARAMKRISHNA

1) For some reasons, probably historical, the West and the East employ two different logics. This fact may play a considerable role in establishing the differences implicit in their respective world views: A one level materialism in the West and a multilevel ontology in the East. The West has adopted a purely **disjunctive** logic, traceable to Aristotle. Its base is the 'law of the excluded middle", which says that every proposition is either true **or** false: One **or** the other. This type of logic excludes the **conjunctive** which is included in the logic of the East: One **and** the other. Nonetheless, Plato, coming before Aristotle, held that "the opposite of every great truth is also true". If a truth is "great", both it and its negation are true, a violation of the law of the excluded middle. Thus, even in the Western tradition, there may be admitted a class of propositions beyond the class of true or false, statements that may be both true and false and statements that may be neither true nor false.

For example, the statement: time is either day or night. But there is time which is both day and night, namely a twenty four hour period. And there is time that is neither day nor night, e.g., dawn and twilight. In the courts, a person on trial is either innocent or guilty. However, he might be both or neither, depending on the **context** taken into consideration and on the degree of **specificity** of the law. Quantum physics demands going beyond the law of the excluded middle. The fact that entities are both particles and waves requires a non-Aristotelian logic to think about them.

A purely disjunctive logic fails to reach into the contexts in which categories are imbedded and fails to consider the gaps that may exist between categories. These limitations were recognized by Russell and Whitehead who attempted to correct two valued logics in their Principia Mathematica. A consequence of a purely disjunctive logic is a conception of the world that distorts its real structure and denies its full richness. An open ended dialogue with the universe must permit the validity of propositions that go beyond the law of excluded middle.

2) The whole contains every part and every part contains the whole. This ancient truth has been discovered in the West by technology through the invention of the hologram. The entire universe exists within each of us as well as each of us existing within the universe. As five hundred years ago it was difficult for people in the Spanish Court to understand that the East could be reached by sailing west, it is difficult for people today to understand that the infinite may be reached through the infinitesimal, by going within, by centering down into the immediate local and present.

3) For most people today it is also paradoxical that access to fullness, to completeness, is acquired along the path to emptiness. It must be learned that one cannot make progress on the trail to true treasure while loaded with collectibles. It must also be learned that one cannot successfully follow two paths, a career path and a spiritual path. A choice and a commitment must be made.

4. The nature of mind is also holographic. We each possess a mind and a MIND possesses us. Minds are both personal and public. There are many public minds as well as millions of personal minds. Minds can merge, fracture, grow and diminish. One must become aware of which mind one is tuned to. But most important, no mind is local in space or time. This is what permits minds to have access to one another and to MIND.

SMOKE

My attitude toward smokers is gradually turning from prejudice against their habit to compassion for their predicament. Over the past few years, I have observed that smokers, after recovering from the initial shock of finding their usual turf suddenly off limits to smoke, began to regroup forming coteries outside stores, restaurants and offices. They banded together and puffed away defiantly glaring at the non-smokers who passed by.

After a year or so however, the size of the groups standing out of doors began to decrease. They still were in strong rapport with each other but now ignored the passers-by. Later the size of the groups diminished further and one would see two or three holding their cigarettes, no longer talking, just staring into the distance, avoiding all eye contact with those who passed by. Now it has come to where an isolated smoker, having only the companionship of a cigarette, braves snow, cold, or rain, staring at the ground.

I begin to empathize with their condition. I have always respected those willing to stand alone convinced of their position, not needing the moral support of others to validate their choice, having the courage to persist even when all turn against them. I almost see the lonely smoker out there in the cold wind as displaying great virtue until I realize that it is neither conviction nor courage that has brought him/her to that lonely post, it is the addictive power of nicotine.

Their's is not the choice of a person with freedom, in which case virtue would be involved. The smoker is not a free agent, he stands out there under the orders of a ruthless dictator who promises torture if not obeyed, whose agenda is a well disguised long term holocaust. In essence, the fight against the tobacco pushers is the same fight Americans have time and again fought against tyrants who would take away freedom.

SMOKERS.WP6

97/05/12

The smoker practices TOMA
Lighting the pipe, drawing on the cigarette
he leaves this world for a moment.
This neither nicotine-substitute or
something to hold in the hand can replace.
It is replaceable only by meditation

The slide into the most ephemeral.
game within the game within...
Is not the endpoint an instant NOW?
that which the meditator seeks

The White man has converted again the sacred
into a commodity for profit. What was first
used to (teach breathing by) making the breath of Wakan Tanka
visible, was taken and profaned and
used to enslave.

Cell phones can replace cigarettes
for the hands need to hold something

DIALECT0.WP6 97/04/03; 97/05/01; 97/05/08; 97/05/12

ON DIALECTICS

The terms 'dialectic' and 'dialectics' have been defined and redefined by various philosophers from Plato to the present. Aristotle, Kant, Hegel, and Marx each gave different meanings to the terms. Why 'dialectic(s)' should be repeatedly redefined instead of replaced by neologisms is either because its roots allow different emphases [The Greek, δια = right through or one against another; λεκτικος = good at speaking; διαλεκτικος = argument]. or because each philosopher is seeking to grasp and articulate some elusive fundamental essence that linguistically underlies the word. Plato held that dialectic referred to first principles; Aristotle to the level of ideas that required no hypotheses; Kant for the difficulties and errors that arise in conceptualizations beyond the world of phenomena; Hegel for an adversarial process consisting of principles or forces he called theses and antitheses, that resolved themselves through syntheses; Marx and Engels married Hegel's definition to an ontological materialism, elaborating with such attributes as all entities consist of opposing elements making their stability temporary.

With this antecedent of philosophical freedom in how one may use the term 'dialectic', I here propose to name by 'dialectic' any basic **pair** of forces or principles that operate with or against each other to effect emergence. Unlike Marx, I allow that certain dialectical forces cooperate instead of compete. I also allow that certain dialectical forces do 'time sharing', they multiplex in the TDMA mode. I also postulate with Plato certain primary dialectics that create the 'ground' for the 'figures' of other dialectics; that is, the primary dialectics form and sustain the stage that supports the changes, the dramas, that take place on that stage. Hence, the following definition:

DIALECTICS: *Forces, energies, or principles, or trends that work with and/or against one another, whose interaction effects emergence or obliterates existing order.*

At dialectical interfaces, 1) some form of emergence occurs either through synthesis or creation; or 2) some species of obliteration or extinction removes existing inhibitors, resulting in the release of energy and the renewal of potential. Dialectics are engines that generate complexity, manifest new levels, or even create new worlds.

also dialectic is applied to Nagarjuna
by author of ~~Buddhist~~ Handbook

DIALECTICAL PROCESSES

SOME EXAMPLES:

- YIN/YANG

The usual generic term for dialectics is Yin/Yang. However, many more specific dialectics have been subsumed in this term, such as Masculine/Feminine, Concentrated/Dispersed, etc.

- INDIVIDUALIZING/HOMOGENIZING

This is a dialectic that I have never seen mentioned but that seems very pervasive. I call it Uniqueness/Equalization. There is a great struggle in the world between the forces of homogenization and the forces seeking to generate and protect uniqueness. For brevity, I have labeled these GEP, a General Equalization Principle and GUP, a General Uniqueness Principle. In physics, the second law of thermodynamics is a special case of the former, and Pauli's exclusion principle is a special case of the latter. In theology, orthodoxies are homogenizations, heresies are pursuits of uniqueness.

References: GUP/GEP 1996#69; The Glory of Uniqueness 1994#30; Kinship and Uniqueness 1991#83

- CONTACT/SEPARATION

This dialectic, sometimes called Departure/Return or named Isolation/cosmopolitanism by Chamberlain and Moulton of the University of Chicago who first enunciated it early in the present century. It was used to explain much of what happens in bio evolution. Unlike some other dialectics, it is oscillatory or time multiplexed.

- FORMING/DISSOLVING

This is the dialectic expressed in mythology by the opposition of Apollo and Dionysus. Dionysus is always escaping the forms that Apollo would capture him in. The human spirit is always escaping the prisons that the human intellect would imprison it in. This is fittingly symbolized by the bread of intellect and the wine of spirit. We must have worldviews, but we must ever abandon and transcend them. We must go from Ptolemy to Copernicus to Digges to Wright to Shapley to Hubble to ... This is also a time multiplexed dialectic.

References: Bread and Wine 1996#59;

- EXTINCTION-RADIANT ~ forming/dissolving
- SPLITTING-BRIDGING ~ departure/return
- STANDARDIZING-COMPETING
- ORDER-FREEDOM
- ACTUALIZING-POTENTIALIZING
- ETHERIALIZATION-MATERIALIZATION

PRESERVING ~ CHANGE

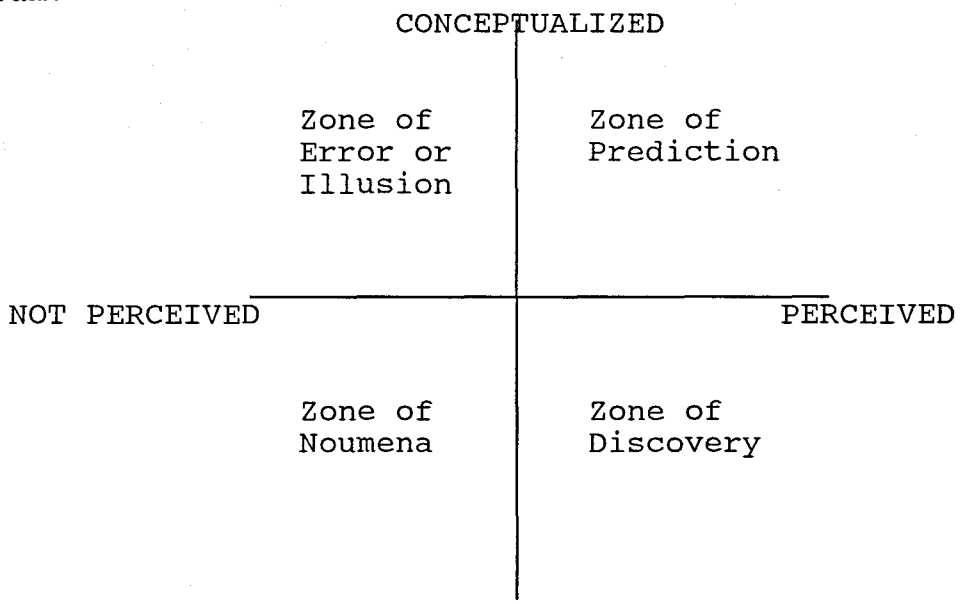
PERCON01.WP6 May 12, 1997

CONCEPTION AND PERCEPTION

Which came first, the perception or the conception, the chicken or egg? In our century we have in the theory of general relativity an example of a conception coming first. This conception leads us to see things like black holes which very likely would not be perceived without their having been predicted by the conception. We also have the Hubble space telescope which is showing us objects like the birth nests of stars, cosmic forms that we did not know existed, that were not predicted by any conception. Mostly perception and conception are like the two snakes on the caduceus, they intertwine and lead to new knowledge. However, as perceptions collect, their usefullness requires cataloging, requires a conceptualization. And after a formal conceptualization has been made the trouble starts.

The old adage, "Seeing is believing", governs the epistemological zone where concepts are open ended, and everything perceived contributes to the formation of the concept 'catalog'. If something is not in the catalog, it can be added provided the catalog can subsume it. But the "Law of Hardening" says that it will become increasingly difficult to add items as their number mounts. In time things perceived that have no alloted conceptual space will not be granted admission. We become restricted to the epistemological zone where the adage, "Believing is seeing" dominates. What is not believed, i.e. not in the catalog, will not be seen.

It is interesting to look at this in the form of a quadric diagram:



A CONCEPTION FIRST DIAGRAM

THIS DICHOTOMY ~ THE 2 TYPES OF PARADIGM (see Dyson)

FROM CONCERNS FROM TOOLS

e.g. relativity e.g. computer

IMAGINED WORLDS
Pub 1997

(THIS WAS WRITTEN BEFORE READING DYSON)

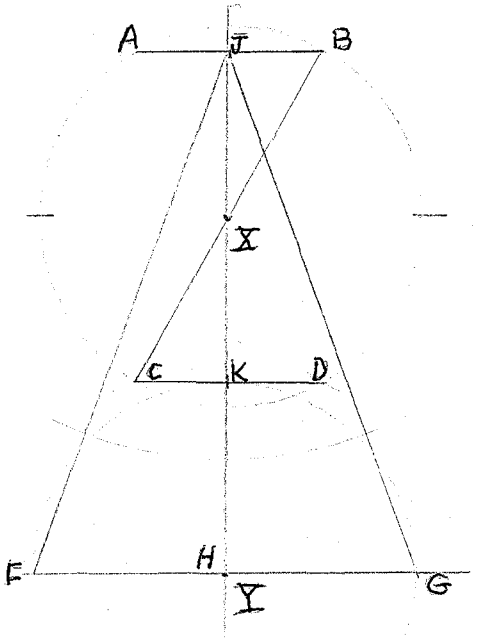
I read Dyson in April 1998 This was written May 1997

NONAGON.WP6 97/04/30; 97/05/12

RULER AND COMPASS

THE CONSTRUCTION OF A NONAGON

PART I.
- o Construct the circle X of radius R.
- o Divide its circumference into six parts.
- o Connect AB, midpoint J. Connect CD, midpoint K.
- o Construct circle Y with radius R tangent to CD at K.
- o Connect J with the ends of the diameter FG.
- o The angle FJG will be equal to 40°.20782 = 40°12'

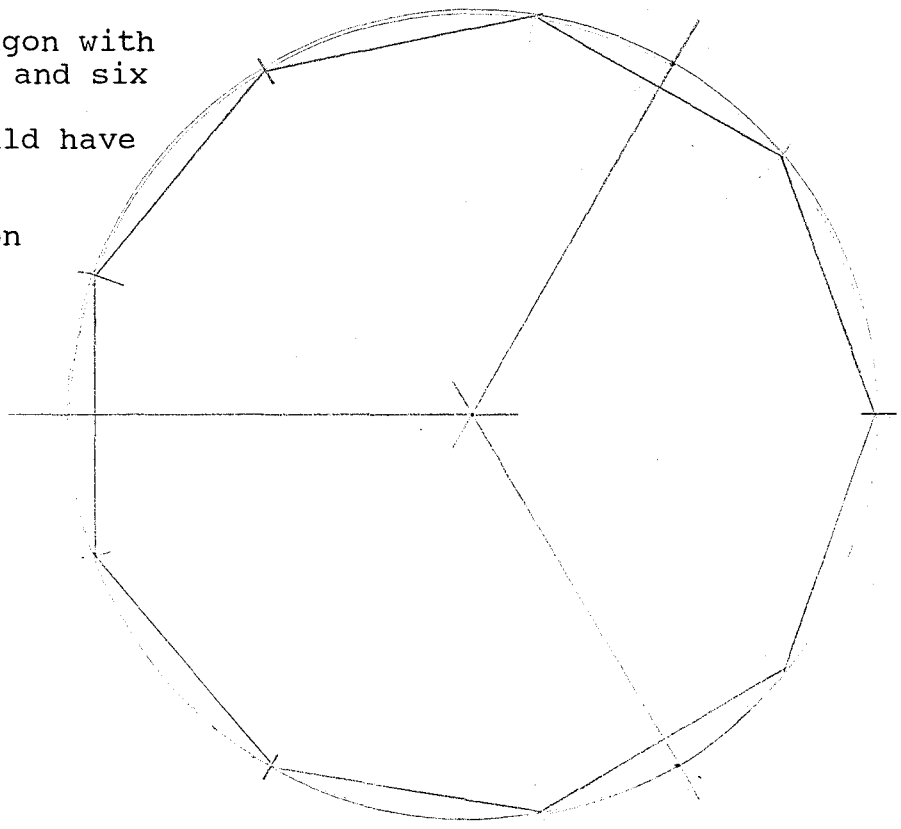


The projection of BC on line JH is = 2R cos 30°.
cos 30° = $\sqrt{3}/2$; JH = $R(1+\sqrt{3})$
tan FJH = $R/R(1+\sqrt{3}) = 1/(1+\sqrt{3})$
angle FJH = 20°.10391

PART II.
- o Divide a circle into 3 parts.
- o Layout angle FJH on both sides of the three radii.
- o Bisect the remaining arcs.

This results in a nonagon with three sectors of 40°.2 and six sectors of 39°.9
(The exact nonagon would have nine sectors of 40°)

Note: This construction fortuitously evolved while working on a tiling problem.



DEEPBLU1.WP6 May 19, 1997

WHAT CAN WE LEARN FROM DEEP BLUE?

The current philosophizing about the defeat of chess champion Garry Kasparov by Deep Blue, the IBM RS-6000 chess player, reflects a division of opinion that may go back to when early man first picked up a stick or stone as a tool or weapon. Some have always held that supplementing our brawn (or brain) with external devices introduces an unnatural element into bio evolution and even diminishes our potential. Certainly, raw man (that is, man without supplements or peripherals) is at a disadvantage when up against man+stick or man+stone. This point of view of diminished potential is still supported in the world of sports where what raw man without supplements (including steroids) can achieve is celebrated even though man+devices can move faster, go higher, and throw further than can raw man. It may be said that this view is also supported in those schools where children are prohibited from using calculators, and this view may even play a role in the widespread opposition to human cloning. Most others, however, have always held the view that nothing enhances man more that the supplementary or peripheral devices that he creates to move, lift, see, fight, and more recently, compute. And Deep Blue vs. Kasparov should be viewed as but another entry in a long list of competitions of man vs. the devices he has made: limb vs. wheel, oars vs. sail, and so on.

But raw man vs. man+device is no longer a central issue. The issue has turned to man vs. the device itself, not so much as creator against the creation, as the emerging possibility of the creation against its creator. This scenario was recently (1968) given a possibly prophetic portrayal by HAL the malevolent computer in the film 2001. However, the same scenario is also present in our mythic heritage, Chronus killing his progenitor Uranus, followed in turn by Zeus and the Olympians conspiring against and replacing Chronos and the Titans, who were their progenitors. The same theme was dramatized in Mary Shelley's novel 'Frankenstein' published in 1818, which was also the era of the Luddites who faught against the machine seeing it not only a threat to jobs but as embodying an evil spirit. It should probably be noted that primitive man did not view the stick or stone as an adversary but rather as a deity, the container of spirit. Must we not agree with both the primitives and the Luddites if we consider **information** to be a species of spirit?

Over the centuries man became symbiotically comfortable with artificial muscle, why then this fear when confronted with the prospect of artificial intelligence? Is it the Luddite fear that even more jobs will be lost and that more of us will become irrelevant? Or is it the resurfacing of the ancient fear that the creation will destroy and replace its creator? Or is it the fear

e.g. WAR

of the uncontrolable spirit the ancients projected on the stones; translated into our vernacular, the fear of self-organizing information evolving itself beyond our intentions. Lastly, could it be that since man does not really know who he is, our deepest fear is to continue the journey into unknown territory to find out? Today the machine has acquired too much of its own imperative to be stopped by neo-Luddites. There is only the feeble opposition of claiming that artificial intelligence is impossible.

Are the fears justified? If we look at the levels into which human creations fall, perhaps we can better understand if and when to fear:

- The first level is that of tools. These are devices **we design** for some specific task, which **we fabricate** and which **we operate** using our own energy.
- Next are machines, devices we design for some **specific task(s),** which we make and operate but which have a non-human (or animal) **energy source.** Using this definition most present day computers are machines.
- Then come robots, devices we design for some specific task(s), which we make but which **operate themselves** and have their own energy source. This category includes devices such as automatic thermostats, automatic pilots, ... automatic factories. A computer is usually an essential component of such robots, which we will call robots of class 1.
- Following next in sophistication and complexity are robots that add **self-maintenance and repair** to their auto capabilities. Call these robots of class 2.
- Next come robots that **can make themselves.** These are designed and fabricated initially by humans but are on their own with respect to energy, cloning themselves and any other operations they perform, but remain limited to their initially assigned spectrum of tasks. These are class 3 robots.
- Finally come self-maintaining, self-replicating robots that **can evolve,** adapting to their contexts, increasing the spectrum of tasks they perform and perfecting their performance. This would include the capability to design, fabricate and use tools, machines, and robots of grades 1,2, and 3. These we designate Cyborgs.

At the present time we have created nothing significantly beyond robots of class 1, although using computers we have designed cellular automata that exhibit many of the characteristics of life, such as self-repair and self-replication. But assuming that down the road we can produce a cyborg or make robots that can evolve into cyborgs, what remains of raw man that is unreplaced?

where are corporations

Several answers to this have been given. One answer is that in the grand course of cosmic evolution the role of organic life is to create silicon life which has more potential, and when this has been done there will be no further need for organic life and it should then peacefully ride off into the sunset. Other views say that we will always find in ourselves things we are and can do that no current cyborg can do. But with cyborgs evolving, the nature of the human vs. cyborg game is to move the goal posts whenever the cyborgs catch up. This game could go on for some of Zeno time, with the cyborg eventually bettering the human on each new aspect that the human comes up with. And when we run out of new challenges for the cyborg, then apophatically we shall have finally been completely ~~cloned~~ fabricated. A third answer says that there is a cosmic rule that no being can create its equal, it may beget its equal but it cannot create its equal. If true, then our greater responsibility is to become all that raw man can become, individually as well as collectively, spiritually as well as culturally.

PARTIME1.WP6 May 23, 1997

see 1994#5 1997#3

PARTICLES:TIME :: WAVES:FREQUENCY

Another venture into the jungle of juxtaposition. This time with frequency/time as wave/particle. Mathematicians have settled that frequency = 1/time, but could there not be more? In going from frequency to time may we not also be going from a wave to a particle manifestation. This seems to be the case in music. The horizontal time axis has a particulate nature consisting of entities distributed in time called notes. The vertical pitch axis references the frequency or wave nature of the notes. The human musician or 'observer' gets into the act by deciding where the time-to-frequency interchange should be located. For human music this seems to be somewhere in the interval eight to twenty hertz. That is for duration times less than about 1/20 sec we prefer to sense the frequency aspects.

Let us generalize from this music metaphor. By analogy, every entity from atoms to the cosmos, like every note, has associated with it both a duration in time and a wave pattern. While this time-frequency parameter may be singular for every entity, the t<-->f interchange is set by the t<-->f of the observer. In the abstract world in which mathematicians exist, they always set t<-->f at one. For humans the time side of the divide is usually called the lifetime of the entity, the wave side the frequency range of the entity. In general, the larger the entity, the greater its age, the smaller the entity the higher its frequency. The Planck particle has f = 10^{42} hertz.

Conjecture: (some function of h, m, and d)
Surmise: For every entity: $_{?}h\nu + (mc^2 \times d)$ = a constant, where h is Planck's constant, ν the frequency, m the mass, c the velocity of light, and d the life time.

An alternate approach holds that, instead of the time-frequency parameter being singular, there is either TDMA or FDMA (or both) multiplexing going on. In the TDMA version, every entity oscillates back and forth between its wave manifestation and its particle manifestation at some unknown frequency. In the FDMA version, every entity exists at two or more frequency levels. In this view a singular frequency spectrum could not even exist. cf. Pythagoras and Nagarjuna

Another TDMA multiplexing model would have an information vs. energy oscillation occurring at some unknown frequency. Somehow every material form must be continually refreshed by being supplied both energy and information. This view holds that information-energy, time-frequency, and wave-particle are each two sides of a coin. [of how many coins?, one, two, or three?]

#33

3ONTOL01.WP6 May 24, 1997

MORE ONTOLOGIES

In comparing two types of the game "20 Questions", Wheeler proposes two kinds of reality which he labels 'OBJECTIVE' and 'CONTEXTUAL'. Objective reality is plain old fashion Newtonian reality which postulates an 'absolute' world out there that exists independently of being observed by ourselves or any other conscious creature. This is the common sense and traditional scientific view of reality. It corresponds metaphorically to the classical form of the 20 question game. Contextual reality, on the other hand, postulates a critical role for the observer. The observer creates reality through the process of observation. This is a counter intuitive and quantum mechanical view of reality. It corresponds metaphorically to the modified game of 20 questions. (For a description of these games see Casti, Paradigms Lost p416, or Scraps 1995#27). The difference: A Newtonian objective reality is to be explored; a Wheeler contextual reality is to be created.

Whenever given two systems that appear contradictory in the framework of Aristotelean logic, my rule is: assume both are correct, put them in juxtaposition, and find a meta-system in which both may be consistently imbedded or coherently subsumed. In this case one result of applying this process is an ontology, which may be called 'SELECTION' reality. Begin by noting that in the game of 20 questions there exists in advance an available set of words from which the target word is 1)chosen by the group in the objective case or 2) evolved by the group plus the questioner in the contextual case. In both cases a prior reality, namely a set of candidate words, pre-exists. It is only the processes by which the **selection** takes place that differ. It follows that both OBJECTIVE and CONTEXTUAL realities are special cases of a SELECTION reality.

> [Throwing out the 20 question metaphor there may still be a true Wheeler creation type ontology. But within the framework of the metaphor the Wheeler ontology is a type of selection ontology.]

How best to describe a SELECTION ontology?

One way is to look upon reality as a two dimensional terrain with human experience taking a one dimensional path through that terrain: the path being the portion of the map humans call reality. (Or with more sophistication, think of Reality as an n dimensional hyperspace with human experience selecting an (n-r) sub-space reality, where r < n.) In this ontology are we creating or are we exploring? Neither. We are not creating because what we encounter already exists. Nor are we exploring because we are limited to a one-dimensional path, and exploring mandates freedom to survey every portion of the terrain.

We are selecting.

Why are we limited to a one dimensional path in a two dimensional terrain? This involves two factors: 1) If the ontology is deterministic, as is assumed by classical physics, linear causality forces the path to be linear, and the place of each step on the path is determined by what has preceded. This linear causality is a consequence of the one-dimensional and uni-directional nature of time. 2) Viewed topologically, a one dimensional path of whatever length cannot cover a two dimensional domain. [cf fractional dimensions]

However, even though linear, there may be branch points on the path. Part of the inculcation of the OBJECTIVE reality we experience is that a thing cannot be two places at the same time. At branch points we have the freedom to select but cannot be served items on the menu other than the one chosen. Further, the nature of the selection process that determines the path is that in traversing certain sectors we are precluded from ever traversing others and the zones of inaccessibility increase each time a selection is made. This is not only implicit in the nature of time, as is illustrated by the cone of inaccessibility in relativity theory, but is also a consequence of the second law of thermodynamics as pointed by Szilard.(the law of hardening). A way of getting around this has been proposed by Everett who postulated 'parallel universes' in which at every branch point both the observer and the universe split allowing both branches to be taken, one branch by the observer in this universe, the other branch by a cloned observer in a cloned universe.

The SELECTION model is in accord with the nature of time as we experience it. The past is no longer accessible and the future contains choice. We might say that our temporal experience infers a SELECTION reality while our spatial experience infers an OBJECTIVE reality. (It is not clear that Minkowski's formulation of space-time can incorporate this distinction.) In an OBJECTIVE reality the statement, "You cannot get there from here" is used as a joke. In a SELECTION reality it is not a joke, it is part of the reality.

OBJECTIVE	CONTEXTUAL	SELECTION
NEWTON	WHEELER	SZILARD
EXPLORE	CREATE	SELECT

NOTES: In addition to the above ontologies, we have PARALLEL, MULTIPLEXED, and SERIAL (in the sense of Dunne) ontologies. If multiplexed universes are cloned as are parallel universes, then the period between 'time on stage' for each universe monotonely increases. What consequences of this become observables? redshifts? second law? expanding universe?

ONE DAY IN THE NEWS

A selection of 12 stories from the Press Democrat
MAY 27, 1997

No 1. Page E1

Internet privacy battle heats up

Washington:

The encryption fight is shaping up. The government allows exporting only codes that are sufficiently weakened so that the National Security Agency can readily decipher them. Forbidding export of strong codes stands to create a loss of thousands of jobs and up to $60 billion for U.S. software companies, who argue that foreign companies will develop and sell strong codes in spite of any restrictions the U.S. government can make. A government proposed alternative is to allow exports but have the keys to the codes put on deposit so that the NSA or Justice Department can have prompt access to them whenever needed for security reasons. Rep. Bob Goodlatte, R-Va and 97 co-sponsors introduced a bill that would let U.S. companies sell strong encryption abroad, ban government agencies from gaining access to on-line communications, and let Americans use any type of commercially available codes, whether or not the government could decipher them. John Gage, chief scientist for Sun Microsystems recently told a House panel: "The government is proposing an industrial age solution to an information age problem. Computer bytes aren't like howitzers or nuclear subs, things that can be stopped at the border. Privacy cannot be centralized, and in the real world, nobody trusts the government to keep secrets."

No. 2. Page 8.

Fusion research prompts fear of new bombs.

A quiet battle is heating up over whether the nation's weapon scientists should be allowed to press ahead with work toward a new generation of hydrogen bombs. With water (duterium) the ubiquitous source of nuclear fuel, the controversy centers on nuclear ignition systems that could be made small enough to be readily transportable. Despite the Comprehensive Test Ban Treaty, the weapons laboratories argue there is a loop-hole that allows pure-fusion research. Because of the laboratories great political clout, the Clinton administration has courted them extensively, starting a bomb maintenance program costing 4 billion per year. Opponents argue that the United States now risks becoming not only the architect of unnecessary weapons but also a nuclear hypocrite in the eyes of the world.

No. 3. Page 1.

Clinton in Paris for NATO expansion signing.

Paris:

Clinton will meet with Yeltsin after the signing ceremony assuring Moscow that NATO has no plans to station nuclear weapons on the prospective new members territory. In a Memorial Day ceremony at Arlington Cemetary Clinton compared the extending of NATO to the Marshall Plan that saved Europe fifty years ago, "extending the reach of prosperity and security" to former communist countries.

2/NEW0527.WPG

No. 4. Page B5.

On China, money talks.

There will be appeals, some eloquent, passionate, and well meaning by human rights activists against extending the Most Favored Nations pact with China. But heavy stakes are involved with such players as Boeing, Seagrams, and AT&T selling planes, booze, and electronics to China. And don't leave out Philip Morris, Federal Express, Walt Disney, BellSouth, Chevron, Ameritech and Caterpillar. In spite of the fact that we are running a $40 billion trade deficit with China, these corporate giants have gained powerful clout in congress and the Clinton administration through their $55 million total given to political campaigns. That buys a lot of affection for free enterprise. Forget morality, values, and principles. In the great China debate money is going to do the talking.

No. 5. Page B5

Gephardt to break with Clinton on China policy.

Washington:

Representative Richard Gephardt, the House Democratic leader plans to denounce Clinton's "Trade ties are the best way to bring China into the family of nations and to secure our interests and ideals." Gephardt calls Beijing's current policy, "Free-market Stalinism" He said that efforts to advance democracy through trade were futile. "Economic growth for the elite will not lead to basic human rights for billions."

No. 6. Page E2.

Guatemalans tell of job abuse.

Philadelphia:

Reporters investigating work conditions in Guatemala find that U.S. companies that contract overseas work do not adequately monitor conditions. Under age, under paid, over worked employees who cannot complain because of family poverty are the subsidizers of the high profits of U.S. firms that find "the taste of cheap labor intoxicating". Workers as young as 14 were found working 55 hours a week to make prom and bridal gowns for Alfred Angelo Inc. of Horsham, Pennsylvania. The company is planning to downsize its labor force of 57 union workers remaining in Horsham after their contract expires on May 31.

No. 7. Page 1.

Jobless Mexico peasants blame train heists on hunger

Acultuzingo, Mexico:

"No one here has enough to eat and there's no work. We rob to live"

--Luis Hernandez

"These people are organized and dedicated to committing robberies. They hide behind women and children whom they hire to carry out the robberies. And they make it appear as if they steal because of hunger."

--Miguel Tirado Rasso, Mexican National Railroads

Now President Ernesto Zedillo is auctioning off the railroads--principally to private U.S. companies.

No. 8. Page 1

Activists seek right to bid for U.S. trees.

Okanogan, Washington:

When an alliance of conservationist groups bid highest in an auction to purchase 271 acres of lodgepole pine that had been partially burned by forest fire, the Forest Service awarded the contract to the second highest bidder, an Oroville logging company. The Forest Service made the award claiming the alliance had no intention of logging the trees. The Clinton administration issued a letter rejecting the idea of awarding timber contracts to nonharvesting bidders.

No. 9. Page E2.

Patients find HMO's tough in benefit fight

If your Health Maintenance Organization treats you negligently, you many find you have nowhere to turn. The problem is with the ESIRA--the Employer Retirement Income Security Act of 1974. ESIRA was passed to force companies to pay employees the pensions they were promised. It covers all employee benefit plans, including health plans. The catch 22 is that lawsuits under ESIRA have to brought in federal courts and malpractice is a state not a federal issue. If HMO gets into federal court, malpractice goes out the window. HMO in state courts usually does not allow for more than recouping the benefits cost.

No. 10. Page 3.

Carbon monoxide in truck kills 3 children.

Los Angeles:

While three children on a trip back from San Francisco drowsed beneath the camper shell of the family's small pickup truck, they were slowly being poisoned by carbon monoxide. The parents who rode in the truck's cab, looked in on the children and thought they were asleep. When they later tried to waken them they were unresponsive.

No. 11. Page 6.

Mom charged in death of starved infant.

Chicago:

A woman ignored her doctor's orders to immediately take her malnourished son to a hospital and instead took him to a salon where he died as she was having her nails done.

No. 12. Page 10.

Christianity in England 1,400 years old.

Canterbury, England:

In a service at the cathedral marking the arrival of St Augustine in Canterbury in 597, the Archbishop of Canterbury, the Most Rev. George Carey, appealed for reconciliation among Christian denominations. This date is widely regarded as the start of English Christianity. At the time of Augustine's arrival England was divided into ten independent kingdoms all of which were pagan.

$\sqrt{RMS}$

DREAM 97/06/07

We have separately obtained tickets to a performance and find we have front row seats. On the stage is a bed and on the bed a male figure, reminiscent of some Greek or Roman deity, is surrounded by a group of beautiful women and men, all reclining on the bed. They have musical instruments and are playing and singing a song. It seems to be some song that I have heard snatches of all my life but have never heard in its entirety. It is very beautiful, but sounds completely different from how I imagined it would sound. When the song ends the central figure says that he just cannot get over how joyful everything is now that he has an "R M S" relationship to all the others. I laugh at this. Then the person next to me asks, "What is RMS?" I say it means 'root mean square'.

I wake up and find I am smiling about this dream. It seems to contain many messages. It is clear to me that the deity is the central self and the others are all Jungian figures, animas, shadows, etc, and other inner figures going beyond Jung's list. But what is an RMS relationship? Whatever it is, the result seems to be the achievement of an harmon~~ization~~ that is capable of singing the cosmos' fundamental song with great feeling and beauty.

I begin to think mathematically about root mean square. This is different from an ordinary or first moment mean which adds all the inputs, both the positive and the negative, then divides by the number of inputs. The root mean square, or second moment, first squares all of the inputs, then adds them, divides by the total number and finally takes the square root. In RMS every input is positive because the square of negatives is positive. Psychologically, (which is what this is about), every aspect whether positive or negative is first rendered positive making the final disposition always positive. First moment averaging may lead us to **balance,** but second moment or RMS averaging leads us to **harmony.**

The psychological problem is how do we 'square' our negatives?

RMS2.WPG

√RMS

SOME COMMENTS

Re DREAM 97/06/07

The psychological problem is how do we 'square' our negatives?

An event that happened August 15, 1993 seems to be a possible clue to squaring, at least one form of squaring. On this date an intruder broke into my house intent on burglarizing. Not suspecting anyone to be at home, he was completely taken by surprise when we encountered one another. I shouted at him, "Who are you?" He, visibly off balance, shouted back, "Who are **you** ?" In effect we had [Who are you?]^2. Aside from the immediate purpose of the questions, there was a very important meaning to them which led to our confrontation. Who was I to have a house and some stuff worth burglarizing while he had needs that could be met by taking some loot. Here we were both with backgrounds that gave a negative, a double negative meaning, to the encounter. Affluence vs. poverty, and legality vs. crime. That which legalized my affluence also played a role in legalizing his poverty, and consequently illegalizing his action. The negatives here were deeply intertwined. He promptly left and I called the sheriff, ending the event but opening up questions concerning its cause and meaning.

There was a double symmetry here and while a single symmetry may not permit 'squaring', a double symmetry does. Somehow the two negatives of an illegal action and an imbalance in access to resources cannot be resolved separately, but can be resolved together--that is squared or made positive. This requires both inner and outer changes, probably why nothing ever gets squared.

In a broader sense we must take the inner and outer domains of ourselves and the universe and square them. We must let the inner and outer symmetries reflect each other as do parallel mirrors until the infinite regression squares us with the cosmos. We must not overlook that there is double symmetry here, for both we and the universe have inner and outer domains--we separate subjective and objective, the universe separates concealed and manifest.

[Both we and the universe have inner and outer domains, there is double symmetry.]

Another example Terrorists & Terrorism

RMS.WPG

97/06/07

Another meaning of squaring, come from statistical theory.

The first moment gives the mean ~ balance

The second moment gives the variance ~ spread about the mean.

So from the dreams point of view, the harmony & joy comes from the spread, what is included, accepted — e.g. the shadow.

June 12, 1997

Dr. Steven J. Ostro

300-233
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, CA 91109-8099

Dear Dr. Ostro,

It is was with extreme interest that I read and viewed the material you kindly sent me on your observations of Geographos and other ECA objects. Just as Sputnik turned global attention to artificial satellites in 1957, the Shoemaker-Levy collision with Jupiter has turned global attention to the probabilities of earth asteroid/comet impacts. This attention has been long overdue.

To my knowledge, the first dedicated search to determine the distribution in size and orbit of what is out there was done at the Lowell Observatory by Clyde Tombaugh in 1955-6. With the photo-telescopic equipment available he concluded that there was "nothing larger than a tennis ball" regularly present in cislunar space. How much in both fact and knowledge has changed since then!

When we began the first Palomar sky survey in 1949, the number of known ECAs (called Apollo's back then) was about 20. Four or five new ones were picked up on the survey, including Geographos and Icarus. All findings were by-products, none from intentional search. There were two other asteroids we found on the survey, named Quetzalcoatl and Tezcatlipoca for Aztec gods, whose status is unknown to me. If you could check your current list of ECA objects for these two, I would be most appreciative of any orbital and physical information there might be.

Thank you for your communications, and may I wish you much success in your important research activities.

Sincerely yours,

Albert G. Wilson
P.O. Box 1871
Sebastopol, CA 95473

ALW1871@aol.com

CSTRO, LTR

"DEEP IMPACT" A YEAR LATER

July 1, 1997

Dr. Steven J. Ostro
300-233
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, CA 91109-8099

Dear Dr. Ostro,

Thank you for your communication on Quetzalcoatl and Tezcatlipoca. Your radar studies are leading to many important clues re the origin of these objects. Is it too early to look for size vs. orbit patterns, or shape vs. size patterns? Are the asteroidal bodies too diverse for any meaningful classifications? If there exist no patterns, or if all fall within certain limits that is also telling us something important.

Thank you for filling me in on this exiting research.

With best wishes,

Albert G. Wilson

Member Deaths

Since June 1996, the Society is saddened to learn of the deaths of the following members:

Victor Ambartsumian
Robert H. Dicke
Isadore Epstein
Richard B. Herr
John B. Irwin
Igor Jurkevich
James Jay Klavetter
Jerome Kristian
Thomas H. Markert
Leonard J. Martin
Walter E. Mitchell, Jr.
Edward P. Ney
Carl Sagan
Jack William Slowey
Roman Smoluchowski
Lyman Spitzer
Martin Schwarzschild
W. Reid Thompson
Clyde W. Tombaugh
Richard F. Tousey
Henry L. Yeagley

In Memoriam

FROM THE
AMERICAN ASTRONOMICAL SOCIETY
NEWS LETTER
JUNE 1997

IN BRIEF

At the Eastern Analytical Symposium to be held in November, **Paul C. Lauterbur** of the University of Illinois at Urbana-Champaign and **Richard N. Zare** of Stanford University will be among those receiving 1997 EAS Awards. Lauterbur will be honored for achievements in magnetic resonance and Zare for accomplishments in analytical chemistry. The awards are sponsored by a group of organizations that include several sections of the American Chemical Society.

The Franklin Institute honored **Federico Capasso** in May by awarding him the John Price Wetherill Medal for "his pioneering contributions to the technique of bandgap engineering and its innovative use in solid state electronics, optoelectronics and semiconductor science, and in particular, for his invention and experimental demonstration of the quantum cascade laser." Capasso is the head of the quantum phenomena and device research department at Bell Laboratories, Lucent Technologies, in Murray Hill, New Jersey.

OBITUARIES

Clyde William Tombaugh

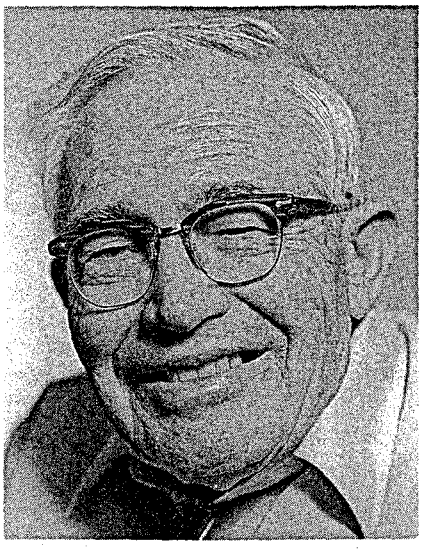
Clyde Tombaugh, known for his discovery of Pluto in 1930, was born on 4 February 1905 in Streator, Illinois, and died of congestive heart failure on 17 January 1997 in his home in Las Cruces, New Mexico.

In 1928, Clyde, an amateur astronomer who had made his own 8-inch telescope, sent some of his drawings of Mars to Lowell Observatory in Flagstaff, Arizona. Although all he wanted was suggestions for improving his observing technique, the Lowell administrators recognized Clyde's skills and hired him as an assistant observer to participate in a systematic search for a ninth planet.

Clyde's first tasks were to bring a new telescope on line and to develop an observing procedure for seeking a distant planet. He systematically photographed overlapping regions of the sky when they were on the meridian so that relative motions would be perpendicular to his line-of-sight, causing greatest displacement. Matched pairs of images, separated by several days, were searched for moving objects. Asteroids, with relatively large displacements, were noted and excluded from the search.

Although Percival Lowell had predicted the expected location of a planet, based on the orbital positions of Neptune and Uranus, Clyde was committed to carrying out a systematic search of the entire ecliptic. The search had been under way for ten months before he found Pluto. The discovery, announced on 13 March 1930, was somewhat disappointing because Pluto was so faint that it would have had to be extremely dark or dense to have been massive enough to exert the reported perturbation on Neptune's orbit.

After receiving the Jackson-Gwilt Medal from the Royal Astronomical Society in 1931 for his discovery, Clyde started his undergraduate education at the University of Kansas in 1932. He continued to work at Lowell during the summer and returned there full-time after earning a BA in astronomy in 1936 and an MA in astronomy three years later.



CLYDE WILLIAM TOMBAUGH

The fact that Pluto was not as bright as it should have been to be a giant planet motivated Clyde to continue a systematic search for other bodies. This photographic program, centered on the ecliptic, covered 75% of the sky and would have detected any planets as large as Earth within 100 astronomical units (the average distance to Pluto is 40 AU). The null result from this systematic study has shaped the thinking of the astronomical community for more than 50 years.

During World War II, Clyde taught navigation at Arizona State College. In 1946, following the war, he became an astronomer at the Ballistics Research Laboratory at White Sands Proving Grounds in New Mexico, where he developed tracking systems to determine the flight paths and characteristics of rockets. In 1955, he moved to New Mexico State University, at first as an astronomer in the physical sciences laboratory and eventually as a professor of Earth science and astronomy. From 1953 to 1958, he directed a photographic search, carried out in Ecuador, for natural Earth-orbiting debris. Again, a systematic search yielded a null result. This time the result was welcome; near-space was not hostile to manned activity. At New Mexico State, Clyde developed a program to provide a systematic set of planetary images to support the NASA Mariner and Viking missions to Mars and Voyager mission to the outer planets.

From 1955 until his retirement in 1973, Clyde taught both geology and astronomy classes. His commitment was contagious, and his interest in and dedication to public education did not flag as he entered retirement. He continued to make an amazing effort to satisfy the demands of the public. In 1980, in collaboration with Patrick Moore, he published his version of the discovery of Pluto, *Out of the Darkness: The Planet Pluto* (Stackpole Books, 1980).

From 1985 to 1990, in response to his concern about poor professional opportunities for young scientists, he and his wife Patricia toured the US and Canada, presenting public lectures and raising funds for the Clyde W. Tombaugh Scholars Fellowship, to provide support for a postdoctoral fellow at New Mexico State University.

In his last years, Clyde remained involved in NASA missions, assisting the Jet Propulsion Laboratory team to publicize its plans for a feasible mission to Pluto. If and when that mission flies, the spirit of Clyde Tombaugh will go with it.

To the last weeks of his life, when he was not inflicting puns on those close to him, he was enthusiastically following new developments in the space program. He will be missed by friends and the general public, who appreciated and admired him. Always the gracious discoverer and hero to children and amateur astronomers, Clyde Tombaugh set high standards in public outreach and education for all of us to follow.

RETA BEEBE
New Mexico State University
Las Cruces, New Mexico

Yuli Borisovich Khariton

Russian and world science suffered a grievous loss on 19 December 1996 with the death, at the age of almost 93, in Sarov, Russia, of academician Yuli Borisovich Khariton, the long-time scientific director of the nu-

Some of the concepts that appear to be basically involved in exploring the structure of the world:

SYMMETRY

As defined by Herman Weyl: A structure that remains unchanged after the performance of a certain operation is symmetric with respect to that operation. Symmetry is thus associated with invariance, and consequently with conservation principles. It refers to an attribute that is changeless within change. [Therefore ~ SAT, the eternal. Symmetry provides a clue to the extra-temporal or is a bridge between the temporal and extra-temporal] cf 1995#65, re "perfect symmetry"

DIALECTICS

These are the forces of change, oftimes being adversarial pairs obeying Newton's Third Law, "to every force there is an equal and opposite reaction". At other times dialectical forces may be mutually supportive in which case they are temporally multiplexed thus avoiding Newton's third law. In the case of opposing forces novelty occurs at the interface, in the case of supportive forces, the action is in effect an "engine" producing some form of change.

ORTHOGONALITY

Independence and interdependence are determined by orthogonality. Orthogonal forces or parameters operate independently of one another. However, orthogonal instruments must at some time and place intersect. Non-orthogonal parameters, on the other hand, are interdependent with a modification in one parameter effecting modifications in other parameters. The orthogonals intersect one another; the non-orthogonals modify one another. Orthogonal parameters are parameters that cannot be expressed in terms of one another. Orthogonality is the essence of dimensionality. Examples are the x,y,z dimentions of geometric space and the physicists' Mass, Extension, and Time. Parallelism is a special case of non-orthogonality in which there is independence without intersection. [quadric diagram: orthogonal:non-orthogonal::intersect:modify] [also skew instruments]; [zones of immunity to interaction, e.g. light cones]

LIMITS

Infinity is an illusion. In nature bounds are placed on all parameters. Bounds are discriminated from limits in that bounds are contextual while limits are internal. Bounds and limits take one of two forms: Cyclical or wall-like, [Kreisgrenze oder Mauergrenze]. The conditions of open or closed refer to the existence of intrinsic or self-imposed limits within systems. Open and closed have no meaning with respect to bounds which are SAT. A bound or limit is usually expressed mathematically by an

ORTHOGONALITY

$$\frac{y}{x} = \tan\theta \qquad \theta = \tan^{-1}\frac{y}{x}$$

$$0 \leftarrow \frac{y}{x} \rightarrow \infty,\ 0 \leftarrow \tan\theta \rightarrow \infty,\ 0 \leq \theta \rightarrow 90^\circ \qquad \theta_0 \leq \frac{\pi}{2}$$

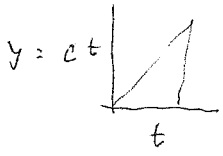
99/09/13

SEMI-ORTHOGONALITY

$$\frac{y}{t} = v = \tan\psi \qquad \psi = \tan^{-1}\frac{y}{t}$$

$$0 \leftarrow \frac{y}{t} \rightarrow c \qquad \psi_0 = \tan^{-1} c$$

cf ψ_0 and $\theta_0 = \frac{\pi}{2}$



Another y is $\frac{GM}{c^2}$

inequality, a $\leq$ b. Among the bounds so far discovered and believed to be universal are:

- The Einstein Bound $v \leq c$
- The Heisenberg Bound $E.T \geq \hbar$
- The Schwarzschild Bound $M/R \leq c^2/G$
- The Bell Inequality

These bounds govern what is possible or not possible in the cosmos.

It is difficult at this point to causally order the fundamental concepts. Some items are independent, some are the results of others. What belongs to SAT, to primary dynamic principles, to resulting forms and structures remains to be discriminated. This study must be done by "successive approximations".

HIERARCHIES

Hierarchies consist of sets of levels where levels are discrete categories usually separated by existential voids or gaps. Levels may usually be indexed according to values of a single parameter, such as scale. Several classes of hierarchies may be distinguished:

REGRESSIONS

Regressions are hierarchies characterized by inclusion or containment. Commonly a regression is a set of systems within systems within systems,... say in the manner of nested Russian dolls. Usually the members of a regression at all levels are similar in that they differ only with respect to the value of a single parameter such as size. Fractals are an example of a regression.

MODULAR HIERARCHIES

Whenever a hierarchy is a containment hierarchy in which the levels are not similar, it is usually referred to as a modular hierarchy. An example is the observed astronomical universe consisting of stars contained in galaxies contained in clusters contained in super clusters,..

MODULATION

Modulation is a type of hierarchy in which a set of similar operations act between the levels. The most common form is a two level system in which the amplitude or frequency of one wave is modulated i.e. modified according to the properties of second wave. This process could be carried on beyond two levels.

STABILITY

Configurations equipped to resist the dialectics of change; perhaps in some sense possessing orthogonality to most dialectic vectors. Or possessing internal clocks that operate much more slowly that the clocks of "proper time". [Orthogonal to prevalent zeitgebers?]

> Brahma, the Creator of Worlds, who is the Alpha and the Omega, the positor of beginnings and endings, the designer of all themes, seeks in all worlds what variations are possible on the themes. Bhahma knows the denouement of worlds; what Brahma does not know are the possible alternatives that may occur within a theme. Brahma is fascinated with the unique, and with the variety of actualizations that can occur within the set bounds of potentiality.

A human has to feel special in order to fully function. It is important for us to feel that we are in some way unique, we have a special function to perform, a special role to play, a special gift to give. This is the essence of what we call 'meaning'. Mature parents inculcate in their children that they are special; that they are to be or do something someday that no one else can be or do. They are unique. An important part of the teaching of each religion is to assure its adherents that they are special: they are created in the image of God, they are Chosen, they are among those who in the last days will be saved, etc. Successful politicians impress on their followers that they are special, they are members of the master race, they alone have a special heritage, the future belongs to them. Advertisers exploit by assuring you that you become special when you buy their product. Our sacred and secular traditions convince us that we are special as a species, special as belonging to some particular group, special as a person living in some particular place or time. Because of Brahma's interest in alternatives, we have been suffused with the drive to be unique. This is what lies behind our cherishing of freedom, for only with freedom can we develop our uniqueness.

We see the importance of all of this when the sense of being special is taken away. When we are dissed, get no respect, aren't needed, are denied access to markets and membership in groups. To remedy this we set up gangs, we get guns, they get us respect. What is it that happens that takes away our sense of specialness? There are many forces out there operating to do just that. These are the forces of homogenization. Some are philosophical, some social, some psychological, and some even physical. Philosophical ideas that have reduced our sense of uniqueness have been Copernicus taking away our central position in the universe, Darwin taking away that we were specially created, modern astronomy scaling us to minuteness, and modern views equating us to animals, mechanisms computers. Monopolies and mergers reduce umiqueness; the trend from home town to megopolis to global village has reduced and homogenized us. The ubiquitous action of the second law of thermodynamics is homogenizing the world to one temperature, even gravity can act to homogenize all matter into one singularity.

The great dialectial struggle in the universe then shapes up to be not good against evil, but uniqueness against homogenization.

Vairocana ⟷ Akṣobya

white noise modulating white noise [central] limit theorem

{Iterated} → dirac function

The quantum world is less iterated that the macro world
The division is a matter of iteration

Ψ is a measure of probability
iterated probabilities → smaller variance

Brahma's role is ~ Amitabha's
interest

Ratna Sambhava is the filter
i.e. there is no causality only
computability with what already exists

The Appearance to us is causality

When all 4 are through, the template is passed to Amoga Siddhi

Brahma knows the initial conditions, boundary conditions and the denouement. What Brahma is interested in and doesn't know is the variety that can occur within his cosmogenic → eschatologic framework. i.e. in the variations on the theme. Conversely, those here who are the actual variants on the theme, providing the uniqueness of Brahma's interest, want to know and seek to discover what the theme is.

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?

> *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 at its mercy is unaware of it.*
> *—Blaise Pascal (1623-1662)*

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 once 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?"

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

BRAHMA TABLES II

Four interlocking evolutions take place governed by an algorithmic or Pythagorean ground. This ground is extracted from the Sunyata by Varicona and made SAT by Akśobya. It is the source of the basic homogenizing dialectics, recalling all that exists to return to primal oneness. The basic counter dialectics driving to variety or complexity are TAO. All worlds emerge at the interface of SAT and TAO.

TABLE OF GROUND AND FOUR EVOLUTIONS

GROUND	COSMIC	BIO	CULTURAL	SPIRITUAL
EPISTEMOLOGY	PHYSICAL SCIENCE	BIO SCIENCES	SOCIAL SCIENCES	RELIGIONS
CAUSAL MODE	DETERMINISTIC	OPPORTUNISTIC	TELEOLOGICAL	FINALISTIC
AXIOLOGY	WHAT IS TRUE	WHAT IS VALID	THE IMPORTANT	THE LONGED FOR
MIND	COSMIC	GLOBAL	COLLECTIVE	INDIVIDUAL
THE DYNAMIC	CONSERVATION PRINCIPLES	NATURAL SELECTION	DISCOVERY AND CREATIVITY	THE SEARCH
DRIVEN TOWARD	EXPANSION	VARIETY	HEGEMONY	ACCESS
PART TO WHOLE RELATION	FRACTAL	BOTH PRINCIPLES OF PLENITUDE	HIERARCHICAL	HOLOGRAPHIC
THE REPETITIVE	CYCLICAL PROCESSES	RHYTHMS, MITOSIS	GROWTH AND DECAY "DECLINE OF WEST"	REPENTANCE, REINCARNTION
THE ITERATIVE	ELEMENT CREATION	SEXUAL	EDUCATION	METANOIA
THE RECURSIVE	PART --> WHOLE	CELLS ⊃ WHOLE	4-FOLD PARALLELS	RE-ENTIFICATION
REGRESSION	FRACTAL	FOOD CHAIN, PARSITES	HIERARCHY, CLASSES, CASTES	ONENESS, ENLIGHTENMENT

NOTES: The two Principles of Plenitude are 1) Lovejoy's "filling of every niche, and 2) the 'cancer cell' motivation to convert the whole into its likeness by proliferation and modifying the contextual environment so that it is unfavorable to competitors.
4-fold parallelism is 'checks and balances' between parts rather than containment.
There are 2 forms of recursion: part containing whole =holographic, or whole becoming part

~ EMBEDDING = REGRESSION

SOMATH01.WP6 JUNE 28, 1997

SOME MATHEMATICS

Mathematics has developed from the manipulation of entities by processes. The entities being the natural numbers or postitive integers and the processes being the basic arithmetic operators of + and -, x and /, ^ and √. (i.e. addition, subtraction, multiplication, division, powers and roots.) The interaction of these operators with the positive integers has generated new classes of numbers: the negative integers from + and -, the rational numbers from x and /, the irrational numbers from ^ and √, The totality of these numbers are contained in an even larger class, the real numbers. A class that arises in the marriage of arithmetic and geometry. From the interaction of - and √ come imaginary numbers, which combine with real numbers to give complex numbers. [The end of the line?] But not only new classes of numbers have emerged, but new operators emerged, such as log, antilog.

Arithemetic calculations usually involve a great many numbers but only a few operations. Infinite series and infinite products usually involve only one or two operations together with an unlimited number of integers.
For example,

(1)
$$e^x = 1+x+\frac{x^2}{2!}+\frac{x^3}{3!}+\frac{x^4}{4!}+\ldots$$

in which there are but ~~two~~ 3 operators but unlimited positive integers.

However, there are some interesting arithemetic sequences that involve only one number and consequently constitute infinite regressions. Certain classes of continued fractions and continued roots form such regressions. For example,

(2)
$$\Phi = 1+\frac{1}{1+}\ \frac{1}{1+}\ \frac{1}{1+}\ \frac{1}{1+}\ \ldots = 1.618034\ldots$$

the continued fraction for the golden ratio, involving only the number one and the two operations '+' and '/'.

Or an example of a continued root,

(3) $$\Phi = \sqrt{1+\sqrt{1+\sqrt{1+\sqrt{\ldots}}}} = 1.618034\ldots$$

again using only the number one and two operators.

Equation (2) may be generalized,

(4) $$F = \frac{1}{n+}\ \frac{1}{n+}\ \frac{1}{n+}\ \frac{1}{n+}\ \ldots = \frac{\sqrt{n^2+4}-n}{2}$$

where n may be any number, real or complex. The proof consists in noting that F = 1/(n+F). The quantity F has the properties:

(5) $$F + n = \frac{1}{F}, \qquad F + \frac{1}{F} = \sqrt{n^2+4}, \qquad F = \frac{\sqrt{n^2+4}\ - n}{2}$$

These are recognized as properties of the golden ratio when n is given the value +1.

We may also generalize equation (3). Defining R as,

(6) $$R = \sqrt{n+\sqrt{n+\sqrt{n+\sqrt{\ldots}}}} = \frac{1+\sqrt{1+4n}}{2}$$

The proof consists in noting that whenever the sequence converges, $R^2 - R = n$. It may be shown that R has the following properties for all numbers real or complex:

(7) $$R = \frac{1\ +\ \sqrt{1+4n}}{2}, \qquad n = R^2 - R$$

What is of interest here is the emergence of numbers such as ϕ from an infinite regression.

Why continued ~~divide~~
and continued ↑ both → Φ^2.

Using the values for F from equation (5) and the values of R from equation (7), the following tables may be constructed:

TABLE I

		2	4	6	8	10	
n	0	1	2	6	12	20	30
F	1	ϕ	$\sqrt{2} - 1$	$\sqrt{10} - 3$	$\sqrt{37} - 6$	$\sqrt{101} - 10$	$\sqrt{226} - 15$
R	1	$1+\phi$	2	3	4	5	6

In the table, $\phi = 0.618034...$
$n = m(m-1)$; $F = \sqrt{[1+(n/2)^2]}-n/2$, $R = m$

TABLE II

ΔR		ΔF
	$R(1) = F(1) + 1$	
2	$R(3) = F(3) + 2$	2
4	$R(7) = F(5) + 3$	2
6	$R(13) = F(7) + 4$	2
8	$R(21) = F(9) + 5$	2
10	$R(31) = F(11) + 6$	2
	. . . . .	
	$R(n^2-n+1) = F(2n-1) + n$	

$F(1) = \varphi = 0.618034$
$F(2) = \sqrt{2} - 1 = 0.4142136$
$\sqrt{10} - 3 = 0.1622777$
$\sqrt{37} - 6 = 0.0827625$
$\sqrt{101} - 10 = 0.049876$
$\sqrt{226} - 15 = 0.033296$

$\varphi = \frac{\sqrt{5}-1}{2}$

$1+\varphi = \frac{\sqrt{5}+1}{2}$

What is the relation between fractals and regressions?

fractal dimension and F + R ?

A great step was made in the ~~interface~~ interaction of the continuous + discrete [a dialectic?]

also geometrizing number by Descarte
Analytic Geometry

also geometrizing mechanics by Einstein
General Theory

There were 2 Gods: The God of Geometry – Horizontal continuous – analog – Euclid – Einstein
The God of Number – discrete – digital – Pythagoras – Descartes
Vertical – Planck

APHORPTH.WP6 FROM MANLY HALL:SECRET TEACHINGS OF PYTHAGORAS

Aphorisms of Pythagoras

1. DECLINING FROM THE PUBLIC WAYS, WALK IN UNFREQUENTED PATHS
By this it is to understood that those who desire wisdom must seek it in solitude.

2. GOVERN YOUR TONGUE BEFORE ALL OTHER THINGS, FOLLOWING THE GODS.
This aphorism warns man that his words, instead of representing him, misrepresent him, and that when in doubt as to what he should say, he should always be silent.

3. THE WIND BLOWING, ADORE THE SOUND
Pythagoras here reminds his disciples that the fiat of God is heard in the voice of the elements and that all things in Nature manifest through harmony, rhythm, order, or procedure, the attributes of the Deity.

4. ASSIST A MAN IN RAISING A BURDEN; BUT DO NOT ASSIST HIM IN LAYING IT DOWN.
The student is instructed to aid the diligent but never to assist those who seek to evade their responsibilities, for it is a great sin to encourage indolence.

5. SPEAK NOT ABOUT PYTHAGORIC CONCERNS WITHOUT LIGHT.
The world is herein warned that it should not attempt to interpret the mysteries of God and the secrets of the sciences without spiritual and intellectual illumination.

6. HAVING DEPARTED FROM YOUR HOUSE, TURN NOT BACK FOR THE FURIES WILL BE YOUR ATTENDANTS.
Pythagoras here warns his followeres that any who begin the search for truth and, after having learned part of the mystery, become discouraged and attempt to return again to their former ways of vice and ignorance, will suffer exceedingly; for it is better to know nothing about Divinity than to learn a little and then stop without learning all.

7. NOURISH A COCK, BUT SACRIFICE IT NOT; FOR IT IS SACRED TO THE SUN AND MOON.
Two great lessons are concealed in this aphorism. The first is awarning against the sacrifice of living things to the gods, because life is sacred and man should not destroy it even as an offering to the Deity. The second warns man that the human body here referred to as a cock is sacred to the sun (God) and the moon (Nature), and should be guarded and preserved as man's most precious medium of expression. Pythagoras also warned his disciples against suicide.

8. RECEIVE NOT A SWALLOW INTO YOUR HOUSE.
This warns the seeker after truth not to allow drifting thoughts to come into his mind nor shiftless persons to enter into his life. He must ever surround himself with rationally inspired thinkers and with conscientious workers.

9. OFFER NOT YOUR RIGHT HAND EASILY TO ANYONE.
This warns the disciple to keep his own counsel and not offer wisdom and knowledge (his right hand) to such as are incapable of appreciating them. The hand here represents Truth, which raises those who have fallen because of ignorance; but as many of the unregenerate do not desire wisdom they will cut off the hand that is extended in kindness to them. Time alone can effect the redemption of the ignorant masses.

10. WHEN RISING FROM THE BEDCLOTHES, ROLL THEM TOGETHER, AND OBLITERATE THE IMPRESSION OF THE BODY.
Pythagoras directed his disciples who had awakened from the sleep of ignorance into the waking state of intelligence to eliminate from their recollection all memory of their former spiritual darkness; for a wise man in passing leaves no form behind him which others less intelligent, seeing, shall use as a mold for the casting of idols.

PYTHCOS2.WP6 April 4, 1997, June 29, 1997

MORE PYTHAGOREAN COSMOLOGY

In the past few years many relations between the age and size of the universe and the properties of the elemental particles and fundamental constants of physics have been found leading some to hold that cosmology has now become a branch of particle physics. But that is a reductionist view. Mach would have it that particle physics should be taken as a branch of cosmology. Maybe it would be best that particle physics-cosmology should be a single discipline postponing for now the question of the direction(s) of causality.

In both particle physics and cosmology the fundamental constants, c,G and h, and the dimensionless numbers α,μ and S appear in many equations. The so called 'Planck Particle' defined by the values of c,G and h when augmented by appropriate powers of α,μ and S appears to determine the dimensions of many other entities in the universe from baryons to stars. Without extensive knowledge of the physical processes that may be occurring in the unfolding of the universe, we can see from the identity of certain numerical values alone that there is a profound interplay between the micro-micro and the macro-macro.

In studying these equations we must drop our historical biases of identifying these constants solely with the relationships in which they were first discovered. For example, the dimensionless constant, S, was first measured as the ratio of coulomb force to gravitational force. But the powers of $\sqrt{S}$ appear in so many non-force relations that S is likely to have cosmological functions other than those arising solely from being a particular force ratio.

Likewise we must be prepared to accept as canonical other parameters than those which we at present take to be basic. In Newton's day, energy, a parameter we now consider to be most fundamental had not yet been recognized. The history of physics shows an evolution of concepts toward the more general and inclusive: mass, Lagrangians, Hamiltonians, and in the present century charge, strangeness, color, beauty, etc. The path consists of continual re-entification and re-conceptualization.

HONGKONG.WP6 June 30, 1997/July 1, 1997

THOUGHTS ON VIEWING THE TURNOVER OF HONGKONG

The symbolism contained in the lowering of the Union Jack and the raising of the Red Flag of the People's Republic of China carried many messages and portents going far beyond the turning over of Hong Kong.

- The ceremony was the ritualistic proclamation of historical fact. It, indeed, celebrated the end of an era that began at the time of Vasco de Gama, which peaked in the nineteenth century with European empires circling the earth, and began its decline as these empires fought one another in 1914. And saw its final defeat in Saigon as helicopters evacuated American political and military personnel from an embassy roof. And now, July 1, 1997 can be said to mark the official end of colonialism.

- The ceremony was also the ritualistic proclamation of a new era. An era that had its beginnings at Lexington and Concord, carried forward by Bolivar and Juarez, brought to maturity at Tsushima. sanctified by Gandhi, and formalized at Bandung. This date was not just for China, "One country, two systems", but for the world, "One world, two systems". It is the evolution of this phrase that will constitute the history of the 21st century. We have seen the prologue in the USA-USSR cold war. But this is not a war between East and West, as some ~~hope to~~ have to mold ed it. It is a war between finance and politics, between economy and culture, between profits and people. One outcome could be a corporate-political alliance leading to the emergence of global totalitarian capitalism. Another outcome could be the further development of the people-political alliance we call democracy. A third outcome could be the end of nation states brought about by the new communication technologies and a corporate-people alliance. Whatever way it goes, the real message today was that we must look at everything in a new way.

- A third thought I had was about the importance of ritual and the superb understanding the British have for its design and execution. (We might add they have had much practice). When we compare what happened today with the clumsy cloddish manner that Yeltsin terminated the Soviet Union, we can appreciate the power of ritual in stamping a seal on the acts of history. We need such landmarks for our spirits as well as for our intellects. May history record our debt to the people of the islands (and their bagpipes) for teaching us something beyond winning and losing.

An error here: The US does not yet understand colonialism is over. ∴ Terrorism and its war against the last Imperialists.

Nothing became the British as a people of empire like their leaving it.

John Keegan

INTROD01.WP6 July 2, 1997 July 24, 1997

A DRAFT INTRODUCTION

No one born and brought up in a given culture can achieve a full state of detachment from that culture. Only aliens from some other world could view earth's cultures from outside. While those of us indoctrinated here cannot achieve detachment, we can seek to stand by our own experiences making them the yardstick with which we measure the traditions and doctrines of our culture.

Culture represents the **intersect [1]** of human experience, not the **union[2]**. It is the least common denominator of those experiences shared, if not by all, then by the great majority. This being the case, it discounts what obtains outside the intersect. However, until humanity is willing to include and scrutinize what lies throughout the union of human experience, it imposes a severe limit on reaching an understanding of who we really are.

This needs be said in introducing this set of essays, many of which definitely lie outside the cultural intersect. Even before reaching the age of ten, I found that some of my experiences were not shared by or sharable with others. I became a 'loner' until later in life I found that many things I had experienced were basic parts of traditions in Eastern and Amerindian cultures. Feeling affirmed, I became a crusader against intersect perceptions and proscriptions, be they in politics, art, science or religion. Restricting to the intersect may be the key to what is considered important, but it is certainly not the key to discovering what is valid.

These essays, then, will not always reflect the latest intersect (or internet) thinking. They are based on personal experience and personal thinking. They may be right, they may be wrong, or as Pauli would say, they may not even be wrong. It might seem foolish to display thinking that is not up to the cutting edge in some fields. However, while not adhering to the party line may brand one as a heretic, maverick thinking might also lead to alternative perspectives. And after all that is really what I am about, the persuit of alternatives. I am not seeking agreement, I am not proselyting, only hoping to open the door to alternate ways of viewing the world.

---

[1] Please forgive the mathematical terminology. These terms are used in the Boolean sense. The **intersect** of a set of sets consists of those elements common to or contained in all of the sets. This is what the term "public" sometimes means.

[2] The **union** of a set of sets consists of all elements contained in any set. This would include the public domain and the totality of all private domains.

STANDMOD.WP6 JULY 4, 1997

THE STANDARD MODEL

There are 61 basic particles, including anti-particles. These are 36 quarks, 12 leptons, and 13 guage bosons.

Particles marked with an asterisk are considered **stable*.**	FERMIONS SPIN = 1/2 OBEY PAULI PRINIPLE	BOSONS SPIN = 0,1 NO PAULI PRINCIPLE
HADRONS CONTAIN QUARKS STRONG FORCE PRESENT	BARYONS 3 QUARKS	MESONS 2 QUARKS
NO QUARKS NO STRONG FORCE	LEPTONS	GUAGE BOSONS FORCE CARRIERS

GUAGE BOSONS

The force exchangers employed by the four forces. All have spin 1

FORCE	MASS	CARRIER
STRONG	0	GLUONS (EIGHT TYPES)
WEAK	83 GeV	INTERMEDIATE VECTOR BOSONS, W+, W-; Z 93GeV
ELECTRIC	0	PHOTONS*
GRAVITY	0	GRAVITONS spin +2

LEPTONS

All have 1/2 spin, are not subject to the strong force, but obey the Pauli Exclusion Principle. [ν is symbol for neutrino]

PARTICLE	MASS	CHARGE	ANTI-PRTCL	MASS	CHARGE
ELECTRON*	0.511 MeV	-1	POSITRON*	same as	+1
MUON	105.6 MeV	-1	ANTI-MUON	particle	+1
TAU PRTCL	1.784 MeV	-1	ANTI-TAU	"	+1
e NEUTRINO	< 50 eV	0	ANTI-eν	"	0
μ NEUTRINO	< 0.5 MeV	0	ANTI-$\mu\nu$	"	0
τ NEUTRINO	< 70 MeV	0	ANTI-$\tau\nu$	"	0

D

THE STANDARD MODEL

QUARKS

All quarks come in three colors: red, blue, green, making a total of 36quarks.

QUARKS			ANTI-QUARKS		
FLAVOR	SYMBOL	CHARGE	FLAVOR	SYMBOL	CHARGE
UP*	u	+2/3	ANTI-UP	$\bar{u}$	-2/3
DOWN	d	-1/3	ANTI-DOWN	$\bar{d}$	+1/3
STRANGE	s	-1/3	ANTI-STRANGE	$\bar{s}$	+1/3
CHARM	c	+2/3	ANTI-CHARM	$\bar{c}$	-2/3
BOTTOM-BEAUTY	b	-1/3	ANTI-BOTTOM	$\bar{b}$	+1/3
TOP-TRUTH	t	+2/3	ANTI-TOP	$\bar{t}$	-2/3

MESONS

NAME	MASS	CHARGE	SPIN	QUARKS
PION Pi-0	135 MeV	0	0	$u\bar{u}$ or $d\bar{d}$
Pi+	140 MeV	+1	0	$u\bar{d}$
Pi-	140 MeV	-1	0	$d\bar{u}$
KAON K-0	498 MeV	0	0	$d\bar{s}$
K+	494 MeV	+1	0	$u\bar{s}$
K-	494 MeV	-1	0	$s\bar{u}$
J/PSI	3.1 GeV	0	1	$c\bar{c}$
D-0	1.87 GeV	0	0	$c\bar{u}$
D+	1.87 GeV	+1	0	$c\bar{d}$
UPSILON	9.46 GeV	0	1	$b\bar{b}$

D

THE STANDARD MODEL

BARYONS

Baryons all have spin 1/2.

NAME	LIFETIME	MASS	CHARGE	QUARKS
PROTON*	STABLE	938.3 MeV	+1	uud
ANTI-PROTON*	STABLE	"	0	$\bar{u}\bar{u}\bar{d}$
NEUTRON	15 MINUTES	939.6 MeV	-1	ddu
ANTI-NEUTRON	"	"	0	$\bar{d}\bar{d}\bar{u}$
LAMBDA	~10^-10 s	1.115 GeV	0	uds
ANTI-LAMBDA	"	"	0	$\bar{u}\bar{d}\bar{s}$
SIGMA+	"	1.189 GeV	+1	uus
SIGMA-	"	1.197 GeV	-1	dds
SIGMA-0	~10^-20 s	1.192 GeV	0	uds
XI-	~10^-10 s	1.321 GeV	-1	dss
XI-0	"	1.315 GeV	0	uss
OMEGA-	"	1.672 GeV	-1	sss
CHARMED Λ	~10^-13 s	2.28 GeV	+1	udc

JOINTMND.WP6 July 4, 1997

See 2001 #14, #18

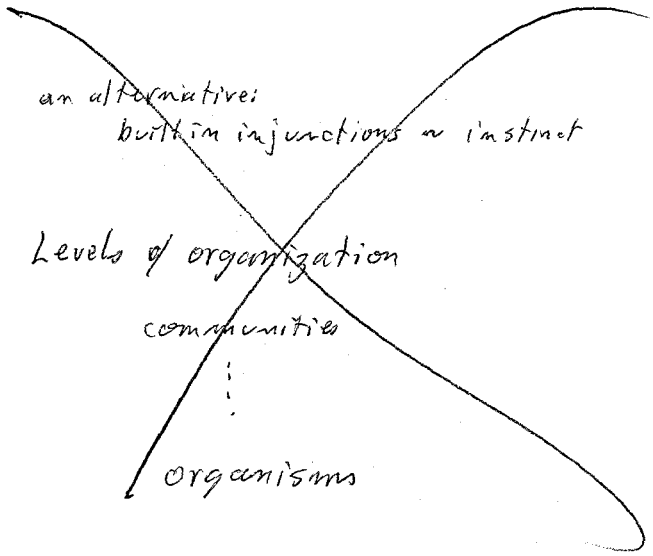
JOINT MINDS?

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 $<=$ c, but in the quantum experiments this limit may be violated.

Also involved seems to be 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.


an alternative:
built in injunctions or instinct
Levels of organization
communities
organisms

THE THREE COMPLEXITIES

PART I

A few nights ago I had a curious dream. There were three men walking along a corridor intently discussing what I overheard to be "the three complexities". Their conversation was focused on the role that these complexities played in the structure of the universe, and how they were the key to the beginning of true understanding. What these three concepts that they called complexities were, I either never heard in the dream or lost upon waking. But perhaps that is best. For in not knowing what they were I am launched upon a search for any possible candidates.

It is felt by certain sages that all basic descriptions of the outer or physical world are four fold in nature, and that basic descriptions of the inner or spiritual world are three fold. If this be so, then the three complexities must have to do with the world of thought and spirit. Starting with this, what ideas present themselves as candidates for the three complexities?

One possible set of canditates consists of the three fundamental cognitive operations of 1) discrimination, the noting of differences; 2) integration, the noting of commonalities; and 3) linking, making associations.

Discrimination: Noting differences. Inclusion and exclusion, this and not this, here and elsewhere, before and after, us and them, inside and outside, dyads, and G. Spencer Brown's crossing. Dynamically the dialectics: departure and return, TDMA, breathing in breathing out, taking and sending, etherialization and materialization, genotype and phenotype, extinction and radiant, crucifixion and resurection, bread and wine-- are all based on the operations of repetition and iteration, with the directionality of fragmentiation and diversification.

Integration: Noting commonalities. Clustering, lumping, grouping through commonalities. Dynamically based on synthesizing, standardizing, homogenizing, and uniformization, with directionality of coalescence and uniformity, decrease in variety and uniqueness.
consolidation

Discrimination and Integration dialectically oppose one another, but their combination effects an "engine" that produces complexity or leads to extinction.

Linking: Making associations. Associations beyond those based on commonalities, address and content, terrain and map, figure and ground, archetype and manifestation, object and symbol, decisions and criteria, as above so below, and G. Spencer Brown's naming; with the directionality of abstraction and generalization, producing explanation and understanding.

Other possible candidates:

- Time, Consciousness, Existence
- Levels, Dimensions, Spaces
- Symmetry, Orthogonality, Topology
- Sunyata, Brahman, Cosmos
- Chance, Necessity, Design
- Mathematics, Music, Life
- Turtles, Egrets, Humans
- ?, ?, ?

POSTPISC. WP6 July 22, 1997

A POST-PISCEAN GLIMPSE

As we wind up the century, the millennium, and the age that began some 25 centuries ago, commonally called the Piscean Age, we wonder what the themes of the next age will be. Do we have any previews or glimpses of what the age now beginning will be like? If I were to make a guess, I would see as one highly likely, but definitely not assured, scenario something like the movie, Apollo 13. I see humanity united and identified with both the importance and the challenge of going beyond the Earth. And this not just from the technical challenge, but from its forcing us to graduate from ~~the cradle~~ our sand box and school yard mentality that has possessed us for millennia. For the venture into outer space is not only a physical journey, it is a symbolic journey of our leaving the cocoon in our spiritual evolution.

The venture into interplanetary space can serve as a ritual, a liturgy, that will also awaken and guide us in our venture into "inner space". Probes and space vehicles will be the candles and incense of our new litany. Already we have seen our hearts as well as our minds awaken as we find global identity with the astro-cosmonauts entering this new frontier for us. They carry each of us with them in spirit as they make their lonely dangerous way into the unknown

.

At this singular point in our journey we are briefly free of deterministic archetypes. There is a spectrum of choice before us. One choice is to stick with the familiar, repeat the scenarios of rivalry and conflict ingrained in us by our historic insufficiencies and inadequacies. Another is to recognize our all but total blindness to a major sector of who we are and what we can become. A sector thus far recognized only poorly and partially by ~~some of our~~ most religions; and off limits to purely intellectual epistemologies.

But once before, if we look back millennia, there was a comparable time, when our ancient ancestors first walked to the shores of the sea, viewed it in wonderment, then began to venture forth on it, discovering both outer and inner realms of which they had never dreamt. We are their descendants and we cannot do otherwise than continue that Great Journey which they began.

* updating the mantra of the sixties, "Make love, not war" we might say, "Put poets, not weapons, into space"

FENCE.WP6 July 23, 1997

A WORLD BEYOND THE FENCE

In my backyard is a board fence which over time has developed narrow spaces between the boards. Beyond the fence is a highway along which cars and trucks pass by. When there are no vehicles going by all one sees is the fence. But when a car or truck moves by its shape, color, and speed become visible through the spaces between the boards.

One is reminded of Aristotle's insight that existence depends on change. What is not moving does not exist. Clearly this is the case for what is visible beyond the fence. Further, if we quietly watch for a while, the fence disappears from our awareness and only what is moving beyond the fence becomes real.

The yard, fence and road seem to model our world. We ordinarily experience the yard this side of the fence. Then when something beyond moves by, we suddenly become aware of a world beyond the fence. But motions are relative and it is also possible to see beyond the fence if we do the moving.

Great teachers of the past have spoken of the world in terms similar to this model. Becoming calm and focused removes the fence from our vision and allows us to penetrate into what is happening beyond. They have also taught disciplines analogous to moving ourselves which also allow us to see beyond the fence. But we are left with the questions: If the yard is the sensible world, the world of nature, what is the fence, and what is the world beyond?

The fence is our sensory apparatus
which both reveals and hides

If we develop a sense that sees
we also at the same time exclude
a portion of the world

like asking a question - Every selection
both selects and de-selects
giving what is selected - removing what is not selected

Only what is in motion is perceived beyond the fence
Although we can perceive beyond the fence when we are in "motion"

"The world is reducible to matter in motion" – Hobbes
⇒ M, L, T

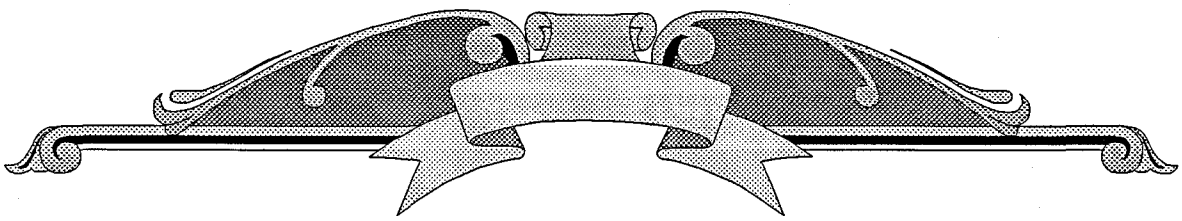
My reply to Hobbes is ∃ a fence ∴ the only world we perceive is that which is in motion, i.e. that which changes. And it is through our own changing that we are able to perceive the world.

However, there exists a rich World beyond the fence that we perceive, not because it moves, but only when we move.

Some of what is beyond the fence is static SAT
Some moves very slowly
some very rapidly

Ontologically This goes beyond the Cliff ~~Onto~~ FDMA

The world perceived lies in a limited range of motion (frequencies)
Meditation expands the frequency range



LANGUAGE AND META-LANGUAGE

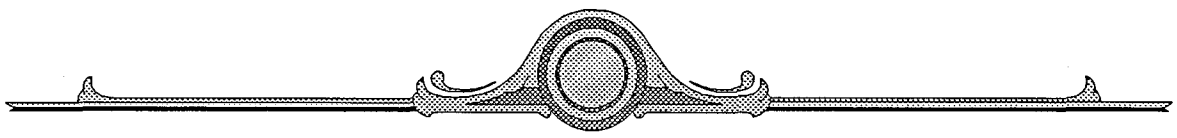
He who would gain wisdom must first master all languages, then overcome and transcend them.

To know one language too well is to mistake a single view of the world for its totality.

Each language and meta-language is a different mirror reflecting a different aspect of reality. Some, like mathematics, give a sharp but skeletal view; others, like poetry, afford a fuzzy but fulfilling view. Perhaps music, of all languages, comes closest to capturing the quintessence of reality in its net. But music also possesses the highest degree of isolation of all languages and is the most difficult to translate into other languages. We must conclude that music possesses some self-referential element that affords it an existence at once both part of and independent of all realities. Music is thus a meta-language.

In writing, if not in speaking, we come to some realization of the extent to which truth is truncated by the process of casting it in those verbal frameworks necessary for communicating with others. What can be caught in the nets of words is but a bare suggestion of those portions that elude articulation.

The success of human communication infers a large degree of redundancy in the world, a redundancy that renders mere hints effective in conveying keys of recognition from one person to another. Yet words have an imperative of their own, forcing thoughts into forms that ultimately become their prison.



METALANG.WPG 97/07/23

Revised from a ~~file~~ 15/1990 file (lost)

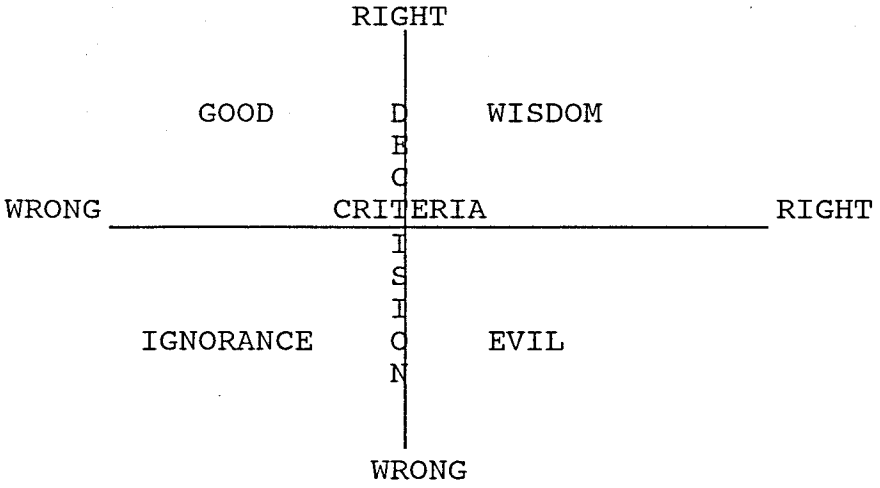
From the "MEDITATIONS OF LI KIANG"

NONDET.WP6 July 24, 1997

ON NON-DETERMINISTIC SYSTEMS

The presence of choice, options, and decisions or the replacement of strict causality by the laws of probability are all indicators of a non-deterministic system. In the case all options are equal the mode is designated as random. In the case all options are not equal, there develop criteria for selecting which choice to make. For example, in bio-evolution under natural selection not all options are equal and the criteria for selection develop from the context, that is from the conditions in the environment in which the organisms are located. In fact the environment is the criteria. In human societies decision criteria assume several forms: conscience, morality, etiquette, ethical systems, legal systems, risk analysis etc. These criteria have many sources, some are empirical, others the result of mathematical analyses, still others are derived from traditional wisdom, the so-called perennial philosophy ofttimes held to be divinely revealed.

In considering the general problem of decision making we are immediately into two levels: the level of the decisions themselves, and the level of the criteria on which the decisions are based. [We note here that some current governmental decisions seem to be governed by no criteria or by the axiological equivalent of no criteria, a set of ad hoc continually shifting criteria. This null set is properly labeled "political criteria".] In shifting from the decisions themselves to the design of criteria for decision making, we ask: What governs the desirability or undesirability of an option? What is a good decision, a bad decision? And from there what constitutes a good criteria, a poor criteria? We here find it useful to construct a quadric diagram with the horizontal axis representing criteria (i.e. motivation, reason, intention) and the vertical axis representing the decision itself or the resulting action.



In general humans seem to be guided and do the right thing even when they have the wrong reasons. This we can call good. When we do the wrong thing for the right reason, that is intentionally, we can call this evil. When we do the right thing for the right reason this is beyond good and evil, it is wisdom. And when we do the wrong thing for the wrong reason, or no reason, that is ignorance. Good and evil are polar opposites, but are special cases ~~of the~~ depending on where we are cognitively located with regard to ignorance and wisdom. In the long run the call for good over evil is futile. The true call is for wisdom over ignorance.

COSQUAD1.WP6 August 3, 1997

THE FOUR PHYSICAL COSMOLOGICAL QUADRANTS

PART II 58
Part III 60
Part IV 1998 # 50

PART I

The Heisenberg inequality, $ML \geq \hbar/c$, and the Schwarzschild inequality, $M/L \leq c^2/G$, define four quadrants: In the first quadrant both of these inequalities hold and the result is the familiar universe of direct observation consisting of planets, stars, galaxies, clusters, etc. In the second quadrant the Schwarzschild inequality is reversed. This is the domain of black holes. In the third quadrant both the Schwarzschild and the Heisenberg inequalities are reversed, a possible domain of dark matter. In the fourth quadrant only the Heisenberg inequality is reversed. Inhabitants of this domain could have unlimited size but only minimal mass.

In the diagram the Schwarzschild and Heisenberg axes mark the divisions into the four quadrants. The intersection of the two axes marks the position of the Planck particle, a virtual particle whose mass, size, and characteristic time are determined by the values of the three fundamental dimensional constants of physics, the velocity of light c, Newton's gravitational constant G, and Planck's constant ħ.

$M/L > c^2/G$, $ML > \hbar/c$	$M/L < c^2/G$, $ML > \hbar/c$
Mass > 10^-4.662 gm	Size > 10^-32.791 cm
No size bounds	No mass bounds
DOMAIN OF BLACK HOLES	UNIVERSE OF STARS, GALAXIES
No atoms, no molecules	
$M/L > c^2/G$, $ML < \hbar/c$	$M/L < c^2/G$, $ML < \hbar/c$
Size < 10^-32.791 cm	Mass < 10^-4.662 gm
No mass bounds	No size bounds
DOMAIN OF DARK MATTER?	LOW MASS ENTITIES OF ANY SIZE?
No atoms, no molecules	photons, gravitons ?

NO PARTICLES ?

Could be apparent extinction $\leq 10^{-43}$ sec lifetime any mass

If the inequalities hold for all particles and all aggregates, then there can be no atoms to the left of the Schwarzschild Limit. What is the relation of the particles of the Standard Model to these quadrants?

See also
1997 # 58, 60, 1998 #50

DREAM897.DRM August 13, 1997

DREAM JUST BEFORE WAKING ON MORNING OF AUGUST 13, 1997

Three parts:

Part I

There are a group of us, seemingly on a picnic, lounging on the grass. Ed is near and we begin to talk, have good rapport. Then suddenly I am leaning over a wall talking to him, we continue to talk but he does not understand what I am trying to say. He leads me to a place where there is a gravestone. He says that in order to continue at this point you must pay a fee [seems in the order of several hundred dollars]. I ask, "What is the money used for?" He seems very surprised then says it is for helping others on the way. I think about it then walk back.

to reach this point

Part II

I climb up some rubble to get to the library. I enter and find that all is chaos, everything is under repair. There is junk all over the floor and the computer room is closed with a sign "not open until tomorrow".. I then discover that the library has been closed. How did I get in? Then the employees who evidently had been in some back room exit and take me with them. I said that I didn't belong, but they ignored me and inadvertently included me in their meeting. It appeared they were dividing up the library among sub-groups in order to control everything. I left and walked down a steep cliff to a stream which I crossed by stepping from rock to rock. I thought my feet were wet but they weren't.

Part III

I go to a familiar place to get some food, but find it has changed, so I go outside to get some air and take in the view. I feel inspired and start singing the Internationale. A man with a beard I had seen at the library meeting comes out and stands beside me. Soon he joins me in singing the Internationale. Then I see that the view is soon to be gone, builders are rapidly putting up a high rise that quickly goes over our heads, but the workers hear our singing and join us. Soon almost everyone is singing the Internationale, everybody seems to know the words. But they keep putting up the building while singing. When we come to the end I go back inside feeling both gratified and confused.

Part I is about how I fear Vajrayana is moving in the direction of traditional institutionalized religion, both blocking and charging for the path. Part II is about knowledge (including science and technology) being reformulated by its custodians for their own power and profit. Part III is about the growing resentment of exploitation among workers who nonetheless have no alternative but to keep on contributing to the degeneration of the planet.

RELIGN01.WP6 August 13, 1997

More on Religion

Religions originate either in the attempt to articulate the transcendental experiences of arhats and mystics and render them in forms communicable to the rest of us, or from a tribe centered deity upon whom is projected the essence of the tribe's cultural persona. In the second case religion becomes a set of views, explanations, and rules designed by and for the members of the particular tribe, culture, or civilization. In this aspect every tribal based religion is of secular origin, even though claims for a 'higher' origin may be made to bestow authority on its deity. Ultimately, however, such a religion's authority derives from its continued usefulness in the personal and collective lives of its adherents. These religions are supported empirically by whether they work, and psychologically by whether they are believed, and are weakened when one of these supports is missing.

We thus call two distinct approaches by the single name of 'religion': 1) The symbolized spiritual experiences of those who have encountered cosmic mysteries; 2) the set of gods, explanations, and rules that are organized into dogmas by an authoritative institution. While the first, having a spiritual origin, is quite independent of tribe, culture, or civilization, the second having a secular origin is tribe based and oriented. But not only are the origins of these two distinct, their purposes are also distinct. The path type religion is centered on spiritual processes leading to the awakening or enlightenment of each individual. The tribal type religion is centered on the community, its collective survival and well being. The latter requires control and centralization of power, facets that tend to corrupt and defeat what path religion is trying to do. Although the two share much wisdom about who we are, why we are here, and how we should lead our lives, the mixture of the two has resulted in obfuscation and the diverting of individuals who would otherwise undertake the path.

In general the three great Western religions, Judaism, Christianity, and Islam have their roots in tribalism. While their notion of God has evolved from a strictly local deity protecting and favoring a particular people, to a cosmic creator and benefactor of all peoples, it has remained strictly monotheistic. Eastern religions such as Taoism and Buddhism, on the other hand, avoid theological speculations regarding the existence or nature of God or gods and focus instead on psychological and ontological principles that may be inferred directly from spiritual experience. In this sense they are path rather than tribe oriented.

also 2 religions God out there
God within

COSQUAD2.WP6 August 15, 1997

PART 3 #60

THE FOUR PHYSICAL COSMOLOGICAL QUADRANTS

PART 2.

As shown in Part 1. the Heisenberg inequality, $ML \geq \hbar/c$, and the Schwarzschild inequality, $M/L \leq c^2/G$, define four quadrants. In Part 2 the values of energy, force, and pressure in these four quadrants are investigated.

Pressure is defined as force/unit area, which is dimensionally equivalent to energy/unit volume.

PRESSURE

$$P = \frac{Force}{unit\ area} = \frac{Energy}{unit\ volume} = \frac{M}{LT^2}$$

$$P = \frac{ML}{T^2} \cdot \frac{1}{L^2} = \frac{ML^2}{T^2} \cdot \frac{1}{L^3} = \frac{M}{LT^2}$$

The <u>total</u> <u>energy</u> of a mass M is equal to Mc^2, and the negative or outward pressure resulting from the total energy will be

$$P_T = \frac{Mc^2}{L^3} = \rho c^2$$

where ρ is the mass density. The <u>gravitational</u> <u>energy</u> of a mass M with size L is equal to GM^2/L, and the positive or inward pressure resulting from the gravitational energy will be

$$P_G = \frac{GM^2}{L^2} \cdot \frac{1}{L^2} = \frac{GM^2}{L^4} = G\rho^2 L^2$$

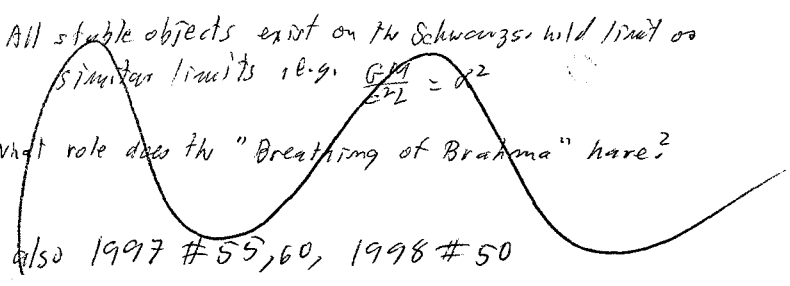
The ratio of the gravitational pressure to the total pressure is

$$\frac{P_G}{P_T} = \frac{\frac{GM^2}{L^4}}{\frac{Mc^2}{L^3}} = \frac{GM}{c^2 L}$$

Since $GM/c^2L = 1$ on the Schwarzschild Limit, P_G will equal P_T on this boundary. In the first quadrant, (the observable universe), the outward pressure P_T will be greater than the inward pressure P_G. The net effect will thus be expansion. In the second quadrant, (realm of black holes), inward pressure P_G will be greater and the net effect will be contraction or collapse.

All stable objects exist on the Schwarzschild limit or similar limits i.e. $\frac{GM}{c^2 r} \simeq 1^2$

What role does the "Breathing of Brahma" have?



See also 1997 #55, 60, 1998 #50

CHANNEL1.WP6 August 16, 1997

ON CHANNELING

While in English it is common to say 'I think', in several other languages the direction is reversed, coming out when translated as 'it thinks in me'. And even in English we sometimes say 'it occurred to me'. All of which suggests that there is some confusion on the location of the source of thought. We honestly may ask, 'Does thought originate in us or are we merely channels bringing the thought from some unidentified source into our heads and out of our mouths?' Perhaps both. Most of our thoughts 'we think', that is we originate them, we are the source. But there seems to be another species of thought that really does come to us from elsewhere.

This second species of thought usually has to do with creativity. It may come in words or in images, or in what we call inspiration, breathing in, so to speak. Remember, the Greeks felt that the source of creativity, in art, poetry, music, dance,... resided in communications from the muses, who were external to our heads. And even the great genius Isaac Newton, in an uncharacteristic lapse into humility, seemed to credit externals when he said: "If I have seen able to see farther than others, it is because I stood on the shoulders of giants."

The New Age has brought into our midst a group of 'professionals' who not only acknowledge an external source in their thinking, but boast of it and charge for it. These so called 'channelers' even assign @ names to their sources. Usually some ancient Egyptian or Medieval sage. When we compare the depth of the channeled message with the ordinary capabilities of the channeler, we begin to suspect that there may really be something channelled from an external source. I have to admit that many times when I have some sort of insight, it must come from some external source. With my background, I couldn't have possibly come upon the idea myself.

All of this leads to the category of thought process I call 'recognition'. Such recognized thoughts do not arise from sensory experience, nor are they contained in memory. To attribute them to Egyptian sages or past lives seems too simplistic. I feel they come to us when we have established access to MIND. And what is MIND? It is not the everyday pool of mental noise we call mind. It exists on a different level and is reached only as a consequence of some disciplined practice. It is reached by persistant attention or focus on some question or activity. It is the result of replacing the filters @ built by our egos with an undedicated openness.

[There exists an openness<>ego dialectic]

Thoughts without a Thinker

COSQUAD3.WP6 August 15, 1997

THE FOUR PHYSICAL COSMOLOGICAL QUADRANTS

PART 2 # 58

PART 4

PART 3.

As shown in Part II, in the first quadrant the total energy exceeds all other energies including the gravitational energy, this assures that P_T, the outward or expansive pressure will dominate. It is consequently expected that all first quadrant bodies should expand. However, the question immediately arises: what makes it at all possible for entities in the first quadrant such as, planets, stars, galaxies,..to be stable, not to expand, even to exist at all?

When Einstein applied his general theory to cosmology, he was disturbed that his equations implied that the universe was either expanding or contracting. (This was before Hubble and Humason had detected that the local universe was actually expanding.) He instituted a "fudge factor", Λ, the so-called cosmological constant, to stabilize the universe. The sign of Λ was chosen to neutralize either expansion or contraction. This factor was later seen to be unnecessary and Einstein called it the greatest blunder of his theory. But was it?

The equations of Part II lead to the same results as Einstein's equations in general relativity. In the first quadrant everything must expand unless countered by some other factor. What then allows astromomical bodies to exist? What is Einstein's fudge factor, Λ ?

Possible answers to this question include:

- Primordial high density "seeds" created local regions where gravity dominated the overall expansive force. (dark matter?)
- Total energy is expended or consumed in some manner, (rotation, radiation,..?) reducing the expansive component to less than the pull of gravity.
- The action of other forces, particularly coulomb forces, create additional "Schwarzschild Boundaries" within the first quadrant, for example the $GM/c^2L \leq \alpha^2$ boundary governing 'normal' matter.

The various stages of stellar evolution, expansion through the red giant stage, novae, supernovae, collapse to dwarf stage, neutron star, etc. may result from alternating local dominance of P_T and P_g all contained within the first quadrant.

- The universe will expand forever see part IV

The conventional choice of sign for gravitational force has been the minus sign. Most likely this convention derived from the earth centered view that gravity acts to bring objects to a lower elevation, and since down has been traditionally associated with minus and up with plus, gravitational force received the minus sign. But this seems to be the wrong choice when the earth centered view is abandoned. It is more in accord with the equations to posit expansion as negative and contraction (gravity) as positive. To see this, consider the two first quadrant equations $F_x=Mc^2/R$, the expansive force, and $F_g=Gm^2/R^2$, the contractive gravitational force. If M/R in the expansion equation is taken as negative then M^2/R^2 in the contraction equation becomes positive. The usual assumption of contraction as negative precludes use of this mathematical convention.

Extending the convention of contraction as postitive and expansion as negative, we might consider coulomb forces as "orthogonal" to gravitational forces and could consistently write for positive and negative charge, ie and -ie respectively. Then the interaction of like charges would give:

$ie \times ie = -e^2$ repulsion or expansion

and $-ie \times -ie = -e^2$ again repulsion

while unlike charges give:

$ie \times -ie = +e^2$ attraction or contraction

Energy in non-bonded form expands P-SPACE
Energy in bonded form (i.e. matter) contracts P-SPACE

Matter is energy bonded by one or more of the 4 forces

How does energy → matter, i.e. become bonded? fusion?
How does matter → energy, i.e. become un-bonded? fission?

See also 1997 #55, #58, and 1996 #50

AUGKOANS.WP6 AUGUST 21, 1997

THE KOANS OF AUGUST

Currently I am probing several questions. For some of them I have partial answers, for others no clue where to begin:

- What is the difference between concentration and mindfulness? What are the differences, if any, in the mental states of a 'top gun' fighter pilot and one who is meditating on a zafu?

- What is mind? Is mind local or global? Are there many levels of mind: individual minds related to individual bodies, group minds, a collective conscious and a collective unconscious, a planetary noösphere, a conscious cosmos? Which minds do we have access to? Which die with the body? Is recognition the process of access to a higher mind?

- The gates to 'emergent knowledge' are either by wrestling with paradox or experiencing recognition. The first seems to be bottom up, the second top down. The first requires effort on our part, the second seems to be a gift resulting from the removal of a cognitive road block, allowing us to become aware of something we already knew. The two approaches require quite different epistemologies: the first of the intellect, the second of the heart. Yet we must ask: Is there some deeper relation between paradox and recognition?

- What is the relation between variety and complexity? Is variety a pre-condition for the construction of complexity? Is a level of complexity a pre-condition for variety? Is oscillatory variety and complexity, [a process like breathing], necessary for the increase of either? Is complexity metaphorically 'solid state' variety?

- There is the ancient paradox of "passing through the eye of the needle", through the "worm hole" into another universe. If we focus down in space and time, into the immediate here and now, into the absolute present and presence, we suddenly discover we are released and pass beyond all of space and time. We glimpse infinity and eternity.

revised Aug 28

Apology to historian, B. Tuchman and her "Guns of August" for the weak pun

- Also it has been said that the narrower the focus, the greater the number of distractions. This would infer that total "anti-focus", in containing all, would therefore contain no distractions. Could this be mindfulness ?

- No system is capable of explaining itself. (cf Gödel)
No program can generate a number more complex than itself -Chaitin see Peterson p197

- "It is more important to have thinkers than scholars".
The scholarly pursuits require many facts, much memory (e.g. history).
The thinking pursuits require few facts, but skills in several processes.
(e.g. mathematics) It seems fair to say the first requires much experience but few tools, while the second requires little experience but many tools.
This may explain why mathematicians reach their peak in their twenties and historians and philosophers after their fifties.
The question is: which is the better source of emergent knowledge.
["My ability to be creative decreased because I got to where I knew too much"--- Richard Feynman] Knowledge replaces imagination

- What are the basic ingredients of all forms? What parameters are needed for a complete and unique description of any structure? So far I feel candidates are: Limits, Levels, Orthogonalities, and Symmetries. The origin and evolution of form depends on several basic processes. Candidates are: repetition, iteration, recursion, regression, and modulation. The creation, stability, and dissolving of form involves certain dialectical principles, energies or forces. Some candidates are: variety vs. homogenization, balance vs. imbalance, fragmentation vs. consolidation, departure and return, order vs. freedom, actualizing vs. potentializing, enabling vs. inhibiting. Also involved are modes of sharing: ADMA, FDMA, TDMA, and CDMA, and possibly others. But possibly most important of all is "breathing", which is more than a metaphor for purification, it is the basic and universal principle of the cosmos. It is the necessity of interchange, the taking in and giving out, by every system with its context, of every part with the whole. The breathing of the universe is the essence of all dialectical balance and therefore of all existence.

Gödel extrapolated

No axiomatic system is capable of completeness

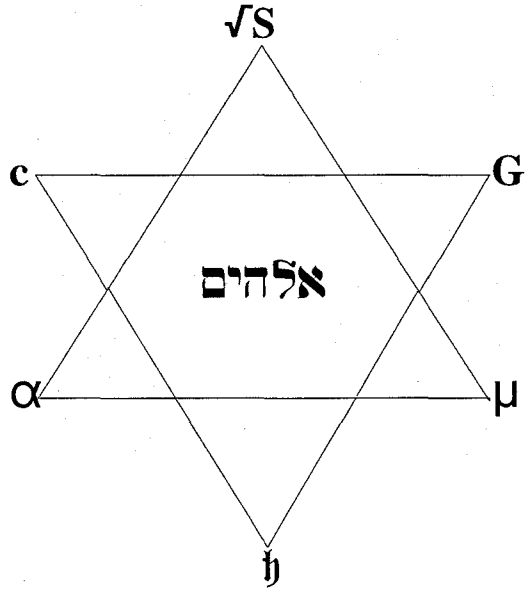
No title can be both perfect and complete

The logical cannot exhaust the rational

The rational cannot exhaust the valid

The intellect cannot encompass the whole

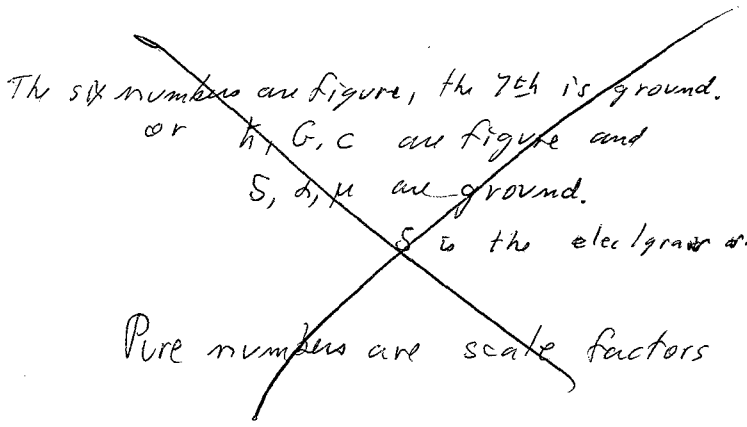
In the Beginning
God Created Six Numbers
And on the Seventh
He rested



In the beginning was Mathematics
And Mathematics was with God
And Mathematics was God

John 1:1

Figure 1


The six numbers are figure, the 7th is ground.
or h, G, c are figure and
S, d, μ are ground.
S is the elec/grav ration ≐ 10^{39}
Pure numbers are scale factors

PACKAGE1.WP6 August 28, 1997

See 95 #92
96 #43
#45
#61

PACKAGING

Religion uses several approaches to a single subject.
Science uses a single approach to several subjects.
---Li Kiang

Both religion and science do 'packaging'. Religion packages morality, psychology, and cosmology into a bundle tied together by the teachings (scriptures, gospels, dharma, etc.) of a particular teacher (Moses, Jesus, Buddha, etc). Science packages astronomy, physics, chemistry, biology, ... into a bundle tied together with a single epistemology called the 'scientific method'. In both cases consumers are forced to buy packages and are locked into sets of associations that in many instances violate experience, create areas of dispute, avoidance, and unapproachability.

The tradition of packaging is so inbred that we no longer realize that the parts could be put together in alternative ways. Much of knowledge has frozen into a 'solid state' impervious to any restructuring. Our 'fundalmentalist' way of thinking refuses to be selective. It insists on eating the whole thing, taking it all together or else. While everything may be related to everything, and the world at some level may truly be monistic, it is not necessarily organized the way we think it is. While the pieces, the parts, may be valid, our picture of the whole may not be. This we suspect when so many pieces have to be left out in order for the present view of the whole to fit together.

I recall an interesting example of a viable scientific alternative. Dr. Clemence, director of the U.S.Naval Observatory, in discussing the compilation of the American Ephemerides noted that the computer calculations of the time were based on a Ptolemaic view of the solar system rather than a Copernican view. From a computer's point of view epicycles were simpler than elipses. In seeking the simplest structure, [Occam's Razor, an intrinsic ingredient of the scientific method], we must realize that what is simplest is an anthropocentric subjective view and may be quite different from the 'ortho- structure' underlying the system. We, of course, want to get to the 'ortho-structure', but how can we **recognize** it except by Occam's Razor?

Assuming there are some who wish to buy only portions and not have to purchase the whole package, how is this to be done? How can we cut the cords tying together the package without losing or damaging the contents? The answer lies in that packaging is done by institutions, religious institutions, scientific institutions, groups whose interest is primarily power and control. To escape packaging abandon institutionalism! As one stand-up comedian put it. "Everywhere people are abandoning the church and going back to God".

JULYKOAN.WP6 August 28, 1997

THE KOANS OF JULY

The koans of July involve the contradictions implicit in the slogans or mottos of two governments. Both are products of the late Eighteenth Century.

- The Koan of July 4th
  E Pluribus Unum

This motto of the United States of America combines the major dialectical pair: Diversity and Homogenization. These opposing dialectical principles are among the most basic dialectics operating in the universe. Very rarely, and then only briefly are they in balance. Although manifested in the particulars of Union, States Rights, Right of Secession, and the immediate question of Slavery, their interplay was at root the cause of the American Civil War, The dialectical principle of diversity, the **pluribus** of the motto, incarnated itself in the viewpoints of the South. The dialectical principle of homogenization, the **unum** of the motto, played its part through the armies of the North. The remarkable feature of the United States is that it has, through its system of federalism, preserved a near balance of these dialectical forces. However the forces of homogenization are gradually prevailing.

- The Koan of July 14th
  Liberté, Egalité, Fraternité

This motto of the French revolution also puts into juxtaposition particular manifestations of the diversity-homogenization dialectic. Liberty and Equality are in opposition. Liberty is the sine qua non of individual uniqueness which in turn is the foundation of diversity and variety. Equality of one or more parameters is the end sought by the forces of homogenization. At what point is balance sought or at what point is balance obtainable? The French approach seems to be let liberty go as far as it will in some parameters and homogenization go as far as it will in other parameters. Support liberty in personal choices, support homogenization in preserving the Republic. We end with the paradox of compulsory military service in order to preserve individual liberty. In effect there is a time in life for liberty and another time in life for uniformity. No civil war needed if resort is to ADMA (across parameters) and TDMA (across time). But also there is liberty for some bought by the homogenization of others. Back in some sense to the issue of slavery, an unacceptable point of balance of the two dialectical principles.

REPACK1.WP6 September 11,1997

RE-PACKAGING

The **cultural** business of the 21st Century will be de-packaging and re-packaging, and the **cognitive** business will be de-entifying and re-entifying. By this is meant that, assuming the elements or modules of experience have been adequately validated, the traditional groupings or manner of linking these modules, is very much open to question and revision. An example from astronomy: The ancients noted certain patterns or arrangements of the stars in the sky. They grouped stars which were in proximity on the sky together into packages called constellations and gave them labels such as, Aries, Orion, the Pleiades, etc. These groupings were endowed with certain astrological attributes and felt to possess physical and metaphysical reality. Over time it was found that apparent proximity was a poor clue to the way stars were actually grouped. Many groupings on the sky were seen to be illusory when the distances to the various stars had been determined. Some groupings, however, such as the Pleiades were real, being clusters of stars at the same distance, with the same motions, and of the same age. Other real clusters were found that consisted of stars that were not in close proximity in the sky, but had other physical parameters in common. It was found that to check our perceptions regarding the reality of an entity, more than one parameter had to indicate grouping. Aside from astronomy, there are many examples of our assuming a package of modules or events is a real entity when in fact it is only a 'constellation'. It is important that we escape these illusions, but of equal, if not greater importance, is detecting entities that exist but have so far been overlooked because of the way we customarily do our packaging.

In the 20th Century we have been treated to a deluge of ad hoc packagings. In war time the enemy is packaged with every real and projected evil. The advertising industry is continually packaging various products with success and happiness. Smoking, for example, has been packaged with sophistication and glamour, whereas its real package is with heart and lung disease. Certain ethnic groups have been packaged with certain proclivities, the Scotts with thriftiness, the Germans with methodicalness. Some societies suffer with packages that other societies do not have. The Chinese, for example, are struggling with what should be packaged with socialism. Dong Fureng, top economic advisor to the Communist Party, in order to facilitate privatization and modification to a market economy, insists "Socialism means seeking social equality, not that the state has to keep a majority stake in every industry". But perhaps the most difficult re-packaging facing those who would re-entify lies in the structure of language itself.

WMDYADS1.WP6 September 13, 1997

"Uniform sameness is the philosophical equivalent of non-existence" --Eddington

It is not surprising that the consummation of centuries of white man's creativity takes the form of the digital computer. The white man's way of viewing himself and the world is reflected in his creations, and the computer like its creator, is formatted in the black and white of dyads or binaries. In the white man's arithmetic everything is ultimately reducible to zeros and ones. In the white man's logic everything is forced into true or false. In the white man's ethics everything is considered either right or wrong. In the white man's justice findings must be either innocent or guilty. With the white man's dwellings one is either inside or outside. In the white man's cities space is either private or public. etc, etc. But is the world really binary? Has not something important been allowed to fall between the crack that separates zero from one by ignoring the values between right and wrong, the levels between true and false, and the transitory spaces between inside and outside?

In our houses we pass directly from outside to inside through one door. Sometimes there may be a bit of a transition provided by an overhanging eve or in increasingly rare instances there may be a porch, anachronisms from a pre-digital age. Lin Yutang in his book, The 'Importance of Living', describes a particular arrangement for the many transitional steps that should exist between outside and inside:

> First, there is a gate and the gate must have a roof. Inside the gate there is a footpath and the footpath must be winding. At the turning of the footpath there is a screen and the screen must be woven of bamboo. Behind the screen there is a pine tree and the pine must be gnarled and old. At the foot of the pine there are rocks and the rocks must be quaint. Beyond the rocks there is a spring and the spring must gurgle. Above the spring there is a pavilion and the pavilion must overlook a pond. Across the pond is a bridge and the bridge must be tantalizing to cross. At the end of the bridge is a grove of trees and the trees must be tall. And in the grove is a house and the house must be secluded.

Our digital culture is not only draining the color and variety from our lives but is also pushing us into a bland homogenized landscape whose uniform plainness serves to dissolve existence itself. Imagination, fantasy, poetry, may all lack practicality and efficiency, but they keep the world from collapsing. Pythagoras knew that whatever is reduced to one becomes extinct. In stripping the world to the binary, but a single brief step remains between ourselves and our demise.

INEVOPT1.WP6 SEPTEMBER 27, 1997

Some of Li Kiang's "Inevitable--Optional" Aphorisms:

INEVITABLE	OPTIONAL	NOTES
PAIN	SUFFERING	for Buddhists only
UNCERTAINTY	WORRY	from J. Lockwood
CHANGE	PROGRESS	
AGEING	MATURING	
EXPERIENCE	LEARNING	
LONELINESS	SOLITUDE	again for Buddhists
DISAGREEMENT	LITIGATION or CONFLICT	
COMPETITION	INNOVATION	
FRAUD	LOSS	from J. Lockwood
TAXES	AUDITS	
COMPLIANCE	AGREEMENT	
SEX	LOVE	male view
LOVE	SEX	female view
~~CHANGE~~	~~PROGRESS~~	
HYPE	QUALITY	

Another aphorism, this from Emil Herzog.

A specialist is someone who knows more and more about less and less until he knows everything about nothing. On the other hand, a generalist is someone who knows less and less about more and more until he knows nothing about everything.

or a renaissance man

This can be applied today in many ways, for example:

A technician is someone in today's world who is required to know more and more about a detail of some specialty until in time he will know everything about nothing. On the other hand, a manager in today's world is forced to be knowledgeable about more and more resulting in an increasing superficial acquaintance until in the end he will know nothing about everything.
OR:
Your search question can become so fuzzy that it gets 10^10 hits or it can become so precise that it gets zero hits.

A specialist is one whose search line is so precise he gets no hits.
A generalist is one whose search line is so fuzzy he hits everything

GDPGHP01.WP6 September 29, 1997

A GENERALIZATION OF SOME GENERAL PRINCIPLES

	GDP DIVERSIFICATION PRINCIPLE	GHP HOMOGENIZATION PRINCIPLE
SPACE	~~PLUS~~ NEGATIVE FORCE TENSION	~~MINUS~~ POSITIVE FORCE COMPRESSION
METRIC	EXPANSION	CONTRACTION
PHYSICAL	Mc^2 ENERGY	GRAVITATION
HAMMING	DIVERSIFICATION	HOMOGENIZATION
BONDING	FRAGMENTATION	CONSOLIDATION
OPTION	INCREASE CHOICE	DECREASE CHOICE

Note that the Mc^2 energy expansion is similar in effect to the cosmological constant Λ introduced by Einstein.

In non-deterministic zones, nature always makes those changes that increase its option space, that is moves to those regions where the number of options is a maximum. This is seen in the structure of the Great Pyramid in Egypt as well as in bio-evolution's movement to increase variety. {see S.J.Gould's "Full House") Wheras first order systems (individual species) operate under the Principle of Plenitude to increase their number, second order systems (ecologies) operate to increase variety.

Some forms taken by GDP and GHP:

GDP	GHP
Pauli exclusion principle	Second law of thermodynamics
Gas pressure	strong force
Radiation Pressure	weak force
Coulomb like charges	Coulomb unlike charges
Mc^2/L^3 energy pressure	GM^2/L^4 gravitation pressure
Liberty	Equality
Isolation, embargo, sanctions	Communication, Trade
Hierarchy	Mergers, Standardization
Sexual reproduction	Mitosis, cloning
The Discrete	The Continuous
---> Existence	---> Extinction

COHERENCE

while diversification may in general be viewed as salutary commercially, and homogenization, the opposite.

There seem to be certain proper realms for homogenization.

One of these is standardization - having to do with what passes over a link - traffic, messaging.

Another is coherence - having to do with the homogenization of phase - even frequency

WHITE NOISE AS EXTREME DIVERSIFICATION

THE ITERATED MODULATION OF WHITE NOISE BY WHITE NOISE LEADS TO GAUSIANS AND $\sigma^2 \downarrow$ ... to a DIRAC FUNCTION which is the extreme homogenization.

Repetition and Iteration homogenize

Regression replicates → fractals

The hope of diversification lies in Recursion

School Uniforms as homogenization ?
or standardization ?

Are school uniforms homogenizing the individual
or merely the exchange of appearance messages
i.e. standardizing

But School itself is an homogenizer.
The paradox in all education

UNIVTYPE.WP6 October 1, 1997

WHAT IS A UNIVERSE?

The usual concept of a universe is that entity which includes all that exists, with the additional property of possessing an overall interrelatedness among the parts that results in "oneness" of the whole. Apophatically, one could alternately say that outside the universe or besides the universe there is nothing. These same attributes are sometimes also assigned to the concept labeled God. Whether universe or God, it must be added that any entity with such attributes is totally alien to common experience.

But in our times the term universe has taken on different meanings and attributes. The term is one used by cosmologists and astronomers to refer to the totality of physical objects that exist, whether directly observable or inferred by theories. The attributes of totality and oneness have been maintained but restrictions are placed on the nature of the included objects. These are limited to those that possess some degree of physical energy, that is have mass, motion, and/or extension in some form or other. But while the concept of universe has retained its attributes of totality and oneness, the models used to describe the universe have evolved.

The Ancient idea of an earth centered universe consisting of a set of transparent spheres containing the planets or wanderers, culminating in a final sphere that contained the non-changing starry objects, has been modified time and again over the centuries. The center was moved to the sun, the starry sphere was replaced by three dimensional space filled with objects at various distances subsequently recognized as being other suns. More recently the universe became the Milky Way, billions of stars with the sun not even near the center, but orbiting planet like about the distant center with a period of some 200 million years. Then earlier in the present century came two radically major modifications. First that there were many galaxies, like but exterior to our milky way, and at greater distances than hitherto conceived. And second, these galaxies were all moving away from one another. If the ultimate physical denizens of the universe were galaxies, then the universe was expanding. Finally in recent decades it was observed that the universe was of a fractal nature, with the galaxies clustered and with the clusters themselves clustered, with great voids or gaps between the succesive orders of clustering.

Sometimes concept occurs before percept. Something is theoretically predicted then later observed. Such was the order of the arrival of black holes to the assemblage of known denizens of the universe. But these objects, informationally sealed off from their exteriors, challenge not only the traditional <u>models</u> of the universe but challenge the traditional <u>concept</u> of universe. It is now a completely new ballgame.

A universe traditionally consisted of all that existed, now it seems that a universe consists more properly of all that is informationally accessible. This idea leads to two views: a universe is all that is observable, or a universe is all that is knowable (by whatever means). The existance attribute must be abandoned. Kant long ago made similar distinctions, differentiating phenomena and noumena.

I. The phenomenal: experienced by the senses (or their instrumental extensions)

II. The quasi phenomenal: extrapolated from the phenomenal by rational or mathematical constructs.

III. The noumenal: exists, but is inaccessible to either our senses or our formal extrapolations. [An extrapolation of Gödel's results regarding axiomatic systems.]

[There is a curious dualism between the noumenal and human fantasy. The noumenal exists but is unknowable, fantasy does not exist but is knowable. It here becomes necessary to postulate orders of both knowledge and existence.]

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.

Aug 1981

PRISON01.WP6 October 2, 1997

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"

Now I lay me down to sleep
I pray the Lord my soul to keep
If I should wake before I die, ...

AandB.WP6 RELAT01.DOC DISK:EPIONTOLOGY October 4, 1997
See also DSW's notes DARL 1969

BASIC RELATIONS

What we have discovered in the course of various team efforts to categorize and organize these cards or tags are several characteristic sets of relationships. Drawing upon the notions of symbolic logic, set theory and Boolean algebra we find it is possible to write a description of all the items in our inventory in one or more of the following formats:

Equivalence:	a equals b
Control:	a dominates b
Containment:	a contains b
Trend:	a inhibits/enhances b
Temporal:	a precedes/follows b
Completion:	a complements b
Balance:	a compensates b

---

a = b	a is equivalent to b
a > b	a is greater than b
a ▸ b	a dominates b
a ⊃ b	a contains b
a -> b	a causes b
a => b	a infers b
a ; b	a precedes b
a ‖ b	a inhibits b
a ∠ b	a augments b
a >< b	a opposes b
a ⊤ b	a balances b
a ⌒ b	a complements b
a ⌣ b	a supports b
a ⋕ b	a in juxtaposition to b

NADER.WP6 October 9, 1997

Caught this on the web news:

> **"Miscellany: Ralph Nader is launching a campaign against Microsoft, alleging "a strange type of monopolistic practice" that controls "content and innovation" rather than price. Sun chairman Scott McNealy and Silicon Valley attorney Gary Reback will speak at an anti-Microsoft conference organized by Nader."**

In today's world even the nature of monopoly is changing. While historically we can say that there can be no such thing as monopoly of content and innovation, everybody is free to choose content and to innovate according to their talents and means. But that view is not perceptive of the situation created by the rapidity of technological change. Bill Gates has an overwhelming advantage since he early on realized how the rules of the game were changing. Resources no longer come from the grain fields and mines, available to the highest third party bidders, they now come from the in house know-how at hand. If you have a head start, you can move way in front of the competition, first, by increasing your in house know-how, and second, not having to share it until your product hits the market place. By then you will have developed much more in house know-how, and moved on increasing the gap between you and those behind. Thus the leader of the pack does monopolize content by the choice of his innovations, and after a point competitive innovators, if they are to make their innovations marketable, are forced to restrict their innovating to the path set by the leader. Thus both content and innovation become the monopoly of the leader. This is in large part the history of the PC and Microsoft.

In addition Gates has aggressively scanned the horizon for all the possible sectors that he can invade with his innovations. The result is that Gates is not only acquiring a monopoly of content and innovation, he is acquiring a monopoly of the **future.** Ralph Nader's concerns are valid for a deeper reason. A selection of a particular future also de-selects all alternative futures, (for quantum mechanical reasons). In other words Bill Gates is not only selecting the future, but prohibiting to us the possibility of other futures. Some think the magnitude of his wealth in today's unbalanced world is obscene, be that as it may, his control of the future is even more obscene. The power centers of history, Nineveh, Babylon, Rome,...London, Washington, have only had power over the present, not the future. However,as a by product of rapid technological change, we are seeing the emergence of a completely new species of power, and by the time we grasp its significance it may be too late to delimit it. We must be grateful for the perspicacity of Ralph Nader.

Changes in the ball park are forcing changes in the ball game.

For millennia ultimate power resided in the military. The past two centuries have seen military hegemony challenged by the legal sector. And today the lawyer has replaced the soldier as the wielder of power. But hold on, a new challenger has come on stage: the technician. i.e. the scientist, the engineer, the research team, the laboratory, and most importantly, the technological entrepreneur.

It has long been an aphorism that in the information age power goes to those who control the flow of information. A new addendum to this aphorism is that those who control technological innovation inevitably gain control over the flow of information.

Since technology changes faster than regulation, Redmond Washington has replaced Washington D.C. as the real center of power.

Robert H. Frank (Professor of Economics, Cornell) and Philip J. Cook (Professor of Public Policy, Duke) in their book "The Winner Take All Society" make the point that capitalism has passed the competitive jungle stage and has been taken over by a handful of "top players". They still weed out a few challengers, but their security of position resides in the public's awe of stars and their ignoring of also rans. So ultimately winner take all capitalism has its roots in mankind's need for Olympians even though there is no longer belief that there is a Mt.Olympus. {[Humanity would do better to go back to the gods. Celebrities are poor surrogates. But perhaps this is what the degeneration of successive ages is all about. The Golden Age was the age of the Gods, the Silver Age the age of the Hero, the Bronze Age the age of the Man of Achievement, the present age the age of the celebrity.]}

One further point the authors make is that even a very small difference of performance between the winner and the runner up results in a huge difference in the subsequent rewards, acclaim, job offers, commercial ops, etc. The winner gets it all, the also rans are ignored and forgotten. This result is a formal consequence of a mathematically well established model--Chaos Theory.

Reply by e-mail

Very interesting point you make. I've always felt this defeat when working in collectives such as Highland Hall or Macrobiotics when it came to issues of how the limited resources were spent. A variation on my playground days as a child when others didn't want to play my game. But it's true that in any competitive situation all the energy goes to the top dog's plan. That's quite different from cooperation where we all try to empower each other.

DSW

74d

December 3, 1997

Judith Lockwood,
Editor Wireless Week

Dear Editor,

Here are some "scraps" by Li Kiang that have a bearing on what is going on with the FCC and some top communication entrepreneurs. At the present time manipulating the FCC is still a useful practice, but as pockets get even deeper down the road it will no longer be necessary. It will be meaningless.

Robert H. Frank (Professor of Economics, Cornell) and Philip J. Cook (Professor of Public Policy, Duke) in their book "The Winner Take All Society" make the point that capitalism has passed the competitive jungle stage and has been taken over by a handful of "top players". They still weed out a few challengers, but their security of position resides in the public's awe of stars and their ignoring of also rans. So ultimately winner take all capitalism has its roots in mankind's need for Olympians even if they no longer believe in Mt.Olympus.

One last curious point they make is that even a very small difference of performance between the winner and runner up results in a huge difference in the consequences, the rewards, the jobs, the acclaim,... and this is a formal consequence of a mathematically well established model--Chaos Theory.

Have a nice day

or a very small advantage, exploited at the right moment can result in a tremendous advantage later.

Li Kiang
POBOX 1871
Sebastopol, CA
95473

Sent with 74a+b

→DREM1013.

DREAM11.WP6 A.M. October 13, 1997

I find myself in a large city, familiar, but not specifically identifiable. There are many tall buildings, but curiously all of them seem to be under construction. All are being added to vertically. While they had earlier been finished, now some sort of motivation is at work to make each taller, adding more storeys. The old heights seem to have been outgrown.

Next I find myself in one of the upper storeys of one of these buildings. I am in a hallway and see myself in a mirror. I have white hair, but a younger face, and seem rather genderless. I enter a room and find a chair which I drag over to be in the sun and begin to read. But soon I find I must move, I become aware that I am in the way of a project that is going on. Near by someone is sawing. I investigate and to my surprise it is Frances. [Frances passed away on February 9 this year] I go up to her and we begin to talk. I notice how beautiful she is. Her hair is totally white, her face radiates great beauty. I tell her how beautiful she is. There are two teen age girls working with her. I ask who they are. She explains that there are really four of them. They are her daughters ages 15,16,17,18. She tells me their names, and besides the two who are currently with her, the middle two are away at school. They are very beautiful and brilliant girls. I ask who their father is. She says, "You are". I reply how could that be, we have not been together for over four decades. She just looks at me and repeats, "You are".

The Celebrations of Christmas

The Christmas season has been a time of celebration since pagan days. The Egyptians celebrated the resurrection of Osiris, the Romans Saturnalia, the Persians the birth of Mithra, Celtic peoples Yule, and various others the rebirth of the sun, all in the time frame mid-December to mid-January. This is not at all surprising since this season is marked by several significant astronomical events: the Winter solstice about December 21, the greatest length of a solar transit interval about December 25, and perihelion near January 5.

Today this season is still the occasion for the celebration of many festivals. In most western countries there are three principal observances: The Christian celebrations relating the season to Gospel stories; continuing Pagan celebrations relating the season to Nature; and Secular celebrations relating the season to a rich ever growing cultural heritage. In addition, the Jewish holiday of Chanukah has been adapted to the season, and the newly created African festival of KwaNZA has opted to be included among the celebrations of this time of year.

The Christian Celebration:

Relating the season to the Gospel stories

The Nativity This is not only the celebration of a particular birth, but the celebration of all birth, the coming of the new into the world. But even more, the celebration of a particular kind of birth: Virgin Birth, whose conception is not by an agent of the continuing past, a mere permutation of existing genes, but by a transcendent agent bringing into the world that which had not been here before.

The Christ Child The celebration of the divinity of the child born of Virgin Birth. Immanuel: God is with us, an infant yet infinite. How paradoxical to perceive of God, the Almighty, as an infant. And of God being given to our care, into the care of those who are in turn in His care. A precious loop. God born into a family, God becoming our brother, our sister. And in consequence, the celebration of the Christ Child becomes the celebration of all new born and the recognition of their divinity. For in a profound sense every child at birth is a Christ Child, whose coming affirms us as members of the Holy Family to which all God's creatures belong.

The Virgin The celebration of the divinity of Mary, the Holy Mother, the protectress and nurturer of the Christ Child and the protectress and nurturer of us all. But in celebrating Mary, we also celebrate all motherhood and all mothers, those who have carried life in their womb and nurtured and protected life during its greatest vulnerability.

These three Christian celebrations of Christmas are not solely the possession of Christian theology. It should be noted that the Christian celebrations are derived from earlier Pagan ones and are related primarily to nature, not the Gospels. At the deepest level Birth, Infant, and Mother are universal and aseasonal archetypes, belonging to all humanity and to all seasons

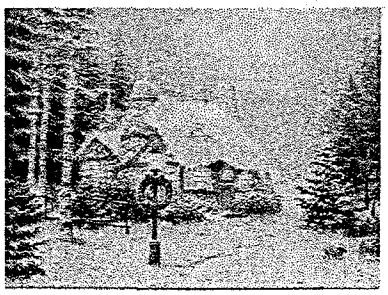
See also
CHRISMED.W52 # 1993
THIS FILE HAS BEEN ACCIDENTALLY ERASED

of the year. However, when there is focus on a particular manifestation of these archetypes, such as the one recorded in the Gospels--the stable, the shepherds, and the star--we are able to internalize the archetype through our feelings, which is not so easily done with an archetype in abstract form. Indeed, humans come to the understanding of essences better by means of stories and their enactment in ritual, than through philosophical abstractions, or mathematical equations. Only when a concept can be reduced to story form does full understanding begin. This is the heritage of universal myth. Such great teachers, as Jesus, and Siddhartha, were able to put archetypal essences succinctly into story form, and to some degree much of literature is an attempt to do the same. But we also need those who can re-extract the essence from the story and articulate it for us in new and different ways.

The Pagan Celebration:

Relating the season to Nature

Winter The celebration of winter, the season of introversion and transformation. The stilled world listening to the silence of the winter stars. The scars of earth covered with a white purifying blanket, the beauty of all enhanced by the fanciful masks of frost, ice, and snow. The paradox between the intimacy and the otherness we feel with the crystalline world of ice and snow. And the paradox between the constraints and the empowerments it provides us. The exhilaration of a gliding world of sleighs, skis, and skates, redefining us and releasing us from the repetitious rotating world of wheels.



The Solstice The season of darkness moves to its climax. And as in a theater when the lights grow dim, feelings of anticipation rise. Although the darkness depresses our spirits (SAD, Seasonal Affective Disorder), anticipations accompanying the turning offset it. The yule log is set ablaze and the warmth and light of the hearth sustain us through the tropos.

December 25th Dies Natales Invicti: The Darkness is overcome, and the good news spreads that light will prevail. It is the birthday of the renewed sun. And in consequence the beginning of a new year. The victory is celebrated with trees of light, Menorahs. But even so, this day is the most special day of the year. The sun reaches its maximum velocity to the east, opening the day to its greatest span. The time of maximum receptivity. Nature's time and man's time are in phase, chronos and kairos are one.

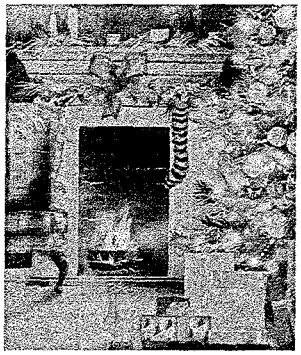
When these seasonal archetypes are merged with the aseasonal archetypes, adorned with the stories of the stable, the shepherds, and the star, a mystery of profound beauty is created., and the whole becomes far greater than the sum of the parts.

The Secular Celebration:

Relating the season to culture and society

Exchange of gifts and greetings This cultural tradition has focused especially on gifts to children. The idea of a gift bringer derived from legends concerning St. Nicholas of Myra, who threw gold through windows. In time the good saint became Father Christmas and in America, Santa Claus. The lore about Santa Claus has

grown since the publication of Clement Moore's poem, "A Visit from Saint Nicholas" in 1822. New facets to the legends have been added almost every year since. Along with the focus on children has come the focus on toys, and on miniaturization of everything, houses, trains, soldiers...



Dolls reflect the archetypes of Infant and Mother. The miniatures enable a focus inward on the immediate and the present. With their help one can begin a meditation appropriate to this season.

Art and music One of the joys of Christmas is the joy of a return after a separation. Bringing out the old and familiar tree ornaments, singing old and familiar carols. All of this reminds us of past Christmases and serves to preserve them for us. For in these practices time is breached and Christmas becomes primordial, not being now , not being then, but being forever. Annually bringing out the art work and music that have grown up around this feast, links us to an archetype that involves all of the seasonal and aseasonal archetypes, an archetype that we have come to call Christmas.

Revelry Recognition that this time of year is not like other times calls for a break in routine. There is release from the ordinary, everything is done with special effort. Special food, special decorations. special gatherings. It becomes a time for coming together, feasting, Gemutlichkeit, and revelry. Customs that date back at least as far as the Roman Saturnalia, when gifts were exchanged, feasts were held and masters served their slaves. A recognition that ordinary life was artificial, and the real was only to be had when we could breach time.

Most of what we celebrate and do at the Christmas season is related to a combination of some or all of these nine aspects. But beyond these three traditions of the West, elsewhere Christmas also looms large. One need only spend Christmastide on the Ginza in Tokyo, or see this festival observed in Hindu and Muslim India to become aware that for the world at large there is something special about the season that generates the desire to celebrate something. While it may be difficult for Christians to admit that there is a 'deeper religion' guiding us that manifests its truth especially in this season, they may feel affirmed that with their story they have captured and articulated one glorious facet of this spirit and given a great gift to the world. And none need feel inadequate in that they can only articulate the ineffable in small part.

We can only conclude:

Christmas belongs to everyone!

Illustrations
1. Madonna and Child--Botticeli
2. Stone Hearth Hutch--Thomas Kinkade
3. American Classics

6times1.WP6 October 23, 1997

SIX TYPES OF TIME

On the basis of purely dimensional considerations six species of time may be derived:

t Motion or Radar time

$$t = \frac{R}{c}$$

τ Density or Keplerian time

$$\tau = \sqrt{\frac{R^3}{GM}} = \frac{1}{\sqrt{G\rho}}$$

T Total Energy time

$$T = \frac{\hbar}{Mc^2}$$

Z Gravitational Energy time

$$Z = \frac{\hbar R}{GM^2}$$

ζ Gravitational time

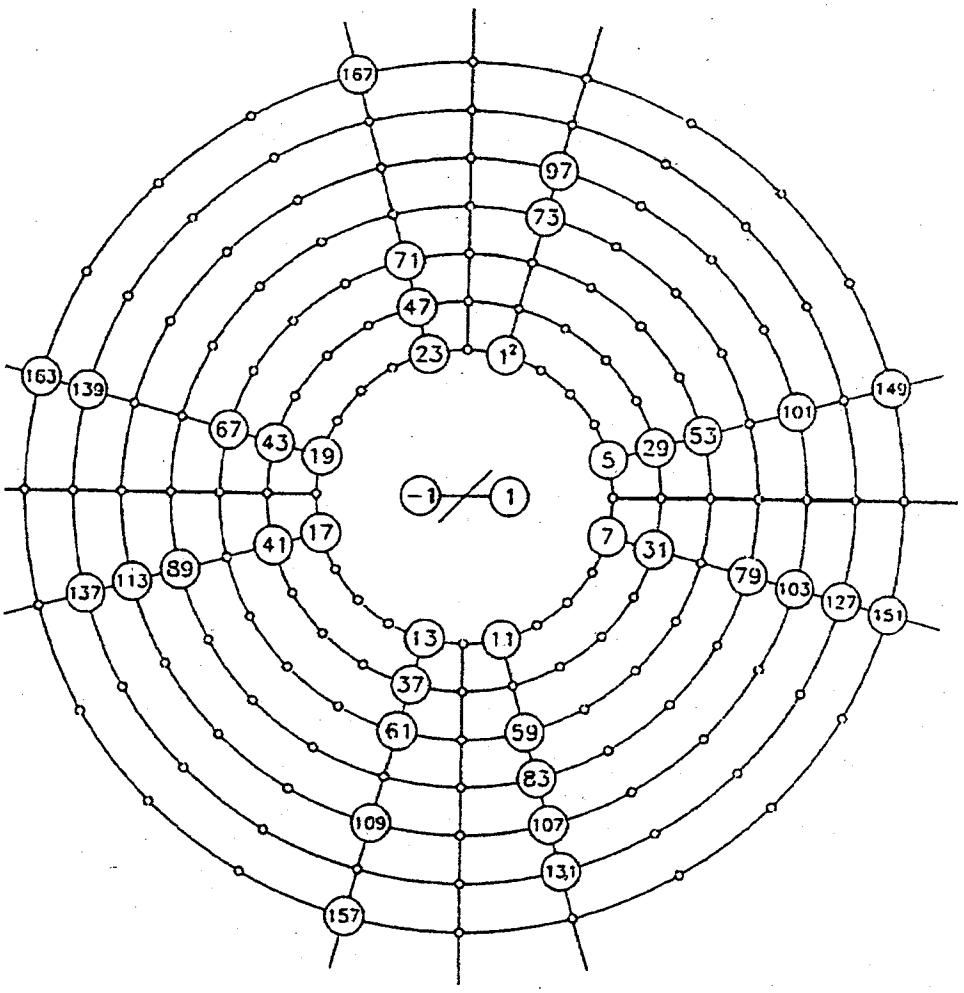
$$\zeta = \frac{GM}{c^3}$$

ϵ Electric time

$$\epsilon = \sqrt{\frac{MR^3}{e^2}}$$

Note that in the case of t, T, and ζ only one parameter, either M or R is involved. In the case of τ, Z, and ϵ both M and R are involved. [Are there two more times? Symmetry would say there should be one involving 1/R, and one involving RM^2, bringing the total to eight.]

ON PRIME NUMBERS



The above diagram shows geometrically a pattern in the distribution of prime numbers. This pattern was "discovered" by Peter Plichta [see God's Secret Formula, Element Press 1997]. This diagram may be summarized:

All prime numbers, p, (except 1, 2, and 3) can be expressed in the form
$p = (N \times 6) \pm 1$ Where N = 1,2,3,....

Which is to say, If {P} is the set of all primes and {F} is the set of all numbers given by Nx6±1, then, $\{F\} \supset \{P\}$. That is all p are in {F}.

However, traditionally mathematicians have sought for an F such that $\{F\} \equiv \{P\}$, that is all members of the set {F} are prime and there are no members of {F} that are not prime. Plichta'a {F} does not meet this criterion, however it indicates where not to look for primes.

6NPRIMES.WPD 97/11/04 See Also 1998 #33

DIAGRAM = PLICHTA

Divide any number by 6
if the remainder is 1 or 5
it may be a prime, if not
it is definitely not a prime.

$\{P\} < \frac{1}{3}\{N\}$ in size

In base 6
all primes end
in 1 or 5

$p = 6N \pm 1$ $\{F\}$ $\{F\} \supset \{P\}$
$q = 6M \pm 5$ $\{G\}$ $\{G\} \supset \{P\}$

N	p	q	M
0	1	1	1
1	5	5	0
1	7	7	2
2	11	11	1
2	13	13	3
3	17	17	2
3	19	19	4
4	23	23	3
4	[25]	[25]	5
5	29	29	4
5	31	31	6
6	[35]	[35]	5
6	37	37	7
			6

ALAPAN00.WP6 November 6, 1997

THE WHOLE WORLDVIEW CATALOG

ALTERNATIVES-APOPHASIS-ANONYMITY

CANDIDATE TOPICS:

1. ALTERNATIVES:
   - Los Angeles
   - Fritz Zwicky
   - Real Wealth

2. AMERICA: UNRESOLVED ISSUES
   - What sort of melting pot
   - Church and State
   - First Amendment

3. APOPHASIS: VIA NEGATIVA
   - Induction and Falsification
   - Balance and Inversion
   - Beyond the Law of Excluded Middle

4. ATHROISMATICS: PARTS AND WHOLES
   - Repetition, Iteration, Regression, Recursion
   - Reversibility and Irreversibility
   - Nodes, Links, Traffic, Messaging

5. BRAINWASHING: CONTROL AND MANIPULATION
   - Conspiracies, Cover ups, Diversions

6. COSMOGONY: $G,c,\hbar$ and α,μ,S
   - Schwarzschild and Heisenberg Limits
   - CHON

7. DIALECTICS: PRINCIPLES AND FORCES
   - Departure and Return, Chamberlain and Moulton
   - Diversification and Homogenization
   - Private and Public
   - Change and Permanence, Herakleidos and Parmenides
   - SAT and Repetition

8. EPISTEMOLOGY: <---> ONTOLOGY
   - Templatonics: Archetypes and Templates
   - Intellect and Non-intellect epistemologies

Revised 97/11/26

Existence and Being

9. INFORMATION: THOUGHTS WITHOUT A THINKER
   - Degree of Surprise-- Shannon
   - Negentropy-- Szilard
   - Bits and Bytes--
   - Useful Data-- F(t,x,y,z,person)
   - Minimum Length of Description

10. NUMBERS: PYTHAGORAS AND PLANCK
   - Discrete and Continuous, Digital and Analog
   - The Species of Dyads, Triads, Quadrads,...
   - Quadric Diagrams and Fourness
   - Prime Numbers and Fibonacci Numbers
   - Rationals, Radicals, Transcendentals

11. PYRAMIDS: STONE AND SYMBOL
   - Pi and Phi
   - Rorschach and Typology

12. SIGNIFICATION:
   - Pleasure/Pain Physical
   - Desire/Aversion Physio-psychological
   - Interesting/Boring Psychological
   - Important/Irrelevant Societal
   - Valid/Invalid Spatio-Temporal
   - TRUE/ Cosmic

13. SPACE AND TIME: TEMENOS AND KAIROS
   - Duration and Interval
   - TDMC
   - The Six Physical Definitions of Time
   - Motion Time vs. Density Time
   - Kairos: Journey of the Year
   - Space: Extension and Separation
   - Space: Dimension and Curvature
   - ADMC

14. NOISE AND SUNYATA
   - Vairacona and Akshobya
   - White, Pink, and Brown Noise
   - The Central Limit Theorem
   - Modulation: White Noise ---> Gausian

INFOAGIN.WP6 November 6, 1997

MORE ON INFORMATION

Beginning with railroads and telegraphs, experience has taught that for a dynamic system to function its information transmissions must be faster that its material movements. Years ago Astrophysicist Jesse Greenstein noted that this seems to be true throughout the universe. Everywhere a system has both slow (dynamical) and fast (informational) components. **Information must move faster than matter.** Astronomer Gustav Stromberg questioned how the interferometric measure of the diameter of a star was possible. Interference must be established between radiation from atoms on the "left" edge of the star and radiation from atoms on the "right" edge of the star. This required a certain phase coherence between the atoms hundreds of thousands of kilometers apart. Whence this coherence? How did the atoms communicate? Signals moving at the velocity of light in many cases would be inadequate to establish coherence. What was the 'fast component' in this case?

Perhaps there may be more than two levels necessary for a structure to exist. (Assuming here that coherence is an essential attribute of all systems and structures). The mechanical or dynamic level operates at speeds up to the velocity of light. One informational level, the electro-magnetic operates at the speed of light. But perhaps there is a third informational level with transmissions at speeds faster than light. (However, another possibility is given by the operation of a computer map. In order to go from one place to another, one does not move screenwise across the map, but zooms out, reducing the entire territory to one screen, then moves a small distance across the screen and then zooms back in to the destination. This covers the distance in a fraction of the time required by one level movement. (Of course this multi-level operation could also take the form of atoms on the left edge and atoms on the right edge both taking their drum beat from a common clock on another level.)

We know that energy is transmitted or exchanged only in the present moment. But what about information? Is it possible that information is transmitted and exchanged in the future? If so this poses an intriguing relation between the problems of information exchange and our notions of the nature of time. Levels of scale, rates of 'horizontal' transmission and rates of 'vertical' (between levels) transmission may all be interwoven in a more complex manner than science's one level notion of space-time can incorporate.

Finally, Gregory Bateson said that 'Information is always at the boundaries'. What did he mean by this?

See Sci Am May 1993 p 144 on Complexity

Information: "A measure of the delocalization of the state of the system in the space of all possible events."

Information: Minimum number of symbols to locate or define a concept or entity — cf. Chaitin-Kolmogorov describe

THOUGHTS WITHOUT A THINKER
INFORMATION WITHOUT A MEDIUM

In order for the multi-automobile system of a city to operate, there must be an informational infrastructure of stoplights, turn signals, crossing halb, ... i.e. An informational template providing the coherence that allows the mechanical (i.e. automotive) system to function.

This a a dynamic template changing with each moment of time. However, if the informational system does not remain ahead of (and operate faster than) the mechanical, there is breakdown.

Conjecture: Every system is two fold consisting of an informational template and its material manifestation or counterpart.

⇒ Even static systems, to exist, must possess the two level information-material (energy) dyad.

A universal zeitgeber?

~ flocks of birds
no communication
just instincts

ALAPAN01.WP6 November 7, 1997

ALTERNATIVES--APOPHASIS--ANONYMITY

ALTERNATIVES:

The real measure of a person's wealth is in the number of alternatives to which he or she has access.

The motorists of Los Angeles have been well trained in understanding the value of access to alternatives. Almost every week there are radio advisories telling drivers in some part of the city to take alternate routes. L.A. drivers have learned to keep a collection of alternative routes always handy. If, as is often claimed, that what goes on in Los Angeles is the wave of the future for other cities, then the age of appreciation of alternatives is soon to be upon us.

A pioneering recognition of the value of alternatives was made during WWII by the astrophysicist Fritz Zwicky at the California Institute of Technology. Zwicky developed a method which he called morphological analysis that allowed him to realize several alternate solutions to a problem. Using this method he invented a plethora of jet engines, including ram jets, pulse jets, ... independently coming up with the German V1 and V2 weapon systems. Zwicky felt that too long humans had not only been content with a single solution but had fallen into being dogmatic about that single solution, persecuting those who proposed alternatives. The time had come to change this and welcome all possible alternatives as providing a rich smorgasbord from which we could choose the best solution for the situation at hand. It is this philosophy that causes us to include ALTERNATIVES in our mantra for the 21st century.

Perhaps one reason that humans have been content with preferring the single solution to multiple solutions is that they consider redundancy to be inefficient. (Also decisions are a nuisance to be avoided whenever possible). But if nature goes heavily into redundancy there must be some wisdom involved that we are ignoring in our pursuit of efficiency. In the long term redundancy may prove to be of far more importance than efficiency: Important for survival, important for innovation and important for emergence. Since actualization exhausts potential, something is required from time to time to replenish potential. We may speculate that it is variety itself that fuels potential and it is depletion of variety that removes potential.

Pertaining to this, Stephen Jay Gould has shown that what bio-evolution is really about is not the development of complexity, of more complex organisms, but the increase of a greater variety of organisms. That is, evolution is in the business of increasing alternatives, and hence overall potential.

GPINT2.WP6 November 22, 1997

THE GREAT PYRAMID: AN INTRODUCTION

The astronomer, Sir Fred Hoyle, after studying in detail the arrangement of the stones at Stonehenge, concluded, "We do not know what the designers and builders of Stonehenge had in mind, and may never know for sure what it was intended for, but we do know what we can use it for: we can predict eclipses with it." In a general sense Sir Fred's statement can be applied to most of the pre-existing structures we have ever encountered, including the world itself: We do not know what the designer intended it for, but we have discovered what we can use it for. In the present case, we want to apply this apothegm to the Great Pyramid of Khufu. We are agreed that we cannot know for sure the intents of the designers and builders, but we do know that many are engaged in finding all of the uses that can possibly be projected on it. And these uses are not only quite varied but also oftimes quite imaginative.

Perhaps one of the most general uses we could make of the Great Pyramid is employing it as a sort of Rorschach test, substituting the measurements taken of the stones for ink blots. What investigators see in the pyramid tells us as much or more about them than about the pyramid. For example, some see the pyramid as a prophecy in stone predicting all of the important events from 2600 B.C.E. to the present (and even on into the future). Using a carefully chosen set of readily shiftable changeable units, the pyramid can be shown to have predicted the Exodus, the birth of Christ, the great plague, the Great War, and the death of Elvis. Another group of investigators see the pyramid as an encyclopedia in stone. Once it can be decoded, the pyramid will reveal the secrets of the universe. It contains the dimensions of the earth and the solar system, the fundamental constants of physics and the properties of the chemical elements. Others see the pyramid as a textbook in mathematics, a mineral manipulation of integers, radicals, and numbers such as pi and phi, the golden ratio. Still others see the pyramid as a vestige of an ancient and lost civilization dating back more than 12,000 years, constructed by Atlanteans or perhaps alien astronauts. Finally there are a few, who having immersed themselves in the cultural context of the pyramid, come up with such ideas as the pyramid's being a tomb, or possibly a temenos to aid the Pharaoh in his passage into afterlife. So we must conclude that we indeed do not know what the designers had in mind, but we do know the pyramid makes a great Rorschach test.

AGESMAN1.WP6 November 29, 1997

THE AGES OF MAN

Many ancient traditions point to there being a sequence of ages, each age being more degenerate than the one previous. The Hindu tradition speaks of a series of Kalpas and Yugas between each of which the quality of life declines. The Greek tradition speaks of the successive ages of Gold, Silver, Bronze, and Iron. The Book of Daniel in the Bible refers to a similar decline from gold to clay. We may question whether these ages refer to actual successive periods of human civilization, (whose sequential decline runs counter to the present age's idea of progress), or whether the idea of decline originates in analogy to the process of personal ageing and degeneration that each individual encounters through life. In either event the idea of discrete ages fits well with the processes of time. In all ageing there appear to be discrete periods, plateaus of relatively slow change, separated by brief gaps of intense change.

In certain traditions, particularly the Egyptian, the ages of man have been tied to the precession of the equinoxes, a cycle of time lasting about 26,000 years. This cycle is customarily divided into twelve periods of about 2200 years, each period being named for a sign of the zodiac. While the length of a period may be calculable, (they may not all be equal), just when one period ends and the next begins is a matter of considerable speculation. Each period seems to be dominated by a theme which is instituted at the beginning of the period and is developed during the subsequent 2200 years. Each period also seems to make some profound contribution, some wisdom that transcends the involvements of its own time, and which is sometimes preserved for subsequent ages.

When this precessional view is adapted to recorded history, the record shows that we have been living in the age of Pisces. Some take this age to coincide with the Christian era, beginning about 2000 years ~~about~~ ago, (this identification possibly because of the Christian use of a fish symbol). But it seems far more likely that a new period, (say Pisces), began about 550 B.C.E. when the conceptual innovations of Lao Tzu, Confucius, Buddha, Maha Vira, Zarathustra, Second Isaiah, Thales, and Pythagoras all hit the world at the same time. It also seems reasonable that this period culminated with the work of Isaac Newton and terminated about 1780 C.E, with the revolutions in America and France.

If the present age began with the ideas of Locke, Rousseau, Paine, and Jefferson, these ideas were quickly followed by the conceptual innovations of Darwin, Faraday, Maxwell, Marx, and Mendelyev. And in this century with those of Planck, Freud, Einstein, Schrödinger, Jung, Gödel, Watson and Krick. Certainly a company comparable to that of 550 B.C.E. And as it took two millennia to work out the ideas of the sages of 550 B.C.E., it will probably take us two millennia to work out the impacts of our own "founding thinkers".

WISAGES.WP6 November 29, 1997

THE WISDOM OF THE AGES

In speculating on what might be the wisest contributions made during each age, the danger is not so much in commission as in omision. In any event, here is a first draft from throwing out the net to recover what deserves to be put in the Golden Book of the Ages.

AGE	DATES	EPIGRAM
VIRGEAN	-13800 TO -11600	According to some the Sphinx
LEONEAN	-11600 TO -9400	dates to the Virgo/Leo passage
CANCEREAN	-9400 TO -7200	Somewhen in the -9400 to -2700
GEMINEAN	-7200 TO -5000	periods was Hermes Trismegistus
TAUREAN	-5000 TO -2700	a deified sage who proclaimed **"As above so below"**
ARIEN	-2700 TO -550	The age that began with the pyramids whose secret wisdom is still being sought.
PISCEAN	-550 TO +1780	Perhaps Newton's Third Law **"To every action there is an equal and opposite reaction"**
AQUARIAN	+1780 TO +4000	Too early to know

From the Age of Pisces, Matthew 16:25 should be included in any selection of great wisdom:
"Whosover would save his life shall lose it, and whosoever would lose his life for my sake shall find it."

And also from the Age of Pisces, Plato's epigram,
"The opposite of every great truth is also true".

And from the Quran,
"When any member of the body suffers, the whole body suffers"
"When any Muslim suffers, all Islam suffers."

And from Buddhist tradition,
"None shall make it until all shall make it."

And from the Tao te Ching,
"The Tao that can be spoken is not the real Tao."

Perhaps the first wisdom of the Aquarian Age 153
"The gods must be replaced in every age."
L.K.

ALAPAN02.WP6 November 29, 1997

ALTERNATIVES--APOPHASIS--ANONYMITY

APOPHASIS: VIA NEGATIVA

> *What keeps me alive is what is found between the images, between the words, between the thoughts. In the emptiness of thought, the emptiness of feeling, the emptiness of the body arises the fullness of life.*
>
> --Basarab Nicolescu, Théorèmes poétiques

In the beginning God created the heaven and the earth. And the earth was without form and void. ---Genesis 1:1,2

Form is emptiness and emptiness is form.
---Buddhist

Matter is one mode of existence, energy is another;
Form is one mode of no-existence, void is another.

We have chosen to limit the world to that which exists and ignore that which no-exists or inversely exists, confusing inverse existence with non-existence.

Existence can be defined by what is, inverse existence by what is not.

There are many levels in the void just as there are in matter/energy. Levels in matter/energy are separated by gaps of void, levels in void are separated by gaps of matter/energy.

Apophasis deals with both negation (-x) and inversion (1/x). In negation emptiness (zero) is the fulcrum, in inversion unity (one) is the fulcrum. There is the nothingness of zero and the nothingness of one. [cf "Uniform sameness is indistinguishable from non-existence--Eddington.]

The continuous (analog) cannot work with void, only the discrete (digital) can work with void.

There can be no verification, only falsification.
---Karl Popper

Science must replace induction (Bacon) with falsification (Popper)

Music is not only the notes, but is also the silence between the notes.

DREAM123.WP6 December 3, 1997

A CASE OF PRECOGNITION

Many well documented examples of precognition are recounted by J.W.Dunne in his book, 'An Experiment With Time'. He concludes that precognition through dreams is a common experience and should not be considered as "paranormal", but such experiences provide a serious challenge to our present theories of the nature of time.

This scrap is to recount a personal incident of dream precognition.

Dream: Sometime after 1:00 am on the morning of December 3, 1997 I dreamed that some friend of the opposite sex and I were going to attend a concert. We found conditions very crowded and had difficulty finding a place to park. After the concert (for which I have little memory) I went to get the car and decided to pick up a pair of pants I had left at the cleaners. They found my pants and I asked what I owed. The clerk said "The charge for cleaning the pants was $600 dollars. I was aghast. "There had to be a mistake" "No, the charge was $600". "For one pair of pants? That's outrageous, I could buy 3 expensive pairs of pants for a lot less than that." I left abandoning the pants figuring they weren't worth that much.

Waking Event: The pick up on my phonograph turn table had worn out and needed replacement. About 9:00 the morning of the third, I went to a repair place to buy a needle replacement (A small element about one centimeter in size containing a flexible strap with a small diamond on the end). They were out and referred me to another store. The second store had one in stock. Expecting the cost to be a few dollars, maybe as high as $12, I asked the cost. The clerk consulted his computer and told me $38.30. Hey there must be a mistake, that is far more than I paid last time. I said I could have bought a couple of phonos for that price. The clerk checked, confirmed the price, $41.17 with tax. Unlike in the dream, I bought it.

The trauma of encountering a price several fold what I had expected was exageratedly foretold in a dream the night before. Precognition?

J. W. Dunne's dream about the eruption of Mt. Pelee in Martinique was precognitive with respect to reading a newspaper headline about the eruption rather than about the event itself

On the night of 01/04/16 I had a dream that my car had been turned on its side [Trotsky involved]

The following picture appeared in the Press Democrat the next morning.

[1] Pelee - Martinique; Pele - Hawaii

[2] Vairacona - Himalayas; V... - Andes

THE BODHISATTVA: GOD'S SPY

"Standing on the Berlin Wall I tried to imagine what would have been Bonhoeffer's feelings if, instead of being martyred, he had lived on into post-war divided Germany. Eastwards, I could see the familiar scene of desolation and oppression, the bedraggled houses, the empty shops, the somehow muted traffic and people in the streets; westwards, the other sort of desolation and oppression, equally familiar, the gleaming neon and glass, the exhortations to spend and to consume, the banks for churches and the erotica for dreams. The pursuit of power versus the pursuit of ~~happiness~~ pleasure, black-and-white television versus color, the clenched fist versus the raised phallus, guns before butter and butter before guns. And in between, the no-man's land or limbo of vigilant sentries on watch-towers, dogs and land-mines and armed patrols. Was there anything here to risk eternal damnation for, or for that matter to live for? The strip-tease joints and the garish posters announcing the mighty achievements of the triumphant German proletariat, equally fantasy. Plastic flesh and fraudulent statistics where's the difference? Perhaps, after all, the limbo is the place, lurking among the land-mines.

"Bonhoeffer's active service as God's spy ends, then, with an unanswered question. Maybe his perfect serenity as he went to his execution was partly due to the fact that now he never would have to answer it - at least not in this world. Meanwhile, we may be sure that other spies have been briefed and posted. It would be foolish even to speculate on their identity and whereabouts. As has already been said, the first duty of stay-behind agents is to take on the coloration of the contemporary scene. One thing is certain, though: whoever and wherever they may be, great services will be required of them and great dangers encompass them."

from 'A THIRD TESTAMENT' --Malcolm Muggeridge (p27)

a misnomer
The term God's Spy may seem wrong, when a spy is thought of as a source of intelligence. After all an omnicient God has no need for the services of intelligence gatherers. But spys have other duties, than espionage, eg sabotage, planting explosive devices [such as "Love your enemies"] disrupting business as usual, giving discomfort to those ~~comfortable~~, and comfort to those discomfortable.

INOCENCE.WP6 DECEMBER 8, 1997

THE PATH OF INNOCENCE

The word **innocent** has three rather distinct meanings in English:

It can mean 'not guilty'
It can mean 'naive'
It can mean 'purity of purpose'

Unfortunately these meanings get confused, especially the second two. Naivete has to do with inexperience, lack of experience, innocent in the sense of a baby. However, when we think of Sir Galahad the word innocent again applies, but he was by no means naive. He was richly experienced, having faced many species of difficulty and temptation, but was unfazed in his determination and persistence in his search for the Grail. He was like an off shore rock washed over by experience after experience, wave after wave, but remaining firm and constant throughout all. In this sense innocent means the possession of a profound sense of discrimination that can both extract the helpful and reject the deleterious from any experience. Such innocence does not protect itself by shunning and avoiding experience, but by gathering strength through its openness to every experience. [One should note here Voltaire's criterion with regard to the repetition of certain experiences: "Once a philosopher, more than once a pervert"]

Is it really paradoxical that innocence can be preserved in a state of openness? Something is needed for this to be possible. Metaphorically it is the armour that Sir Galahad wore. What is this armour? How is it obtained? In Ephesians 6:11-17, St. Paul admonishes to put on the Armour of God, the Breastplate of Righteousness, the Shield of Faith, the Helmet of Salvation, and the Sword of the Spirit, which is the Word of God. When this is properly interpreted the explanation of the paradox can be found.

Sharon Kocher speaks of the "path of innocence having a nourishing cocoon of energy". This infers that, when the journey is inward, there is no paradox, no contradiction between openness and innocence. In the inward journey there is an ineffeble protection that allows us to explore and yet not be misled. We can thus explore with confidence, not being assured that we shall find the Grail, but being assured that we shall be led to those places which harbor what we need.

NONEXIST.WP6 December 10, 1997

also 98#24

ON NON-EXISTENCE AND EXISTENCE

Uniform sameness is indistinguishable from non-existence.
--Sir Arthur Stanley Eddington

There are two kinds of non-existence:

- The kind represented by the symbol "0", zero. Zero non-existence is nothingness, emptiness, the void

- The kind represented by the symbol "1", unity. Unity non-existence is uniform sameness, absence of alternatives, no variety, all entities occupying the same point in multi-dimensionsal Hamming Space.

We ordinarily have little difficulty identifying non-existence with nothingness. If it doesn't exist, it is not there, it is nil. However, it took humans thousands of years before they came up with a symbol for nothing and nothingness. The Hindus and the Mayans both (and I presume, independently) came up with such a symbol within the last 1500 years. But with the unity type of non-existence it is not so easy. We have great difficulty equating a non-existence with "1". After thinking about it, we might go along part way and say, "O.K. if you would substitute awareness for non-existence, I can see where you are coming from. We are aware of things through their differences, so if no difference, then no awarenes, but saying that non-awareness and non-existence are the same thing is a bit much." That is a good point: the question of the relation between the set of things that exist and the set we are aware of and the set we could be aware of, a question that needs further exploration, but for now let us say that there are two kinds of non-existence: The first type really doesn't exist, and the second type might exist but as far as we are concerned it doesn't exist. The difference between these two types might boil down to the limitations of our sensory apparatus, or to the limitations of our intellectual apparatus. [We might here note, moving up a level, that the unity type of non-existence tells us that there cannot even be non-existence unless there are at least two types of non-existence.]

We thus see that existence [read awareness if you will] requires alternatives, variety, differences. When there is but one color, there is no color, when there is but one odor, there is no odor, were there but one tone, there would be no sound. Senses arise in response to differences. When all that exists shrinks down to total uniformity, total homogenization, then extinction ensues. Perhaps this is why bio-evolution is so concerned with the production of variety. It has been said that alternatives are wealth. It might be said that alternatives, diversity, variety, are not only our wealth, but the root of our existence. So as they say in Paris, "Viva la difference".

OUT OF NON-EXISTENCE, EXISTENCE WAS BORN

We start with two kinds of non-existence, the "0" kind and the "1" kind. From each of these an existence was born.

First there is existence born out of "0":

0 --> x and -x (e.g. matter and anti-matter)?

Second there is existence born out of "1":

1 --> x and 1/x

[Question: Are there two Sunyatas or only one? Does Vairacona create type "0" existence, and Aksobya create type "1" existence, or vice versa, or do they both have a role in both types?}

Note that we end with a triad. The material world may be represented by the set of {x's} which is common to both the "0" and "1" creations, but this set of {x's} which we take as constituting the physical world, has two distinct origins. Behind the shared world of {x's} lie two infrastructures, the {-x's} and the {1/x's}. Could this be why there is Ahura Mazda and Ahriman? Why there is God and Satan, why there is good and evil? There were two creators! How are they to be reconciled? Is that our task?

Or is there but one creation, that out of "0", and one destiny, that of "1" (which is extinction)? Then "0" is the Alpha and "1" is the Omega.

It is of interest here that there are also two distinct religious pursuits. Those seeking emptiness, seeking the "0", the infrastructure of their origin (?) These are Buddhists, Taoists, Sufis, Christian and Kabalistic mystics. And there are those seeking oneness, community, "may we be one", These are most Muslims, most Church Christians, and Israelis. The oneness they seek is the unity of their tribes, or their dominance over all humanity.

The "0" path is the path to individuation, diversity, the richness of variety. The "1" path is the path of uniformization, homogenization, and extinction. These two principles, the "0" and the "1" constitute the basic dialectic that operates throughout the cosmos at all levels.

THE MATTER OF CHOICE

In the term "mass-customization" a new oxymoron has appeared. In an editorial in the December 8th issue of Wireless Week, Rob Mechaley states that before Henry Ford innovated the assembly line to produce his Model-T Fords, there was such a thing as customization, the tailoring to individual specifications. With mass production customization disappeared, (Ford said that you could have any color car you wanted so long as it was black), being replaced by either a limited smorgasbord or a one size fits all lunch. Now with new computer technology Mechaley claims that even under the rubrics of mass production customization has returned. His point seems to be that instead of doing market research to find out what most consumers want and standardizing production to make that the norm, it is possible for companies to have a basic product and 'customize' it through the availability of a set of optional add ons. But this "advance" toward pre Model-T times is a far cry from the traditional definition of customization, the crafting to individual specifications. But if Mechaley wants to introduce the term "mass-customization" for a little less limited smorgasbord, we can accept that as another one of the prevailing deceptive euphemisms of marketing.

Certainly, mass production has homogenized products, but even so bill boards tell us that advertizing creates choice. This infers that choice is recognized as important to consumers and if there is no real choice, the illusion of choice must be created. Illusory choice is one of the devices by which homogenization, monopoly, uniformity, and hence control take over. The matter is no longer confined to the business ball park, but spills over into the political ball park. [Once an American reporter was interviewing a dictator in a sub-Saharan African country. He asked the dictator, "How can you claim to have democracy here when you have only one political party and no choices?" The dictator replied, "How can you claim to have democracy in America where you have but one political party, but with your usual American extravagance you make two of them?"] The challenge emerges: How do we decide what choices are illusory and what choices make a difference?

To engage this challenge, we must first understand the nature of variety. Here it is useful to introduce "Hamming Space". This is a multidimensional abstract space in which distance is used to measure the degree of variety or difference between two products or entities. The degree of variety or complexity of an object is given by the number of dimensions required to give its position in Hamming Space. Superficial variety requires only one dimension (or parameter). Take ice cream, for example, while it may require several dimensions in H-space for its complete description, when it comes to the flavor of the ice cream, flavor difference is one dimensional. Returning to choice, the more dimensions in H-space involved in the choice the greater the difference it makes, the more meaning the choice has. Most of the choices in a mass production society involve very few dimensions. Substituting one dimensional (or we might say, illusory) choices for multidimensional choices is a strategy used by those seeking to create monopoly.

When the number of dimensions in H-space that specify entities is reduced, it shrinks our available domain of awareness, accessibility and possibility in the real universe. A dimension in H-space disappears when it is reduced to having only only one value. If there is but one point, there is no line; if there is but one line, there is no plane; if there is but one plane there is no volume; If there is but one temperature, then there is no such thing as temperature; if there is only one color, then there is no such thing as color. It must be concluded that Total extinction ensues when every parameter has been reduce to one value. Hence, **The road to homogenization is the road to extinction.**

Note 1)
By the above reasoning, If there is one God, there is no such thing as God. But it is not that simple, while temperature and color are but one parameter quantities to begin with, God is multi-dimensional. However, it is also true for multi-dimensional entities that unless there exists more than one and that there exists some additional difference between them, then they do not exist. [Hence, the Virgin Mary]

Note 2)
A plurality in number of identical entities may guarantee their existence, not requiring other differences, but only if they are localized, in which case their difference in position in space and time constitutes the required H-space difference for existence. However, if they are non-local, they must possess some differences beyond those in space-time in order to exist. Thus cloning is O.K. for localized entities, but not for non-localized entities. [No two angels can be alike.]

Note 3)
The Buddhist argument for the illusion of existence as given in ~~the~~ Nagarjuna's dismemberment of the Maharaja's chariot, disregards the existence of the template of the chariot, which has not been destroyed by the fragmentation of one of its manifestations.

Note 4)
-->"1" effects extinction in the manifestation world, but not in the template world;
-->"0" destroys the template. However "SAT" is never destroyed or destroyable, it is like the ROM, needed to "boot up" a universe.

Note 5)
The fascination with quantum mechanics is the inference of non-locality, but there is the equally important inference of +, - balance (or x, 1/x balance)..

ALL OF THE ABOVE IS BASED ON AN APOPHATIC EPISTEMOLOGY.

December 3, 1997

Judith Lockwood,
Editor: Wireless Week

Dear Editor,

Here are some "scraps" by Li Kiang that have a bearing on what is going on with the FCC and some top communication entrepreneurs. At the present time manipulating the FCC is still a useful practice, but as pockets get even deeper down the road it will no longer be necessary. It will be meaningless.

Robert H. Frank (Professor of Economics, Cornell) and Philip J. Cook (Professor of Public Policy, Duke) in their book "The Winner Take All Society" make the point that capitalism has passed the competitive jungle stage and has been taken over by a handful of "top players". They still weed out a few challengers, but their security of position resides in the public's awe of stars and their ignoring of also rans. So ultimately winner take all capitalism has its roots in mankind's need for Olympians even if they no longer believe in Mt.Olympus.

One last curious point they make is that even a very small difference of performance between the winner and runner up results in a huge difference in the consequences, the rewards, the jobs, the acclaim,... and this is a formal consequence of a mathematically well established model--Chaos Theory.

Have a nice day

Li Kiang
POBOX 1871
Sebastopol, CA
95473

EDITOR, LTR 12 03-97

PUZLPC00.WP6 December 12, 1997
[see also PUZLPC01.WP6 1998#31]

PIECES OF THE PUZZLE

1. PYTHAGORAS: "One does not exist"
   EDDINGTON; "Uniform sameness is indistinguishable from non-existence."

2. HERMES TRIMEGISTUS: "As above, so below". What was lost in transmission was that there are many aboves and many belows.

3. THE HOPI DYAD: Manifest and unmanifest

4. Light does not manifest until it 'intersects' with matter.

5. KANT'S DYAD: Phenomena (the experiencable) and Noumena (the inexperiencable)

6. J.G.BENNET'S DYAD: Being and Existence

7. C.S.LEWIS' DYAD: What it is made of and What it is.

8. BUBER'S DYAD: I and THOU

9. LI KIANG'S PAIR: Epistemology and Ontology

10. PLATO'S TRIAD: Known, Knowable, Unknowable

11. KHUFU'S DYAD: Π and Φ

12. DIRAC'S PAIR: "$- \leftarrow 0 \rightarrow +$" and "$1/x \leftarrow 1 \rightarrow x$"
    negation and inversion

13. KEPLER'S PAIR: $t = L/V$ and $\tau = (G\rho)^{-1/2}$

14. SCHWARZSCHILD-HEISENBERG PAIR: $GM < Rc^2$, $MR^2/T > \hbar$

15. VON NEUMAN'S DYAD: Continuous (analog) and Discrete (digital)

16. LI KIANG'S DYAD: Recollection and Recognition

17. ZWICKY'S PAIR: Parameter and Value

18. ARISTOTLE'S DYAD: True and False

19. POPPER'S DYAD: Verification and Falsification

20A. PLATO'S PAIR: Archetypes and Templates
20B. PLATO'S DYAD: Archetype <--> Manifestation

21. CHAMBERLAIN AND MOULTON'S DYAD: Departure and Return
Isolation and Cosmopolitanism

22. JUNG'S QUADRAD: Sensation, Thinking, Feeling, Intuition

23. LI KIANG'S QUADRAD: Repetition, Iteration,
Regression, Recursion.

24. Modulation of white noise with white noise leads to a Gausian. Successive iterations diminish the variance. Successive iterations lead to a Dirac δ function.

25. Quantum Mechanics manifests non-localization and conservation of parameters, such as charge, polarization,...

26. SANTA FE TRIAD: Multiplicity, Variety, Complexity

27. PRINCIPLE OF PLENITUDE PAIR: Organisms and Ecologies

28. GÖDEL'S LIMITS: Proofs, Logic, Files, Intellect,
Infrastructures

29. LI KIANG'S DIALECTIC: Diversification-Homogenization

30. DARWIN'S DYAD: Extinction-Radiant

31. BOOLE'S DYAD: Intersect and Union

32. HUBBLE'S PARADOX: How to be older than your mother.

33. POSSIBILITY A: Information without a Medium

34. POSSIBILITY B: Energy without Mass

35. POSSIBILITY C: Thoughts without a Thinker

36. POSSIBILITY D: Non-localization of mind

37. NOETHER'S SYMMETRY <--> CONSERVATION LAWS

38. PAULI'S EXCLUSION <--> UNIVERSAL UNIQUENESS

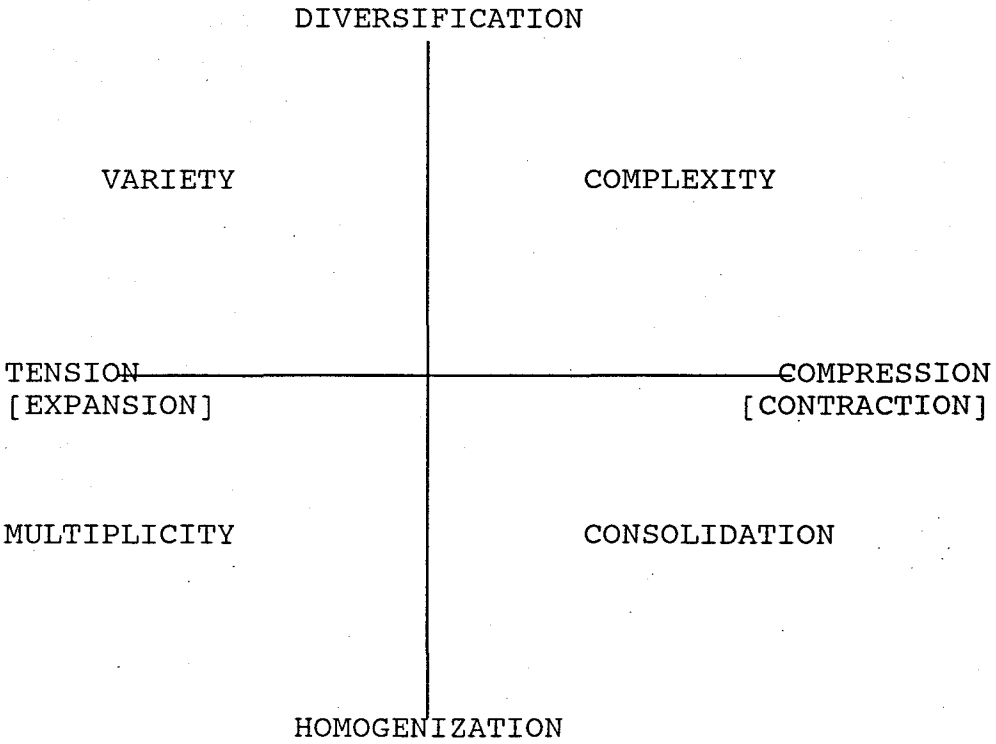
39. NATURE'S DIALECTIC FORCE $\longleftrightarrow$ FORM

NMBFOUR2.WP6 December 15, 1997

THE DIVERSITY-HOMOGENITY/TENSION-COMPRESSION QUADRAD

Traditionally it has been recognized that there exist opposing forces or principles whose interaction plays a basic role in structuring the world. These dyadic principles have been given such names as Yin-Yang, Feminine-Masculine, etc. Here we shall call such pairs, "dialectics". The interplay of dialectics results in existence. Entities are located where dialectical forces are in balance, things happen at the interface, in the 'cracks' between dialectical domains. But to focus on a single dialectic pair is to ignore the fundamental adversarial or complementary power of dialectics. To complete a dialectical structure, two dialectical pairs must be placed in juxtaposition, creating a quadrad.

An example of this arises from consideration of the following two dialectical pairs: The Tension-Compression dialectic, and the Diversification-Homogenization dialectic. A first question is, are these not the same dialectic, Tension-Compression being a special sub-set of Diversification-Homogenization, or vice versa. Unfortunately or fortunately we cannot decide, so we proceed to the creation of a dialectical quadrad.



THE LEFT HALF of the diagram may be labeled FRAGMENTATION, many separate unbound parts being either all the same or varied. In particular there is no center or coordination among the parts.

THE RIGHT HALF of the diagram may be labeled UNITY or BONDEDNESS, where there is a single system consisting either of varied parts such as an organism (complexity) or of several similar parts bound into a single whole (e.g. monopoly). In either case there is a center, central control, coordination, and coherence.

THE LOWER HALF of the diagram may be labeled UNIFORMITY or STANDARDIZATION. Whether the parts are bonded and coordinated or not, variety is minimized. This is the domain of the Principle of Plenitude, the action of the cancer cell, to render all in its own image.

THE UPPER HALF of the diagram may be labeled PLURALISM, whether of unbonded particles or of an organism, in the latter case pluralism refers primarily to function.

UPPER LEFT QUADRANT:
Diversification together with tension, is the environment for the creation of variety. The expansion resulting from tension promotes separation, minimizing interaction, and permiting variety to evolve.

LOWER LEFT QUADRANT:
Homogenization together with tension or expansion results in multiplicity, a plethora of separated identical monads, unbonded and minimally interacting.

LOWER RIGHT QUADRANT:
Homogenized compression, merging modules into a larger whole that resembles the modules. This represents growth in size but not in complexity or sophistication.

UPPER RIGHT QUADRANT:
Bonding of the diverse is the source of complexity, the origin of ecologies, societies, and organisms. Its evolution depends on being fed with fresh variety.

This quadrad has applications in many levels, in cosmology, in bio-organisms, in social structure, in cultural evolution. It must be placed in juxtaposition with other dyads and quadrads, particularly, the four fold structure:

NODE, LINK, TRAFFIC, CARGO