FOUR

THOUGHT

FOUR

THE FOUR MARX BROTHERS
THE FOUR BEATLES
THE GANG OF FOUR
THE FOUR HORSEMEN OF THE APOCALYPSE
THE FOUR ARCHANGELS
THE FOUR GOSPELS
THE FOUR SEASONS
THE FOUR WINDS
THE FOUR ELEMENTS
THE FOUR HUMORS
HESIOD'S FOUR AGES OF MAN
ARISTOTLE'S FOUR CAUSES
BACON'S FOUR IDOLS
THE FOUR NOBLE TRUTHS
THE FOUR HINDU CASTES
THE FOUR YUGAS
THE FOUR ESTATES
THE FOUR FREEDOMS
THE FOUR MT. RUSHMORE PRESIDENTS
THE FOUR KINGS WILLIAM OF ENGLAND
THE FOUR TYPES OF WARFARE
THE FOUR HORSE PACES
THE FOUR PSYCHOLOGICAL TYPES
THE FOUR FOOD GROUPS
THE FOUR EONS OF GEOLOGICAL TIME
THE FOUR NUCLEOTIDES
THE FOUR FORCES
THE FOUR COLOR THEOREM
FOUR VALUED LOGICS
THE FOUR MODES OF MULTIPLEXING
THE QUADRIVIUM

FIVE

THE RAT PACK
THE FIVE GREAT LAKES
THE FIVE STAR GENERALS AND ADMIRALS
THE FIVE EXTINCTIONS
PLATO'S FIVE POLYHEDRA
THE FIVE SENSES
THE FIVE TATHAGATAS

FOURS1+FOURS2 → FOURS01 2006 #51

FOURS1.WPD December 16, 2006 in Download

SPECIES OF FOUR IN CULTURE AND NATURE

PART I

Humans organize their cultures and thinking around dyads, such as:

win/lose; true/false;

Around triads, such as:

Father, Son, Holy Ghost; Brahma, Shiva, Vishnu; Executive, Legislative, Judicial;

And especially around quadrads, such as:

4 directions of the compass, 4 phases of the moon, 4 seasons of the year, 4 quarters of a football game.

But fourness manifests itself not only in our cultures and the organization of our thinking as in sociology, philosophy and mathematics, but also in nature, in physics, biology, and psychology.

In sociology:

The Hindu caste system:

Brahmans, Kshatriyas, Vaisyas, Sudras

The Mayan city organization:

Prince, Priest, Warrior, Merchant

Current USA:

President, Supreme Court, Pentagon, Congress–Corporations

Medieval Education: (The Quadrivium)

Arithmetic, Astronomy, Geometry, Music

The Four Generations of Warfare:

Regiment against Regiment	Alexander, Caesar, ... American civil war
Siege and entrenchment	Masada, Byzantium,...World War I
Movement and envelopment	Mongols, Subatai,...Rommel, Patton
Random warfare	9/11, Al Quaeda ....Terrorism, Terrorists

In Philosophy:

The Presocratics four elements:

Earth, Water, Air, Fire

Aristotle's four Causes:

Material Cause	That out of which something is made	Ingredients
Efficient Cause	That by which something is made	Process
Formal Cause	That into which something is made	Product
Final Cause	That for which something is made	Purpose

Bacon's four Idols:

Idols of the Tribe	Sensory limitations, Preconceptions and Prejudices
Idols of the Cave	Generalizations from local conditions, Universals
Idols of the Marketplace	Semiotic distortions and truncations
Idols of the Theater	Blind acceptance of tradition, custom and authority

FOURS2.WPD

SPECIES OF FOUR IN CULTURE AND NATURE PART II

In Psychology:

Hippocrates' Four humors:

Sanguine	Cheerful
Phlegmatic	Unexcitable
Choleric	Hot Tempered
Melancholic	Depressed

Jung's Four types:

- Sensation
- Intuitive
- Thinking
- Feeling

Buddha's Four Noble Truths

- The existence of suffering
- The causes of suffering, attachment, greed, desires
- The termination of suffering, acceptance of impermanence
- The eight fold path from suffering

In Mathematics:

Only Four algebraic equations soluble by radicals: [✓s flunk on five]

- Linear, Quadratic, Cubic, Quartic

Logic:

- Convex Venn diagrams limited to four sets. [convexity flunks on five]

Pascal Triangle

- 11^n valid up to $n = 4$ [$n \geq 5$ flunks]

Wolfram's Four Cellular Automata Patterns

- Uniform
- Fractal
- Random
- Local Patterns

FOUR COLOUR THEOREM

In Physics:

The Four Forces

- Gravity
- Electric force
- Weak force
- Strong force

In Biology

The Four Nucleitides [DNA]

- Adenine
- Guanine
- Cytosine
- Thymine [Uracil in RNA]

FOUR SOURCES

There are four "Scriptures" or sources of human knowledge and wisdom:

1) **Nature**: The domain of the Hunter.

What is the purpose of our understanding nature and its processes unless it is to accept nature as an exemplar to guide us in our actions and creations. However, we have used our knowledge of the workings of nature to fabricate tools and weapons for dominance and destruction rather than taking it as a credential for inclusion in the Council of Cosmic Destiny.

2) **The Distilled Experience of the Past:** The domain of the Leader

For the most part recorded in such books as the Bible or Koran. However each of these books has been mutilated in redaction for communication, in translations and in interpretations, and worst of all exploited for human agendas. And these distortions have given us anachronistic guideposts such as the Biblical injunctions to subdue the earth or to be fruitful and multiply. Injunctions, that if now obeyed, would ultimately lead to our extinction.

3) **The Wisdom in Nonsense and Absurdity**: The domain of the Clown

When we laugh at our selves and our "wisdom" we are taking the first step toward escaping the box which we have built with our intellects. Our arrogance has entrapped us in this box, but when we ridicule ourselves, for a brief moment we are out of the box, and lose our haughtiness. As G.K.Chesterton has said, "Nonsense is a way of looking at existence that is akin to religious humility and wonder." Honor your errors.

4) **Inner Knowledge:** The domain of the Shaman, the Mystic

In this approach all that is said above is transcended. However this wisdom is ineffable. It cannot be articulated or communicated. While the Kingdom of Wisdom is within, within each of us, it is only available to those who dedicate themselves to its disciplined path, and then only to those who are able to *recognize* it.

It is well to note that what we call the world, the world that we experience, is a uroborus, a loop. We experience the world and in the act of experiencing recreate the world. The empirical involves both passive observation and active participation through re-creation. And the rational, our reason and logic, is an abstraction from our experience of this world that we have selected and created. While we should not maintain that the empirical and rational are wrong, we must recognize that both are but special ways of dealing with a special case. It comes to a matter of validity rather than truth. Our rational facilities work and are valid in this particular world that they have participated in building, but are hardly a scaffold for exploring the multiple facets of reality and potentiality of which the world of our perceptions and conceptions is but a special case.

PUZLPC01.WP6 MAY 6, 1998

[PART I PUZLPC00.WP6 1997#91]

PIECES OF THE PUZZLE PART II

RE GÖDEL

Some (unwarranted?) generalizations of Gödel's Theorem:
_No axiomatic system is capable of completeness.
_No system is capable of explaining itself.
_No program can generate a number more complex than itself.*
_No file can be both perfect and complete
_The logical cannot exhaust the rational
_The rational cannot exhaust the valid
_The valid cannot exhaust the True
_The intellect cannot encompass the whole

[*--Chaitin see Peterson p197]

BUILDING BLOCKS

_SPACES
_QUADRANTS
_DIMENSIONS
_LEVELS

_Symmetry
_Orthogonality

_Dialectics
_Imperatives

_Realities
_Cultures

_NODES
_LINKS
_TRAFFIC
_CARGO

THE FOUR LEVELS OF MIND

_Personal Sensory based
_Collective Cultural
_Noosphere Planetary
_Cosmic Brahman
And SUNYATA

SPACES

_P-SPACE Particle or Position SPACE
_W-SPACE Wave SPACE (or Quadrant)
_H-SPACE Hamming or Form SPACE
_B-SPACE Force or Bonding SPACE
_S-SPACE Selection or Option SPACE

FOUR FEATURES OF QUANTUM MECHANICS
_Complementarity Wave-Particle duality
_Heisenberg uncertainty principle E x T > _
_Non-localism Coherence after separation
_Oscillation of monads between existence and non-existence

MORE QUESTIONS
_Is Creator <--> Creation a Noether symmetry?
_Is reality a function of scale?
_In what SPACE does a mental conception exist?
_In what SPACE does mathematics exist?
_Do I think or does it think in me?

MISCELLANEOUS
_The rational cannot be measured.
_MAP:TERRITORY::PERCEPTION:REALITY
_A belief is neither true nor false. cf Schrödinger's cat.
_Recognition is possible because we are holograms. or said in another way: God created us in His Image.
_Archetypes are generalizations
_Consciousness is awareness of awareness.

BRAHMA02.WP6

JJune 25, 1997

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 Aksobya. 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

On Mysteries

A mystery is that which with every exploration reveals new facets of its being. It is the many contained in the one. Its oneness is ineffable. Only in successive perceptions of its parts can a glimpse of its whole become possible.

The greatest mystery is the Mystery of Existence

The primary mysteries of all religions have been
The Mystery of Life
The Mystery of Death

The Jews added the mysteries of Beginnings and Endings, of Genesis and Eschatolgy.
Then came the Mystery of coming. Not of ending, but of eternal coming, the Mystery of the Messiah.

The Christians expressed these mysteries in the symbolism of the Christ.

Beginnings	The Incarnation
Death	The Crucifixion
Life	Baptism and The Resurrection
Eternal Coming	The Transfiguration
Endings	The Last Judgement

Later two more mysteries were added

Transformation	The Eucharist
The nature of God	The Trinity

The Great Secular Mysteries: Space, Time, Energy, Matter and Mind

The Greeks developed the four elements: Earth, Water, Air, and Fire, which we now recognize as the four states of matter: solid, liquid, gaseous and plasma. The Greeks also related the elements to the four essentials of physical life:

Symbol	**Need**
EARTH	FOOD
WATER	DRINK
AIR	BREATH
FIRE	WARMTH

The Egyptians were concerned with the four spiritual elements, the four essentials of spiritual life.

Symbol	**Need**
Lion	Initiation
Man (Aquarius)	Purification
Ox	Dedication, commitment
Eagle (Scorpion)	Metanoia, transformation, liberation

(The symbols are of Babylonian origin and represent the four fixed signs in the zodiac, and have become the symbols for the four evangelists.

LION	ST. MARK
MAN	ST. MATTHEW
OX	ST. LUKE
EAGLE	ST. JOHN

CHBEARD.P51 January 15, 1991

CHARLES BEARD'S FOUR APHORISMS OF HISTORY

1. The mills of the gods grind slowly, but they grind exceedingly fine.

2. Whom the gods would destroy they first make mad with power.

3. The bee fertilizes the flower which it robs.

4. Only when it gets dark enough can you see the stars.

2006 #51

FOURS01.WPD December 16, 2006

SPECIES OF FOUR IN CULTURE AND NATURE

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And especially around quadrads, such as:
4 directions of the compass, 4 phases of the moon, 4 seasons of the year, 4 quarters of a football game.
But fourness manifests itself not only in our cultures and the organization of our thinking as in sociology, philosophy and mathematics, but also in nature, in physics, biology, and psychology.

In sociology:
The Hindu caste system:
Brahmans, Kshatriyas, Vaisyas, Sudras
The Mayan city organization:
Prince, Priest, Warrior, Merchant
Current USA:
President, Supreme Court, Pentagon, Congress–Corporations
Medieval Education: (The Quadrivium)
Arithmetic, Astronomy, Geometry, Music
The Four Generations of Warfare:

Regiment against Regiment	Alexander, Caesar, ... American civil war
Siege and entrenchment	Masada, Byzantium,...World War I
Movement and envelopment	Mongols, Subatai,...Rommel, Patton
Random warfare	9/11, Al Quaeda ....Terrorism, Terrorists

In Philosophy:
The Presocratics four elements:
Earth, Water, Air, Fire
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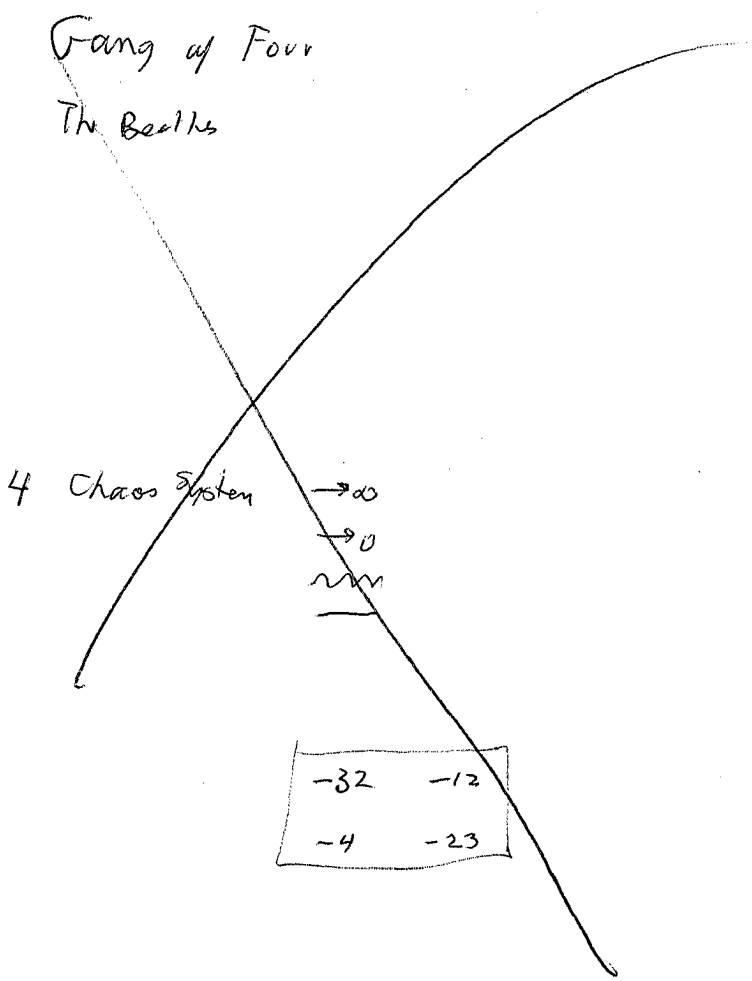
Idols of the Theater	Blind acceptance of tradition, custom and authority

FAMOUS FOURS



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Choleric	Hot Tempered
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- Intuitive
- Thinking
- Feeling

Buddha's Four Noble Truths

- The existence of suffering
- The causes of suffering, attachment, greed, desires
- The termination of suffering, acceptance of impermanence
- The eight fold path from suffering

6 kinds of numbers integers rational irrational transcendental imaginary complex

In Mathematics: Arithmetic operations +, −, ×, ÷ cf. Lewis Carroll Parlors?

Only Four algebraic equations soluble by radicals: [✓s flunk on five]

- Linear, Quadratic, Cubic, Quartic

Logic: T, F, Both T and F, neither T nor F

- Convex Venn diagrams limited to four sets. [convexity flunks on five]

Pascal Triangle

- 11^n valid up to n = 4 [n ≥5 flunks]

Wolfram's Four Cellular Automata Patterns

- Uniform
- Fractal
- Random
- Local Patterns

FOUR FULCRUMS

$-0+$

$\frac{1}{x}\ 1\ x$

$x^{1/a} \times x^a$

$\log_a x \propto x^a$

$(x^a)^b \quad x \quad x^{(a\,b)}$

Four Color Theorem

Subtotals 4 columns

4 states of matter: SOLID, LIQUID, GAS, PLASMA

In Physics:

The Four Forces

- Gravity
- Electric force
- Weak force
- Strong force

5

$e^{\pi i} + 1 = 0$

squarable lunes

In Biology

The Four Nucleotides [DNA]

- Adenine
- Guanine
- Cytosine
- Thymine [Uracil in RNA]

Also 9's MUSES JUDGES

12's TRIBES SIEPS

FOURNESS: THE FIRST ORTHOGONALITY

The frequent appearance of fourness and four-foldedness in nature (e.g. the four physical forces, the four nitrogenous bases) and in culture (e.g. the four directions, the four seasons) raises some intriguing questions: Does fourness play some basic "Pythagorean" role in the structure of the cosmos? Do the many occurrences of four-foldedness imply that there is some physical and/or psychological principle related to the number four? Do the various examples of four-foldedness possess any other commonalities besides just fourness?

Perhaps by listing and placing some examples of four-foldedness in juxtaposition they might disclose whether any additional commonalities do indeed exist.

Let us begin with some traditional cultural fours:

- The four classical elements: Earth, Water, Air, Fire
- The four humors: Blood, Phlegm, Cholor (yellow bile), melancholy (black bile)

Divisions of space:

- The four directions: North, East, South, West
- The four winds: Boreas, Eurus, Auster, Zephyrus

Divisions of time:

- The four seasons: Spring, Summer, Autumn, Winter
- The four lunar phases: New Moon, First Quarter, Full Moon, Last Quarter
- The four dividers of the day: Sunrise, Noon, Sunset, Midnight
- The four Yugas: Krita, Treta, Dvapara, Kali
- The four year Olympiad: The interval between Olympic Games beginning 776 B.C.E.
- The Julian leap year: Every fourth year adds an extra day

- The Gregorian leap centuries: Every century leap year is canceled, but every fourth century leap year is retained.

Next some fours from Myth and Religion:

- The four archangels: Michael, Gabrael, Raphael, Uriel [Judaism]

- The four evangelists: St. Mathew, St. Mark, St. Luke, St. John [Christianity]

- The four noble truths:

the four evanelists gospels

From physics:

- The four recognized forces of physics:
  The strong force, the weak force, the coulomb force, and gravity.[gluons, vector bosons, photons, and gravitons]

- Maxwell's four equations governing electro-magnetic fields:

$$\nabla\times E=-\frac{\mu}{c}\frac{\partial H}{\partial t}\ ,\ \nabla\times H=\frac{\kappa}{c}\frac{\partial E}{\partial t}\ ,\ \nabla\cdot(\kappa E)=\rho\ ,\ \nabla\cdot(\mu H)=0$$

- Four species of time derived from dimensional considerations

$$t=2\pi\frac{R}{c}\ ,\ \tau=2\pi\sqrt{\frac{R^3}{GM}}\ ,\ z=\frac{\hbar}{Mc^2}\ ,\ \zeta=\frac{\hbar R}{GM^2}\qquad T:\ \frac{GM}{c^3}$$

From engineering:

- The four types of multiplexing:
  ADMA, FDMA, TDMA, CDMA
  Area, Frequency, Time, and Code division multiple access

- The four phases in engine cycles:
  Injecting, Igniting, Expanding, Exhausting

From biology:

- The four nitrogenous bases, constituents of DNA:
  Adenine, Guanine, Thymine, Cytosine [1991#106]

From traditional cultures:

- The four directions:
  North, East, South, and West.

- The four winds: {corresponding to above directions)
  Boreas, Eurus, Auster, Zephyrus

- The four seasons:
  Winter, Spring, Summer, and Autumn.

- The four classical elements:
  Earth, Air, Water, and Fire.

- The four types of musical instruments:
  Drums, Bells, Pipes, Strings

- Within the pipe category:
  Flutes, reeds, brass, diapasons

C:FLIPWPG

MOREFOUR.WPD April 1, 1998

THE VECTORS AT THE FOUR LEVELS OF ORGANIZATION:

PERSONAL:	WHAT IS PLEASURABLE or INTERESTING
CULTURAL:	WHAT IS IMPORTANT
GLOBAL:	WHAT IS VALID
COSMIC:	WHAT IS TRUE

On the personal level individuals are divided between the physical priority of pleasure and the mental priority of interest.

THE FOUR PROFANE PURSUITS:

POWER
PLEASURE
POSSESSIONS
POSITION (Renown)

Power is associated with control, this includes possessing energy health, and whatever supports survival.

Pleasure is a built in bio-vector. On a most basic level we are guided by pleasure/pain

Possessions, the accumulations of culturally designated wealth, money, clothes, yachts,,,, Wealth is felt to provide security.

Position is renown, celebrity, fame, esteem. It arises from and goes beyond the need to belong.

These four are biologically based and culturally shaped.

He that findeth his life shall lose it, and he that loseth his life for my sake shall find it. Matthew 10:39

THE FOUR SACRED SEARCHES:

UNDERSTANDING
MEANING
POSSIBILITY
COMPLETION (Belonging)

Understanding is the capturing of experience, of "reality" in one or more of our symbolic currencies, such as language or math. It is a vector of both science and the spiritual path.

Meaning is the extension of the search for esteem beyond all societal and cultural boundaries. It is the discovery of our location in the largest context we encounter.

Possibility is the vector of our participation in the world through creativity. It is the development of our precious gift of imagination in art, philosophy and science. Not what is but what can be.

Completion is the recognition of the Other of which we are a

part. It is the search for union with that Other. It is the vector of the spiritual path. For completion we must seek non-localization in all spaces and times.

Search, survival
- certainty
- security
-

Setsets.wpd scraps 96 FINISH!

{ATTRIBUTES} and {{ATTRIBUTES}}

The symbol {---} is here introduced to mean a set, a collection of items. The title of this essay is thus {ATTRIBUTES} = "A set of attributes" and {{ATTRIBUTES}} = "A set of sets of attributes" or more simply, "Sets of sets of attributes".

PART I.

With those preliminaries out of the way, in Part I we are going to discuss THINGS, SIGNS, SYMBOLS, AND IDOLS. In order to do this we shall need to discriminate between sets of attributes, that is {{ATTRIBUTES}}. First, we shall need the set of sensory attributes, which we shall designate by {S-ATTRIBUTES}, or for brevity {S-a}. Second, the set of subjective or mental attributes, which we shall designate with {M-a}. And third, the set of injunctive or proclaimed attributes, which we shall designate with {I-a}.

Now what do we mean by a THING? An automobile, a bush, a cup of coffee, are all things. In general, a THING is an object of the senses. It has a location, size, shape, weight, color, etc. all revealed to us by our senses (or their instrumental enhancements). In other words a THING is a set of sensory attributes:

$$\text{THING} = \{\text{S-a}\}$$

Next, what is a SIGN? A SIGN is usually a THING, but in addition to having sensory attributes it also has a specific meaning assigned to it. This meaning is usually a collectively agreed upon message. For example, a circle with a bar ⃠ means 'forbidden', a red octagon means 'stop', the figure of a man means 'men's toilet'. The braces in this essay are a SIGN because they are given one specificly defined meaning. Thus a SIGN, being a THING, is a set of sensory attributes but in addition is associated with a specific assigned message or subjective attribute. We will write this as:

$$\text{SIGN} = \{\text{S-a}\} + \text{M}\dot{+}\text{I}$$

The M stands for a subjective or mental attribute. It is connected with an I to indicate that there is an injunctive element present. You are told what the associated mental attribute is to be, no alternatives allowed. Note that here the M$\dot{+}$I stands alone and is not enclosed in braces because the SIGN carries one specific meaning, not a set of meanings.

Third, we come to SYMBOL. As with SIGN a SYMBOL is also a THING. It is therefore a set of sensory attributes, but in addition a SYMBOL carries a set of associated subjective attributes. This set in the case of a SYMBOL does not have injunctive connotations. The mental associations with a SYMBOL may be common to a great many people but there is no consensus on the set. The set is neither delimited nor static. It may change from individual to individual and within an individual from time to time.
Thus, we may write:

$$\text{SYMBOL} = \{\text{S-a}\} + \{\text{M-a}\}$$

Finally, we turn to IDOL. What is an IDOL? Again, an IDOL is a THING, made of matter and conveying sensory data. Unlike a SIGN, a set of proscriptive and prescriptive subjective attributes are linked to an IDOL. This distinction is minor, the real difference lies

in the nature of the injunctive-subjective set, in the {M-I-a}. While there is no trouble in a single M-I, a totally new level strikes {M-a} when the number of specified meanings increases. Injunctive-subjective attributes become injunctive attitudes.
these spill over into injunctive actions.
PART II.
In this part we are going to extend the ideas developed in Part I to include PERSONS, GROUPS, ICONS, and ABSTRACTIONS.

KRIEG2.WPD July 21, 2003

THE SPECIES OF WAR

LAND WARFARE

1) **Slug Match:** Opposing lines and columns
Probably the oldest form of warfare. Alexander's phalanxes, Caesar's legions
The major form of warfare up until the American Civil War
"Get there fustest with the mostest"

2) **Attrition:** Siege and trench warfare
Siege of cities, starvation
World War I, the trenches, outlast the enemy
Body count warfare

3) **Envelopment:** Maneuver and speed
Rapid movement of cavalry or tanks
By pass strong points
Mongol general: Subutai, 4 contingents
WWI Otto Hutier; WW II Rommel, Guderian, Patton

4) **Random:** Guerillas and terrorists
Irregulars, American Indian warfare
Partisans, franctireur, snipers
Suicide bombers

NAVAL WARFARE

1) **Boarding**
Ship vs ship, Lepanto, piracy

2) **Parallel lines**
Trafalgar, ~~Jutland~~

3) **Manuever**
Crossing the "T", Tsushima

4) **Carriers**
WW II Pearl Harbor, Midway

4 Cog Also for Laws of Change

WITNOTE1.P51 DISK:NOTES October 31, 1991

SOME NOTES AND COMMENTS RE MATERIAL
IN WILLIAM IRWIN THOMPSON'S IMAGINATIVE LANDSCAPE

Thompson constructs a typology (again fourfold) which does not seem to map directly on to either the Steinerian or Jungian. Its fundamental parameter seems to lie in the manner of responding to complexity.

METANOIDS PARANOIDS NOETICS NOISIES

The *metanoids* are artists, mystics, seers, etc. They are the whole viewers, the level shifters. They are not engulfed by complexity. "You do not have to drink the ocean in order to swim in it."

The *paranoids* are the 'crazies'. They are the pattern detectors. They and the fundamentalists and literalists, lack a sense of humor. They build scenarios and hypotheses to end run complexity.

The *noetics* are the philosophers, historians, mathematicians (and logical positivists). They are the framework builders, the suppliers of the ground for experience. They may treat complexity by pruning or by building new schemata.

The *noisies* are activists, shufflers, those who make variations on the themes. They supply humor and skepticism, also despair and frustration. They are overwhelmed by complexity.

. . . . . .

THOMPSON'S CYCLICAL DYNAMIC

NOUS --> NOISE --> PARANOIA --> METANOIA --> NOUS --> ...

In a cultural plateau, the generally accepted level of normalcy and reality is the *nous*.

Over space and time as experience accumulates, *nous* decays into *noise*.

Accumulated and compacted *noise* goes into information overload and stimulates *paranoia*.

The patterns of *paranoia* supply the data on which artists and others build a new *metanoia*.

If and when favorably processed by the populace as a whole, the *metanoia* becomes the new *nous*.

cf William Strauss

THE BI-BREATH CYCLE

It is said when Brahma breathes out worlds come into being; when Brahma breathes in they are destroyed. Breathing as fact and as metaphor is the basic dynamic of the Cosmos, of Life, and of most that lies between. It is a meta-dialectic. The LIV (54th) Chan Patriarch, Li Kiang, speaks of breathing as follows: (from Lieh Tzu).

That which is cyclical, no matter how often repeated, returns to the same condition. The Tao, however, knows that a cycle can be used to join Heaven and Earth. The cycle that will bring Heaven to Earth is two-fold. To bring the compassion of Kwan Yin to all the sentient beings of Earth: On the first breath take in her compassion, then exhale it to all the Earth. On the second breath take in the pain of Earth and exhale it to Heaven, Each pair of breaths will not only take the Compassion of Kwan Yin to Earth and the suffering of Earth to Heaven, where it is quickly disolved, but will wash and cleanse the breather.

Li Kiang's Four Levels of Breathing

1) Ordinary Breathing:
Inhale mundane from Earth; Exhale mundane to Earth

2) Theravadan Breathing: Single Breath Purification
Inhale Kwan Yin from Heaven; Exhale mundane to Heaven

3) Mahayana Breathing: Two Breath Purification
1) Inhale Kwan Yin from Heaven; Exhale Kwan Yin to Earth
2) Inhale mundane from Earth; Exhale mundane to Heaven

4) Bodhisattva Breathing: Single Breath Purification
Inhale mundane from Earth; Exhale Kwan Yin to Earth

NOTES:

Level 4) One cycle taking and sending is the taking and sending of the Bodhisattva. Since a Bodhisattva already has Kwan Yin in the heart, the Bodhisattva is part of Heaven. So purification of the mundane is accomplished each breath. For those on the Tao yet to become Bodhisattva, Level 3), two breath cycle is necessary. You become Bodhisattva when you move from Level 3) to Level 4).

Our modern experience with engines can help us to understand the breathing teachings of Li Kiang. The cyclical operation of breathing is metaphorically followed by all engines.

Steam engines do a single breathing cycle, but avoid the stasis described by Li Kiang by having in essence two cylinders, actually a single cylinder separated into two chambers by a piston.

Steam Cycle:

I. Hot steam admitted into left chamber, piston moves to right, cool steam forced out of right chamber
II. Hot steam admitted into right chamber, piston moves to left, cool steam forced out of left chamber

Single cylinder operation for an internal combustion engine, with either an otto or diesel cycle, is much like that described by Li.

Internal Combustion Cycle:

I. Intake stroke: piston moves out, fuel drawn in
II. Compression stroke: piston moves in, mixture compressed
III. Ignition stroke: fuel ignited, piston moves out
IV. Exhaust stroke: piston moves in, spent gas forced out

From these examples we see that a breathing process that effects a transfer of energy must do so with two cycles--two breaths, not one. (In the case of steam, the two cycle criteria is met by having two chambers.) The principles behind Li Kiang's example seem to apply to both the transfer of physical energy and the transfer of Ki. However, it is in the power of Heaven alone to transfer with a single cycle.

THE FOUR WILDERNESSES

A quote from Bible re Jesus into the wilderness

The Cave: The wilderness of commitment

The Grove: The wilderness of learning

The Isle: The wilderness of exploring
Permutations and combinations, organizing, tuning

The Cliff: The wilderness of sacrifice
Gethsenemy

We meet the gods in each wilderness

The clearing

MYSTREV1.WP6 DISK:SYNTHESES May 23,1993

REVISED AUGUST 19, 1994

ON MYSTERIES AND MYSTERIA

- A MYSTERY IS A SET OF POSSIBILITIES ONLY ONE OF WHICH IS TRUE.
- A MYSTERIUM IS A SET OF FACETS ALL OF WHICH ARE TRUE.
- A FANTASY IS A SET OF SPECULATIONS NONE OF WHICH NEED BE TRUE.

Sets of possibilities may be classified in two categories:

1) The first category we shall call a *mystery*. It is a collection or set of events or configurations only one of which is real or true, the others possibly differing from the true by only minute amounts or details. The task is to decide which is the real or true member of the set.
EXAMPLE: The Great Pyramid of Gizeh. Its design fits many mathematical models. The builders probably employed a particular model in their design. Which one?
EXAMPLE; The curvature of space-time. Do we live in a universe whose curvature is > 0, = 0, or < 0?
EXAMPLE: Any of the genre "who dunnit?" where there may be many suspects but only one culprit.

2) The second category we shall term a *mysterium*. It is a collection or set of events or configurations all of which are real or true. Usually the members or facets of the set may not be seen simultaneously, in fact it may be possible to view but one at a time. The task is to construct the set as an entity from knowledge of the attributes of its various facets. This is not the same as generalization.
EXAMPLE: Quantum reality. The nature of fundamental particles seems to depend on how they are observed. Each mode of observation results in a different aspect or facet of the particles (e.g. wave and particle). All are true but what is the "defaceted" structure?
EXAMPLE: Altered states of consciousness. There appear to be several states of consciousness only one of which can be present at one time. Can we construct **Consciousness** from the attributes of the various states or facets?

The "ur-problem" often is to determine whether we are dealing with a mystery or a mysterium.
EXAMPLE: Afterlife. Is there life after death, if so is it a mystery or a mysterium? Is there one true situation or are there many depending on ...? Is it decided or constructed?
EXAMPLE: Theology. Is the subject matter of theology a mystery or a mysterium?

When we are dealing with a mystery there is decision, selection, and exploration. When we are dealing with a mysterium there is construction, creation, and invention. Ultimately the quadric:

Pre-existing
Mystery - - - - - - - - | - - - - - Mysterium
Currently Created

THE DYNAMIC OF MYSTERY

There is allure in the case of mysteries. This arises from the challenge to establish which possibility is the correct one. An example of this is again the Great Pyramid at Gizeh. It is assumed that the builders had a particular design in mind, but there are so many mathematically consistent designs that fit or nearly fit the actual pyramid that we cannot decide which, if any, the builders had in mind. Uncertainty and unanswerability, therefore mystery, allure, and challenge.

Another example is the set of Friedman models of the universe. In these models the task is to decide whether the curvature of space-time is positive, negative, or zero. The actual universe appears to be very near zero, i.e. near a value such that it is very difficult to identify whether the actual curvature lies above, below, or at zero.

In both of these cases, it is assumed that only one of the possibilities is correct. The intriguing part is that there is so little difference between the "real" value and the values of the alternatives. It is this latter attribute, the difficulty of making the determination, that creates the mystery. Thus a mystery is a) many things and b) difficulty in deciding which one is correct.

Why do mysteries occur? Why do so many systems occur within a cluster of alternate possible values? There seems to be some propensity for a system to seek a region of high density in similarity space. Is this because there exist many viable alternatives near at hand and if one is blocked another is readily available. We might surmise a theorem: **The cutting edge of a viable system seeks a region rich in alternatives**, affording maximum choice, maximum option space. We could then say, for example, that the universe evolves so as to maximize its options, and the universe evolves so as to maximize its

potential. A similar, and possibly related theorem, would state that action occurs at the interface between different regions, especially regions of different density (frequency). It seems that new systems emerge in the interstices. (Where there possibly exist beats) cf turbulence

But sometimes we convert a mysterium into a mystery by imposing the imperative of decidability, the monistic constraint that only one member of the set is "true", replacing the set of actual truths. We do this because we feel uncomfortable with alternatives, with ambiguity, with complexity.

We may assert apodictically that Creation is a Mysterium. And it must be emphasized that: **Mysteria and orthodoxy are incompatible. In mysteria there are no heresies.**

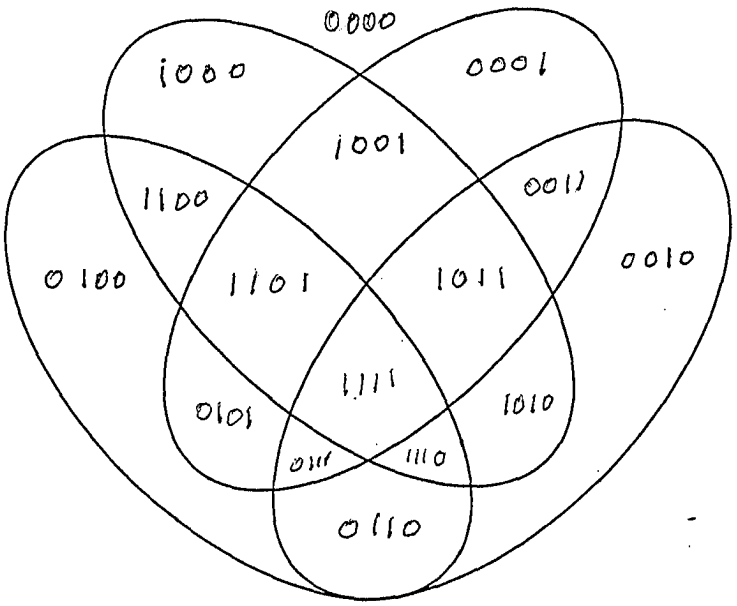
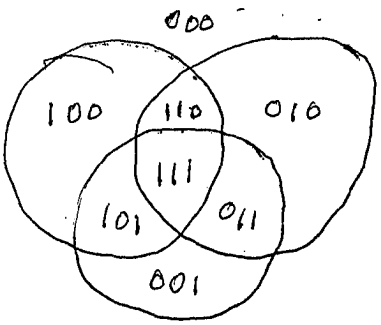


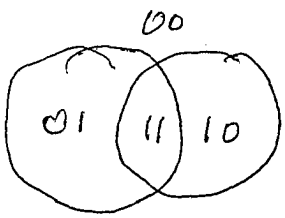
Figure 1.6. Venn's own diagram for four sets (1880).

$2^4 = 16$

SIXTEEN THOUGHT



$2^3 = 8$ EIGHT THOUGHT



$2^2 = 4$ FOUR THOUGHT

$2^1 = 2$ T/F LOGIC

a $2^0 = 1$

1–100 ~~2 evens missing 78, 82~~ all evens

1-70 ~~1-80 2 odds 37, 39~~ all

~~1-36 all odds~~

PREPARED BY

DATE

41	$4!!/.\sqrt{4} + 4/4$	61	$4!/.4 + 4/4$
42	$44 - 4 + \sqrt{4}$	62	$(4 \times 4 \times 4) - \sqrt{4}$
43	$44 - (4/4)$	63	$(4!! \times 4!!) - (4/4)$
44	$44 + (4-4)$	64	$(4! + 4!) + (4 \times 4)$ or $4^{(4 - \frac{4}{4})}$
45	$44 + (4/4)$	65	$(4!! \times 4!!) + (4/4)$
46	$44 + 4 - \sqrt{4}$	66	$(4 \times 4 \times 4) + \sqrt{4}$
47	$(4! \times \sqrt{4}) - (4/4)$	67	$(4!! \times 4!!) + 4!/4!!$
48	$44 + \sqrt{4} + \sqrt{4}$	68	$(4 \times 4 \times 4) + 4$
49	$(4! \times \sqrt{4}) + 4/4$	69	$(4!! \times 4!!) + \sqrt{4}/.4$
50	$44 + 4 + \sqrt{4}$	70	$(4! + 4! + 4!) - \sqrt{4}$
51	$4! \times \sqrt{4} + 4!/4!!$	71	
52	$44 + 4 + 4$	72	$(4 \times 4 \times 4) + 4!!$
53	$\sqrt{4} \times 4! + \sqrt{4}/.4$	73	$(4!/4!!)^4 - 4!!$
54	$4! + 4! + 4 + \sqrt{4}$	74	$(4! + 4! + 4!) + \sqrt{4}$
( )$/\sqrt{4}$ = 55	$4!/.4 - \sqrt{4}/.4$	75	
56	$4! + 4! + 4 + 4$	76	$(4! + 4! + 4!) + 4$
57	$4!/.4 - 4!/4!!$	77	$(4!/4!!)^4 - 4$
58	$\sqrt{4}$ ~~x~~ $(4! + 4)$ ~~)~~ $+ \sqrt{4}$	78	$4!! \times (4!! + \sqrt{4}) - \sqrt{4}$
59	$4!/.4 - 4/4$	79	$(4!/4!!)^4 - \sqrt{4}$
60	$(4 \times 4 \times 4) - 4$	80	$(4! + 4! + 4!) + 4!!$ or $4 \cdot 4! - (4 \times 4)$
~~61~~		81	$[4!! + 4/4]^{\sqrt{4}}$
~~62~~		82	$(4!!) \times (4!! + \sqrt{4}) + \sqrt{4}$
		83	$(4!/4!!)^4 + \sqrt{4}$
94	$4 \cdot 4! - (4!!/4)$	84	$4 \cdot 4! - 4 - 4!!$
95	$4 \cdot 4! - (4/4)$	85	$(4!/4!!)^4 + 4$
96	$4 \cdot 4! + (4-4)$	86	~~4!!~~ $4 \cdot 4! - 4!! - \sqrt{4}$
97	$4 \cdot 4! + (4/4)$	87	
98	$4 \cdot 4! + 4!!/4$	88	$(44 \times 4)/\sqrt{4}$ or $4 \cdot 4! - 4 - 4$
$\frac{4}{\sqrt{4}}$ 99	$4 \times 4! + 4!/4!!$	89	$(4!/4!!)^4 + 4!!$
$(\sqrt{4} + 4!!)$ = 100	$4 \cdot 4! + \sqrt{4} + \sqrt{4}$	90	$4 \cdot 4! - 4 - \sqrt{4}$
$(4!! + \frac{4}{\sqrt{4}})^{\sqrt{4}}$ 101	$4 \times 4! + \sqrt{4}/.4$	91	$(4 \times 4!) - \sqrt{4}/.4$
102	$4 \cdot 4! + 4 + \sqrt{4}$	92	$4 \cdot 4! - \sqrt{4} - \sqrt{4}$
103		93	~~4.4!~~ $(4 \times 4!) - 4!/4!!$
104	$4 \cdot 4! + 4 + 4$		

$\left(\frac{4!}{4!!}\right)^4 = 81$

1	$(4+4)/(4+4)$		21	$4! - 4 + (4/4)$
2	$(4/4) + (4/4)$		22	$(4\times4)+4 + \sqrt{4}$
3	$(4+4+4)/4$		23	$(44+\sqrt{4})/\sqrt{4}$
4	$4 + (4-4)/4$		24	$(4\times4) + 4 + 4$
5	$4 + \sqrt{4} - (4/4)$		25	$4! + [(\sqrt{4}+\sqrt{4})/4] = 4! + 4^{(4-4)}$
6	$4 + (4+4)/4$		26	$4! + \sqrt{4} +$ [illegible] $(4-4)$
7	$(4+4) - (4/4)$		27	$4! + 4 - (4/4)$
8	$(4+4) + (4-4)$		28	$4 \times (4+4) - 4$
9	$(4+4) + (4/4)$		29	$4! + 4 + (4/4)$
10	$4 + \sqrt{4} + \sqrt{4} + \sqrt{4}$		30	$4 \times (4+4) - \sqrt{4}$
11	$4!/\sqrt{4} - (4/4)$	†	31	$4 \times 4!! - (4/4)$
12	$4!/\sqrt{4} + (4-4)$ or $4(4-\frac{4}{4})$		32	$4! + 4 + \sqrt{4} + \sqrt{4}$
13	$4!/\sqrt{4} + (4/4)$	†	33	stet ~~$4 \times 4!! + (4/4)$~~ $\frac{44}{\sqrt{4}}$ (+) ~~$\frac{44}{4}$~~
14	$(4\times4) - 4 + \sqrt{4}$		34	$\sqrt{4}(4\times4) + \sqrt{4}$
15	$(4\times4) - (4/4)$		35	$44/4 + 4!$
16	$(4\times4) + (4-4)$		36	$\sqrt{4}(4\times4) + 4$
17	$(4\times4) + 4/4$	†	37	~~$4! + 4! - 44/4$~~ 4×4 [illegible] $\frac{\sqrt{4}}{.4}$
18	$(4\times4) + 4 - \sqrt{4}$		38	$4! + (4\times4) - \sqrt{4}$
19	$4! - 4 - (4/4)$	†	39	~~$4! + 4 + \frac{44}{4}$~~ $44 - \frac{\sqrt{4}}{.4}$
20	$(4\times4) + \sqrt{4} + \sqrt{4}$		40	$4! + 4! - 4 - 4$

Need $\sqrt{4}$ at 5
$4!$ at 11

Need 44 at 23, 33, 37
$4!!$ at 31, 33
$4!! = 4 \cdot 2 = 8$
$a!! = a(a-2)(a-4)\ldots$

Admitted Operations:
$+ \; - \; \times \; / \; \wedge \; \sqrt{\;} \; ! \; !! \; .$

Permitted operations $+, -, /, \times, \wedge, \cdot, !, \sqrt{}$

Construction of Integers with four 4's

1. $\frac{4+4}{4+4}$, $\frac{4+4-4}{4}$
2. $\frac{4}{4}+\frac{4}{4}$, $4-\frac{4\cdot4}{4}$
3. $\frac{4+4+4}{4}$
4. $4+\frac{4-4}{4}$, $4\times4^{(4-4)}$
5. $\frac{(4\times4)+4}{4}$
6. $4+\frac{4+4}{4}$
7. $4+4-\frac{4}{4}$, $\frac{44}{4}-4$
8. $\frac{4\times(4+4)}{4}$, $4+4+(4-4)$, $(4\times4)-(4+4)$
9. $4+4+\frac{4}{4}$
10. $\frac{44-4}{4}$, $\frac{44}{4.4}$
11.
12. $\frac{44+4}{4}$
13.
14.
15. $\frac{44}{4}+4$, $4\times4-\frac{4}{4}$
16. $4\times4\times\frac{4}{4}$, $4^{\frac{4+4}{4}}$, $\left(\frac{4+4}{4}\right)^4$
17. $4\times4+\frac{4}{4}$
18. $4\times4.4+.4$
19.
20.
21.
22.
23.
24. $(4\times4)+(4+4)$
25.
26. 4
27.
28. $4\times(4*4)-4$, $44-(4\times4)$
29.
30.
31. $\frac{\sqrt{4}}{.4}=5$
32. $\frac{4!}{4!!}=3$
33.
34.
35.
36. $44-(4+4)$, $4(4+4)+4$

GLOSSARY OF SANSKRIT AND TIBETAN TERMS

10/19/93

ANUTTARA SAMYAK SAMBODHI
ARHAUT
AVALOKITESHVARA
BHAVACHAKRA
BODHI
BODHICITTA
BODHISATTVA
BODHISATTVAYANA
BUDDHA
CHENRESIK
CITTA
DHARMA
HINAYANA
KARMA
MAHAYANA
~~NAGARJUNA~~
NIRVANA
PARAMITA
PRAJNA PARAMITA
PRETAS
RINPOCHE
SAMADHI
SAMATHA
SAMMOSAMBODHI
SAMSARA
SANGHA
SHERAB PAROTU CHINPA
SHI-NI
SHUNYATA
SKANDA
SOTARPA
SUTRA
TANTRA
THANKAS
TORMAS
VAJRAYANA
VIPASSANA
YIDAM
ZUPPA

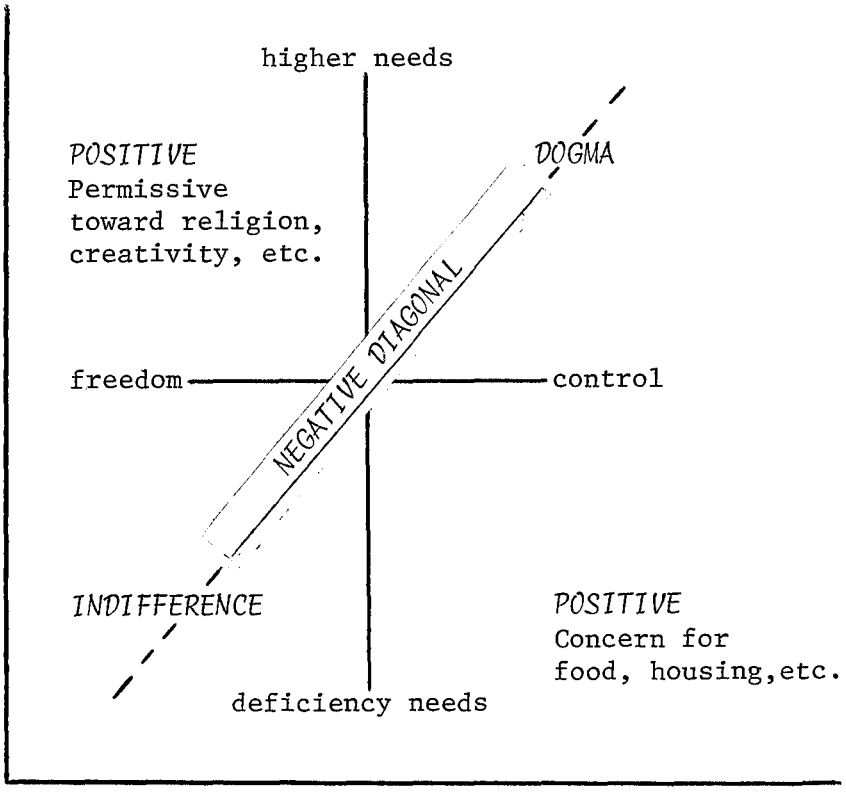
THERAVEDAN
TATHAGATA
MAHA
SHARIPUTRA
SVAHA
GATE
PARAGATE
PARA SAMGATE

AH
ATISHA
NANG-PA
YAMA
MANJUSHRI
OAK SANG
UPAYA
DORJE CHANG
Sambhogokaya
Kagyu
Milarepa
Marpa
DHARMAPALAS
SATTVA
ABI
BDI
MANI
PADMI

QUADRADS

DIAGRAMING THE OPPOSITES

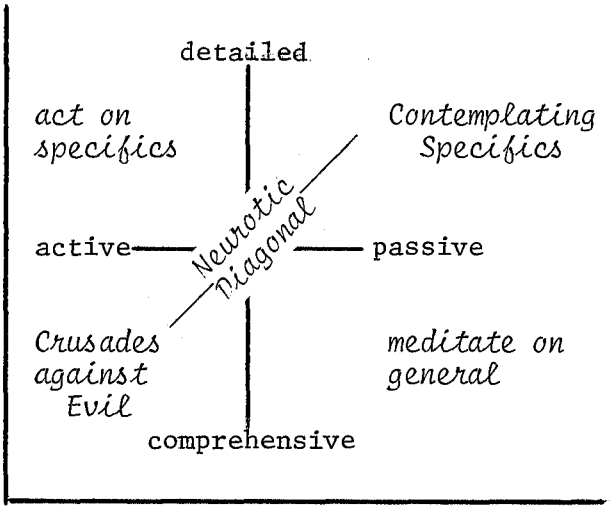
A useful tool for finding relations between entities is the Hatrick Diagram which emerged from one of our workshops. The essence of the method is to place two sets of polar opposites at right angles to each other and seek to identify each of the four resulting quadrants. For example, in the diagram below, there are two axes: the needs axis and the societal axis. (This is one version of the original Hatrick diagram named after Leah Hatrick who conceived this scheme in a workshop at UCLA, 22 June 1968.) The entities that fall into each of the four areas are attitudes of various social models toward individual needs. Individual needs are described by a continuium from "deficiency" needs such as food, shelter, security, etc. at one end to "higher" needs such as education, religion, creative expression, etc. at the opposite end. This is the spectrum that Maslow calls deficiency to being or self-actualizing needs. One of the most interesting facets of Hatrick Diagrams is that the diagonals map onto value systems. In the first diagram, the Negative Diagonal spans the areas from indifference to basic needs (freedom to starve) to that of control over higher needs, which is dogma. The value of the method is its ability to make visible relations between attitudes, rather than displaying separate and opposite attitudes. Arguments over issues such as "prayer in school" are easily displayed on this diagram.



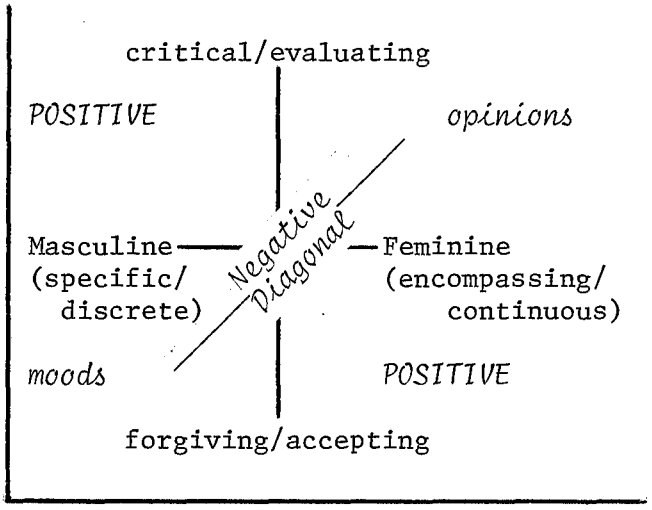
1. Society Versus The Individual

Another relational display is shown in the second diagram on the next page. Active/passive is plotted against detailed/ comprehensive. In the lower left area, we find comprehensive action which reminds us of

Crusades against all encompassing Evil. In the upper right, we find passivity combined with detail which suggests neurotic indecision in form of contemplating specifics. The positive diagonal admonishes one to act when there is detail and to meditate when the issues are general.



2. Action Versus Meditation



3. Masculine and Feminine Modes

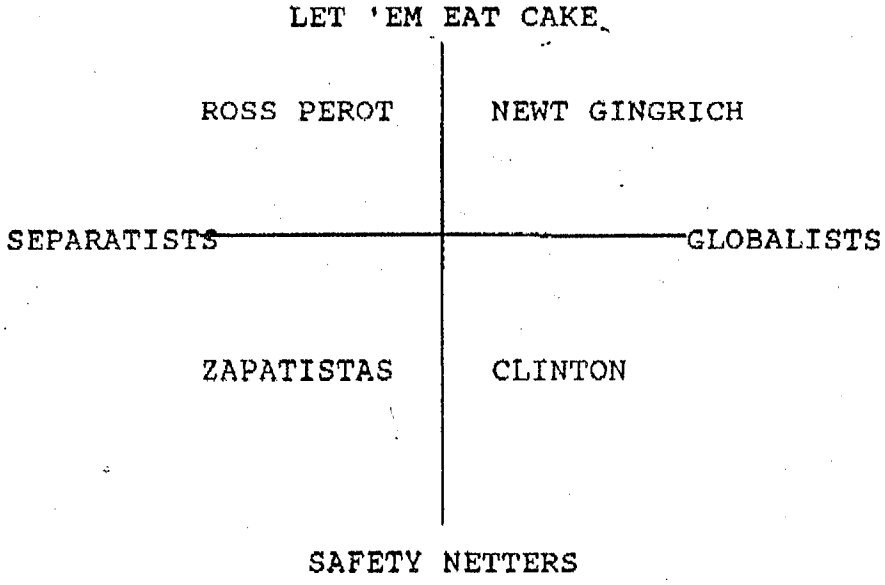
We tentatively present a third diagram that displays negative or inferior aspects of the Feminine and Masculine modes (what Jung called "negative animus" in women and "inferior anima" in men). In the upper right area, we find encompassing criticism which is labeled negative. If criticism is all-encompassing, it is destructive. The only response to sweeping criticism is to ask for specificity and immediacy. By the same token, when acceptance is examined and given out piece-meal, it's moodish and sullen. This inferior mode is seen operating in women who have not developed a keen or critical mind, or in men who are not aware of the diffuse nature of feeling and are overwhelmed by feeling when it appears. When operating on the negative diagonal (that is, from the primitive or under-developed side) women substitute irrelevant opinion for reason or examined thought and men fall into dark, encompassing moods or gushing sentimentality. We might also note what is wrong with the Old Testament type of forgiving with this diagram. An "eye-for-an-eye" is specific and discrete rather than encompassing and continuous which means to be operating on the negative side of acceptance.

QUADRIK1.WP6 February 5, 1997

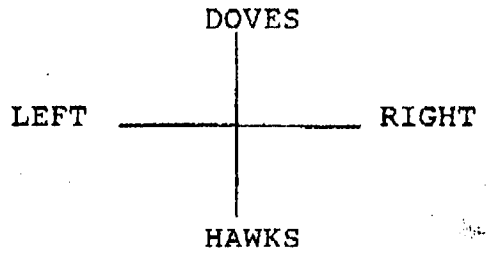
QUADRIK DIAGRAMS

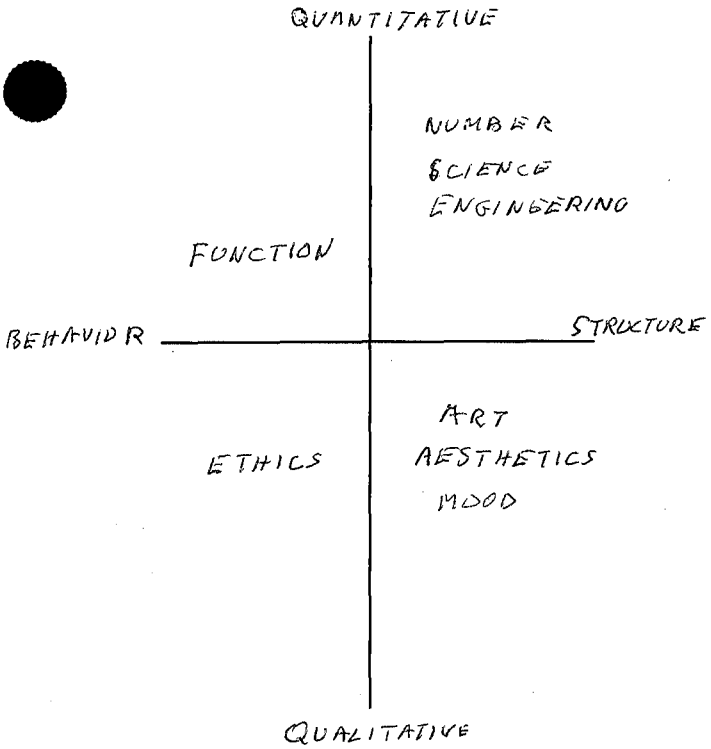
One of the most useful tools for synthetic thinking is the Quadrik Diagram. This consists of placing two dyads in juxtaposition generating a fourfold matrix whose quadrants reflect the values of the parameters composing the original dyads. This type of diagram is most useful when measurement of the values 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.

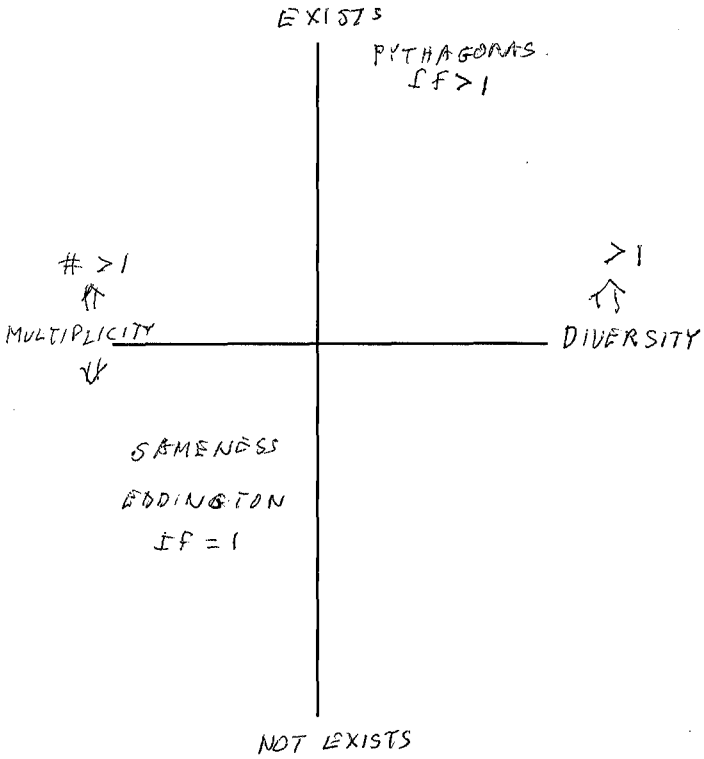
Friedman defines two dyads. The first is that of integrationists, those who want unregulated globalization of world trade; and separationists, those who support protectionism and economic boundaries. The second dyad is that of 'safety netters', those with concern for human values; and winner take all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

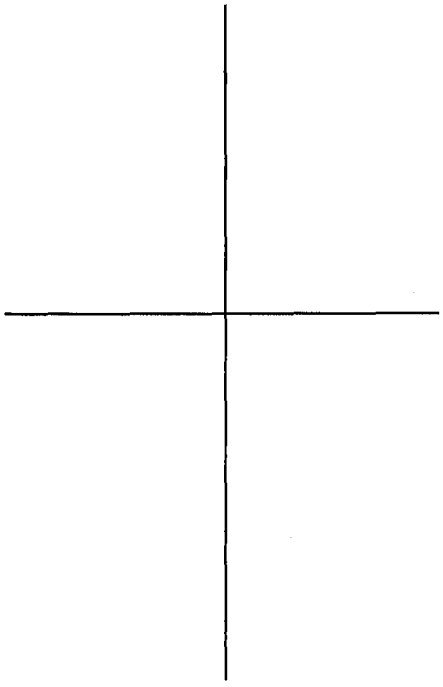


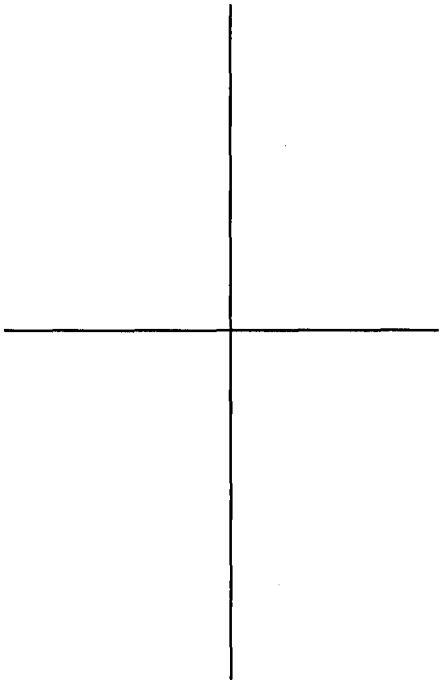
This type of diagram explains why we sometimes have strange bed fellows: Agreement on one aspect of an issue, disagreement on the other aspect of the issue. Friedman maintains that this quadrik is now our central one, replacing the cold war quadrik of left and right and doves and hawks.




QUANTITATIVE
NUMBER
SCIENCE
ENGINGERING
FUNCTION
BEHAVIOR
STRUCTURE
ETHICS
ART
AESTHETICS
MOOD
QUALITATIVE


EXISTS
PYTHAGORAS
If > 1
> 1
MULTIPLICITY
> 1
DIVERSITY
SAMENESS
EDDINGTON
If = 1
NOT EXISTS

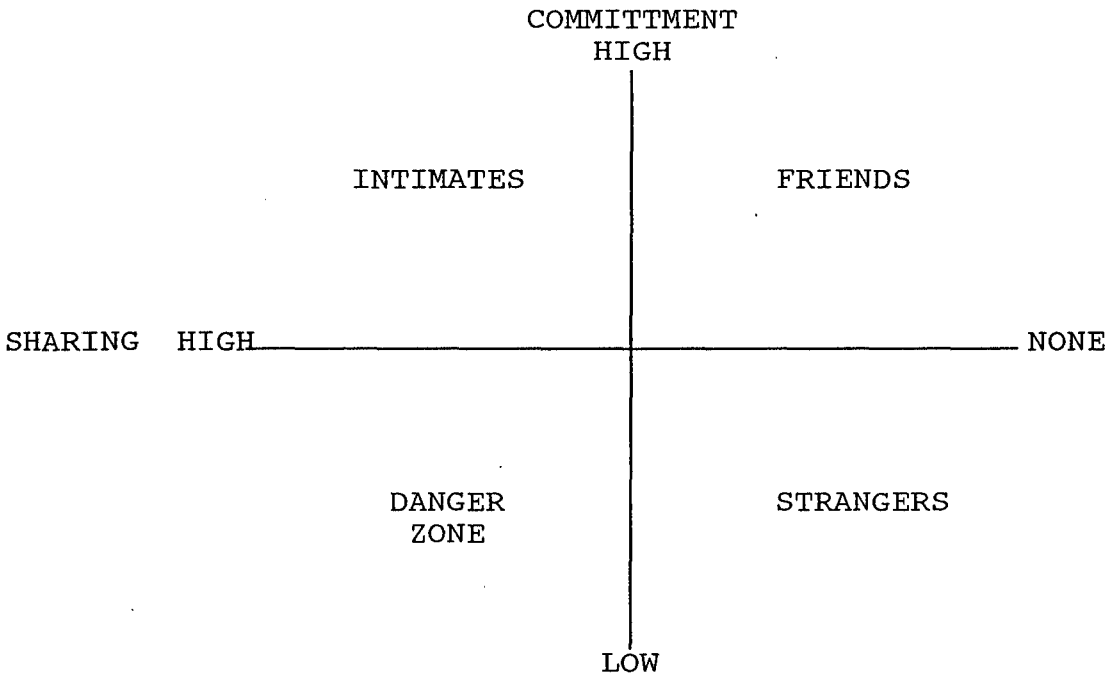


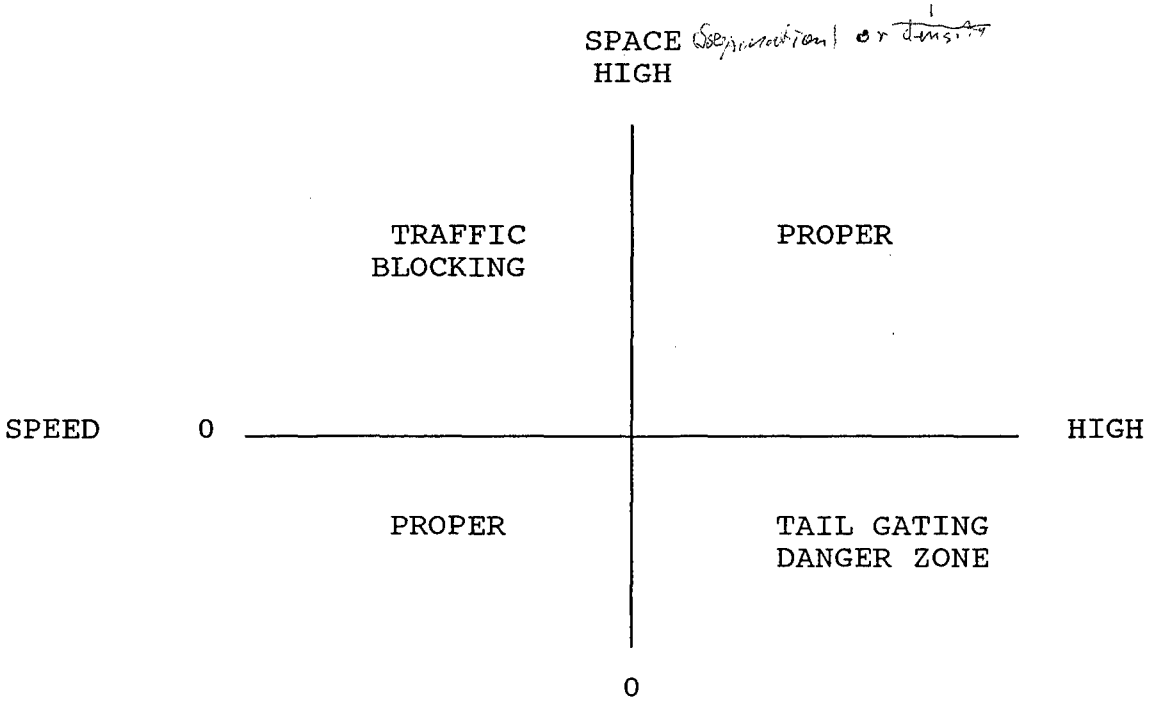


4

QUAD1.WP6 April 24, 1995

TWO QUADRIC DIAGRAMS INVOLVING CONTINUOUS PARAMETERS





199635a

See also
1997 #14

THE EMPTY QUADRANT

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

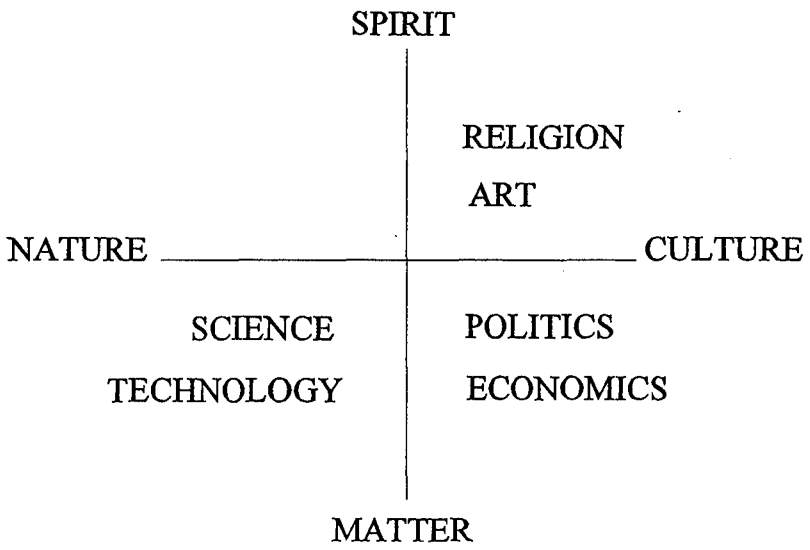


Figure 1

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

One way of looking at this diagram is to think of it as displaying social evolution. In the most primitive societies, nature and spirit were the dominant cultural concerns (upper left quadrant). Later emphasis was less on nature and more on heritage, adding the social emphasis of the culture-spirit upper right quarter. With the arrival of civilization, that is cities, the emphasis moved to the culture-matter quarter. And finally in the most recent centuries, the social infrastructure, as exemplified by the activities and products of science and technology, incorporated

the nature-matter quarter. But in this series of changes the original quadrant became less and less relevant and today has all but vanished.

cf W. I. Thompson and William Stroms

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

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

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

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

The difference between the matter-nature approach and the spirit-nature approach is attitudinal: objectivity vs. awe and reverence, utility vs. sanctity of all that has been created.

The quadric may be "morphed" by substituting inner-outer for spirit-matter, and/or individual-collective for nature-culture.

An intriguing question is where does mathematics lie in these quadrics? Mathematics is not matter, is it nature? is it spirit? It seems, like music to exist in all four quadrants.

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

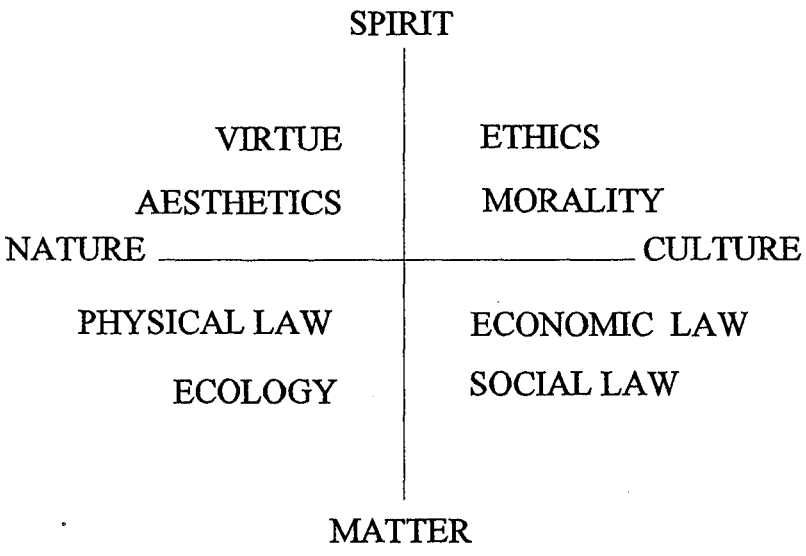


figure 2.

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

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

4

QUADRIC1.WP6 February 5, 1997

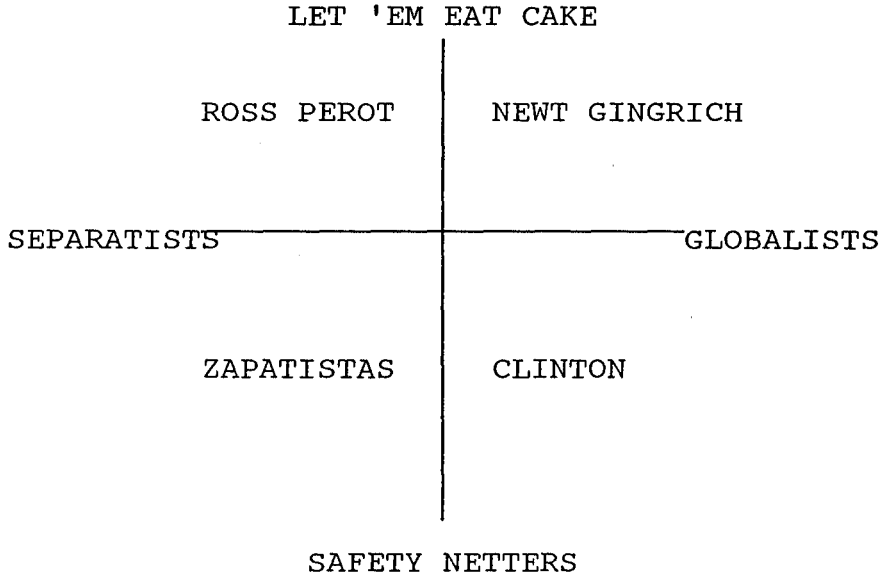
See Also The Empty Quadrant 1996#35

ΚΥΑΔΡΙΚ ΔΙΑΓΡΑΜΣ

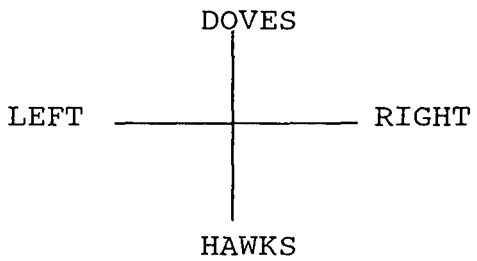
One of the most useful tools for synthetic thinking is the Quadric Diagram. This consists of placing two dyads in juxtaposition generating a fourfold matrix whose quadrants reflect the values of the parameters composing the original dyads. This type of diagram is most useful when measurement of the values 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.

Low Quantification

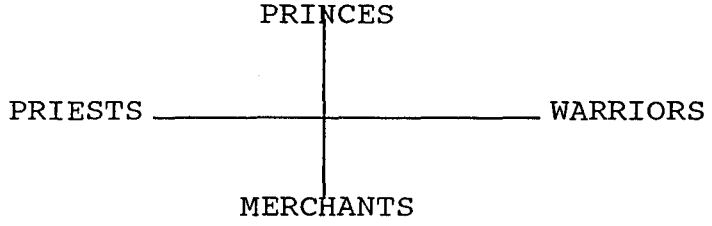
Friedman defines two dyads. The first is that of integrationists, those who want unregulated globalization of world trade; and separationists, those who support protectionism and economic boundaries. The second dyad is that of 'safety netters', those with concern for human values; and winner take all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



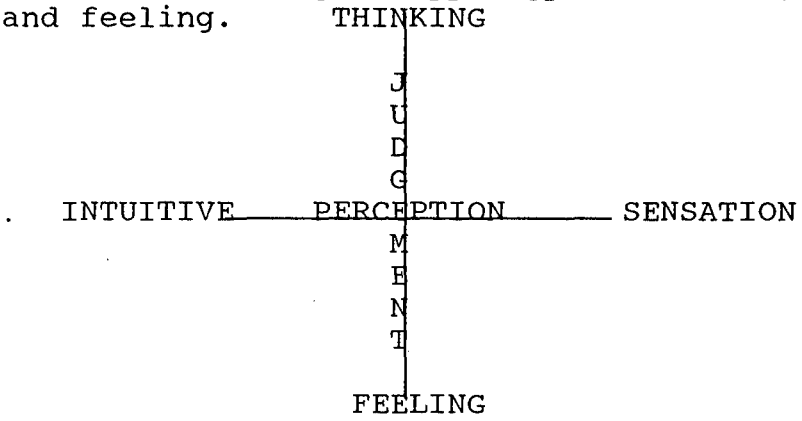
This type of diagram explains why we sometimes have strange bed fellows: Agreement on one aspect of an issue, disagreement on the other aspect of the issue. Friedman maintains that this quadric is now our central one, replacing the cold war quadric of left and right and doves and hawks.



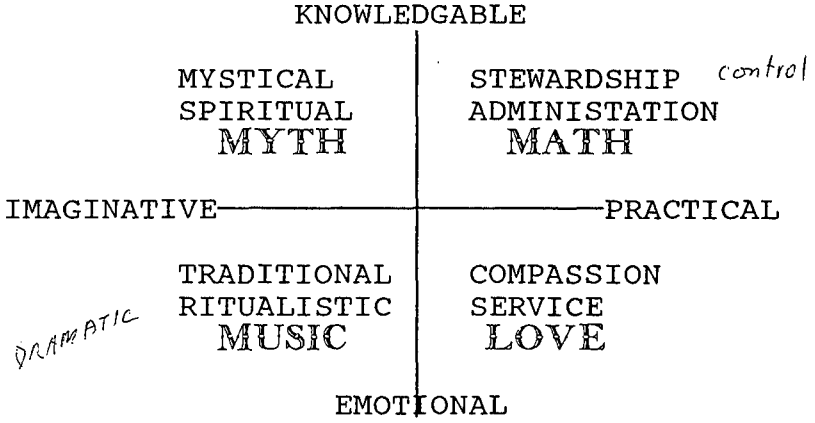
In addition to the pairing of dyads, intrinsic four fold structures display many of their features in a quadric diagram. Examples include the four fold organization of the social order:



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.

4

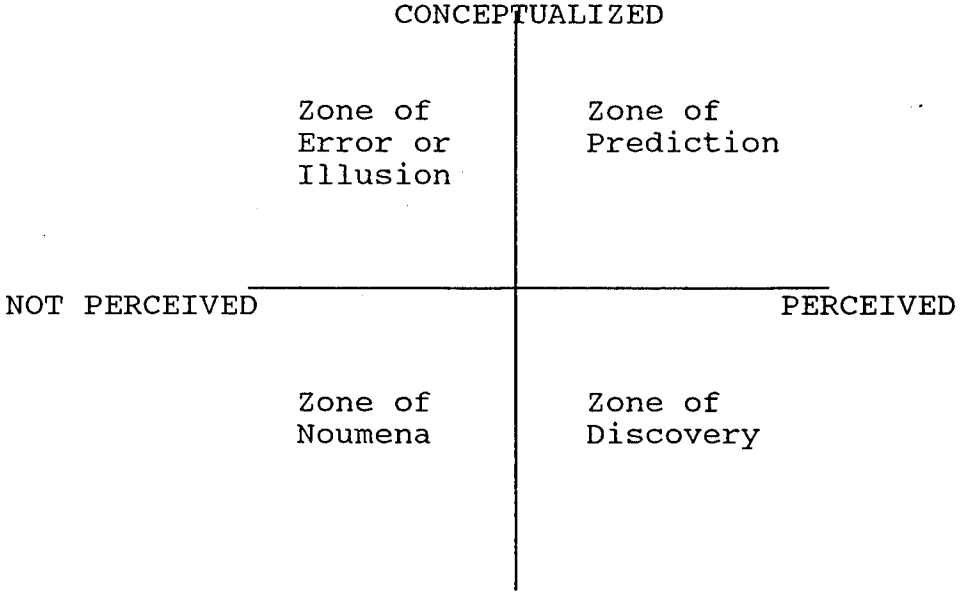
PERCON01.WP6 May 12, 1997

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:



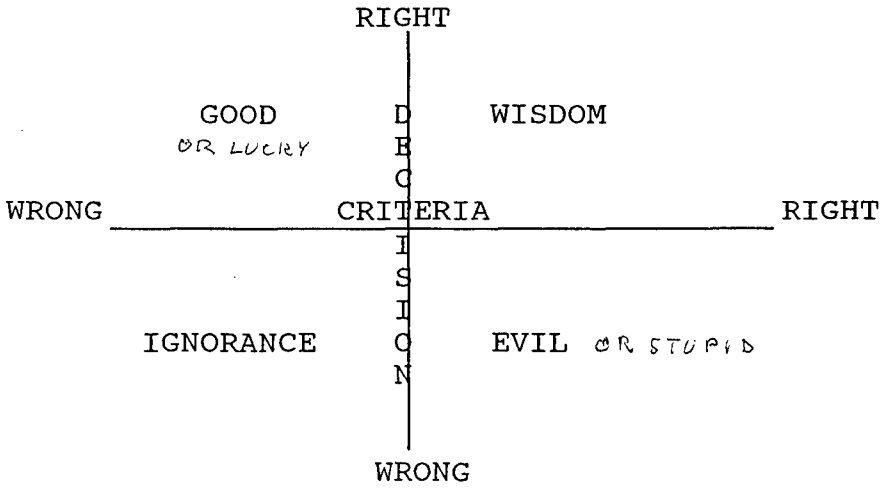
A CONCEPTION FIRST DIAGRAM

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 correctness 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 not polar opposites, but are special cases ~~of the~~ depending 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.

BOTLWINE.WP6 July 30, 1997

ON WINE AND BOTTLES

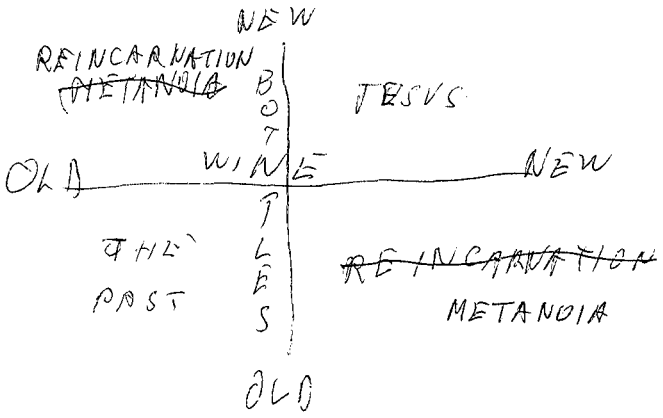
AN EXERCISE IN MIXING METAPHORS

Reincarnation is about putting old wine into new bottles.
Metanoia is about putting new wine into old bottles.

Jesus admonishes that new wine be put into new bottles, else the new wine break an old bottle. [Luke 5:37,38] Jesus has no concern for the old wine.

If all of the above propositions be true, then our task is two fold, 1)to make new bottles and 2) to make new wine. Nature seems to have provided well for the making of new bottles, so our major task is the making of new wine. But what about old bottles before they are discarded? Should they not be emptied and filled with new wine, even though they may break. Is it worth the risk of the new wine that some may be spilled?

Do we have here a paradox created by a mixed metaphor? or is the assumption 2) above erroneous? Is the only role for bottles to be vessels to contain the wine. Whence, then, the source of wine, of new wine and what bottles are to contain it?

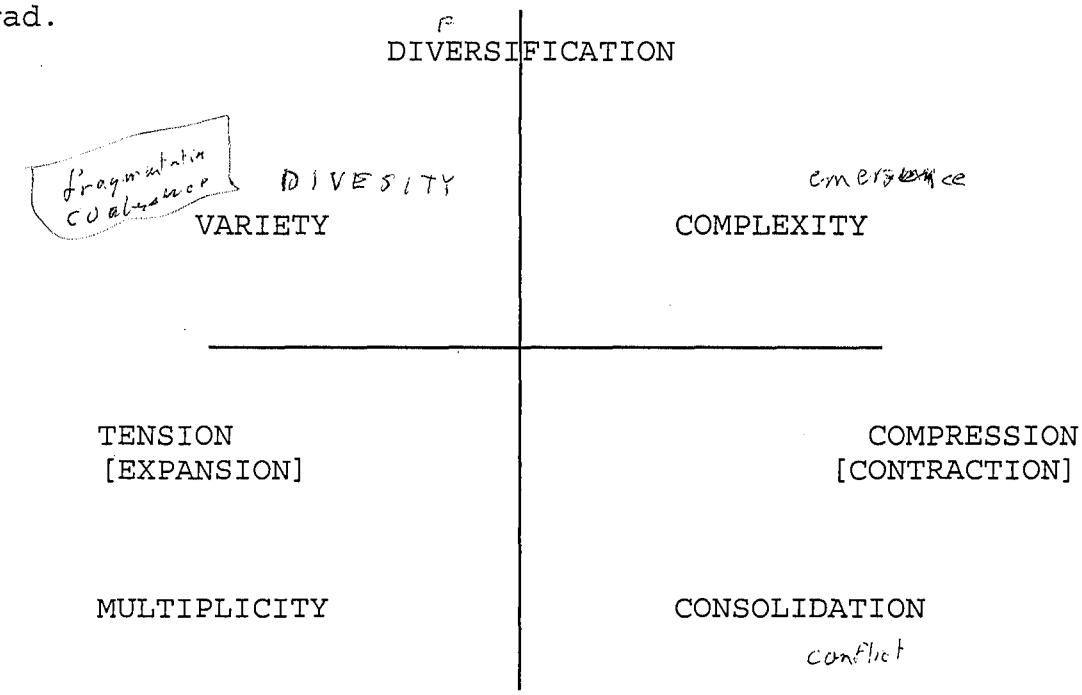


2 BIBLICAL STATEMENTS IN Luke 5:37,38
1° O.K. 37
2° perplexing 38

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:

A Physical example of a quadric diagram

COSQUAD1.WP6 August 3, 1997

THE FOUR PHYSICAL COSMOLOGICAL QUADRANTS

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 $\hbar$.

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

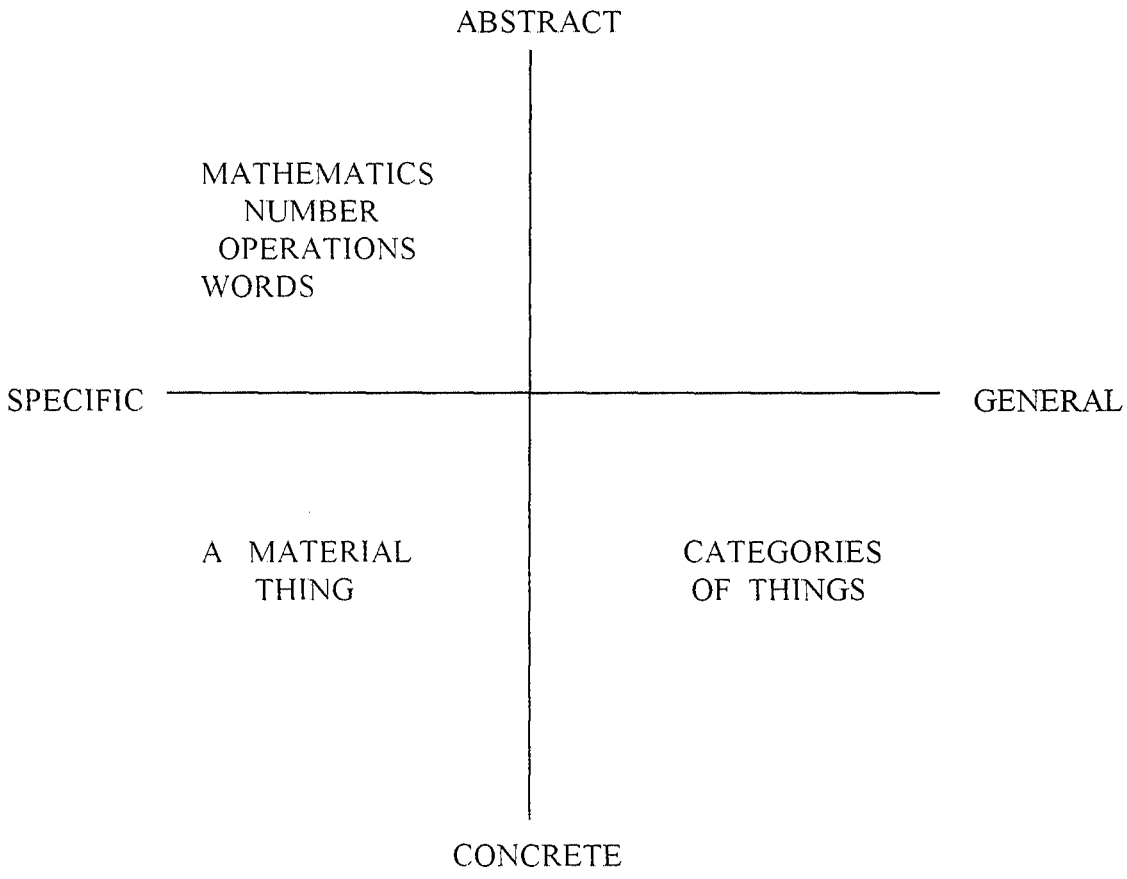
If the inequalities hold for all particles and all aggregates, then there can be no atoms to the left of the Schwarzschild Limit. What is the relation of the particles of the Standard Model to these quadrants?

OISR 1999 Scraps BU

ATHROS01.WPD June 18, 1999

ATHROISMATICS

In the following we shall use the term **sign** for a representation of something specific that is either abstract or concrete; and the term **symbol** for a representation of something general that is either abstract of concrete.



Represent
Symbolize

1997#92a

NMBFOUR2.WP6 December 15, 1997

THE DIVERSITY-HOMOGENITY/TENSION-COMPRESSION QUADRAD

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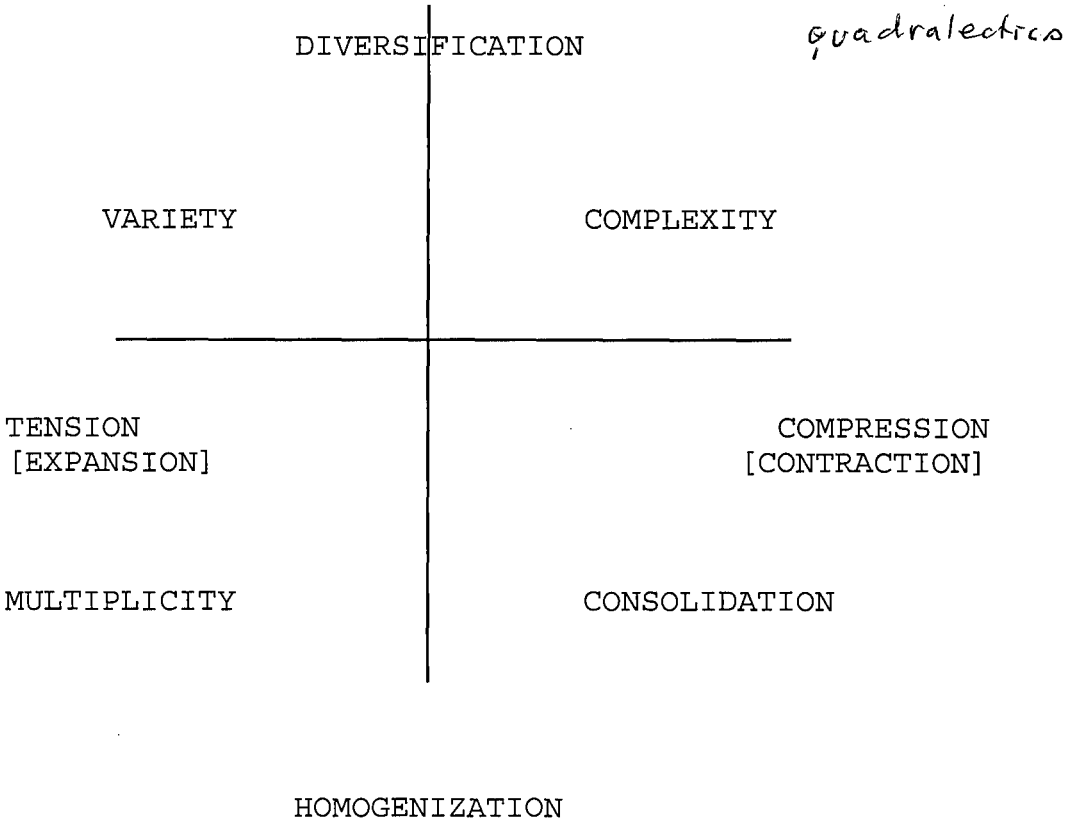

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98 #34

GUPGEP98.WP6 February 7, 1998

ASPECTS OF THE DIVERSIFICATION-HOMOGENIZATION DIALECTIC

The ancients, both Chinese and Greek, held that a great portion of the experiencable universe could be explained in terms of a few dialectical principles, such as Yin-Yang or Masculine-Feminine. However, over the years many dyads were lumped together under a single dialectic term such as Yin-Yang, which then became generic, causing the independence and dialectical significance of these dyadic opposites to become obscured. This practice diverted the quest for a set of fundamental dialectics by which the organization and evolution of the phenomenal world could be represented. It is now important to reexamine various dyadic couples to find which qualify as dialectics and among those, which may possibly be used as a fundamental generating set.

In the present approach to this task we shall begin with the expansion-contraction or E-C dialectic. In addition to the conventional meaning of expansion and contraction derived from our experience in physical or positional space, (hereafter referred to as P-space), we shall recognize the E-C dialectic as also operating in form or hamming space, (hereafter referred to as H-space).[1] In H-space expansion corresponds to the creation of diversity while contraction corresponds to homogenization. Thus the fundamental E-C dialectic may be considered to possess two components, one affecting the density of matter in P-space, the other affecting the degree of diversity H-Space.

This example of the E-C dialectic leads us to consider not only the dialectics themselves, but whether there exist spaces other than P-space in which a given dialectic may operate. The organization of the fundamental generating set will then consist of a two dimensional matrix having as columns the list of dialectics and as rows the spaces in which the dialectics are operative. While P-space is the phenomenological space of our physical experience, it is conceivable that there are basic dialectics underlying the structure of the universe that have no

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[1]H-Space stands for Hamming space, named for Richard Hamming who developed the idea for use in code theory. H-space is a multidimensional space in which each dimension represents a parameter that defines form. The more complex the form, the greater the number of hamming dimensions required for its description. Distance in H-space is a measure of difference in form. The more alike two objects, the smaller their separation in H-space. Two or more objects possessing the same coordinates in H-space would thus be identical in form.

component in P-space. These dialectics being unavailable to our senses or their instrumental extension, belonging to Kant's noumena, could only be detected indirectly by logical inference or pattern completion.

NONTOL01.WPD
NEONTOL 2

AUGUST 4, 1999

NONTOLOGY PART I

THE NON-EXISTENCE OF ONE AND THE EXISTENCE OF ZERO

This paradoxical proposition can best be introduced with a quadric diagram:

	ZERO	ONE	
EXISTS	EMPTINESS SUNYATA	THINGS	diversity
NOT-EXISTS	NOTHING	SAMENESS	multiplicity

Our conventional view of symbolizing is that of the upper right and lower left quadrants. We associate zero with nothing or the absence of things, with non-existence. We associate one (or some higher number) with the presence of things, with existence. However, the inverse symbolization using zero for existence and one for non-existence as in the upper left and lower right quadrants also makes sense if we pursue the following reasoning:

Consider the lower right quadrant: Eddington noted that "uniform sameness is the philosophical equivalent of non-existence."[1] Centuries earlier, before the introduction of zero, Pythagoras concluded that the number one was the correct symbol for nothing. He held that at least two of anything had to be present to confer existence. Eddington required that there be **diversity** in order for there to be existence. Pythagoras required that there be **multiplicity** in order for there to be existence. We may argue that Eddington and Pythagoras were really talking about perception rather than existence. Where there is no difference we perceive nothing. If there were only one color we would not be aware that there was such a thing as color. Only in there being two or more colors does the parameter or attribute of color come into existence or awareness. If there were only one tone (frequency), then there would be no tone. Only when multiple tones are perceived do we become aware of the existence of tone. The same argument may be made for texture, taste, aroma.

#49

4COGOP.WPD AUGUST 20, 2000

FOUR COGNITIVE OPERATIONS

1) The first cognitive operation is the perception of difference. Indeed, without difference there would be no perception of existence. Difference is the sine qua non of existence.
"Uniform sameness is the perceptual equivalence of non-existence". [Eddington]

2) The second cognitive operation is the noting of similarities among the different things.

3) The third cognitive operation, (that of Structuralism), is to note the resemblances in the differences themselves.
"It is not the resemblances, but the differences which resemble each other"
—Claude Levi-Strauss

4) The fourth cognitive operation is to note the differences in the resemblances themselves..
"It is not the differences, but how the resemblances differ from each other."

The fourth operation inspects those concept and ideas that the second operation has tended to render equivalent. Linguistically, this requires the inspection of synonyms, such as freedom and liberty, true and valid, isomorphic and homeomorphic. Frequently an inspection of synonyms leads us to see that they refer to isomorphic states or levels whose merging because of resemblances obliterates important ontological properties. As an example, consider similar terms: *useless* and *irrelevant.*

RELEVANT ~ DIACHRONIC

children philosophers monks astronomers	parents statesmen doctors educators scientists
USELESS	*USEFUL* ~ SYNCHRONIC
gamblers criminals celebrities retirees	politicians entertainers sports figures reporters

IRRELEVANT

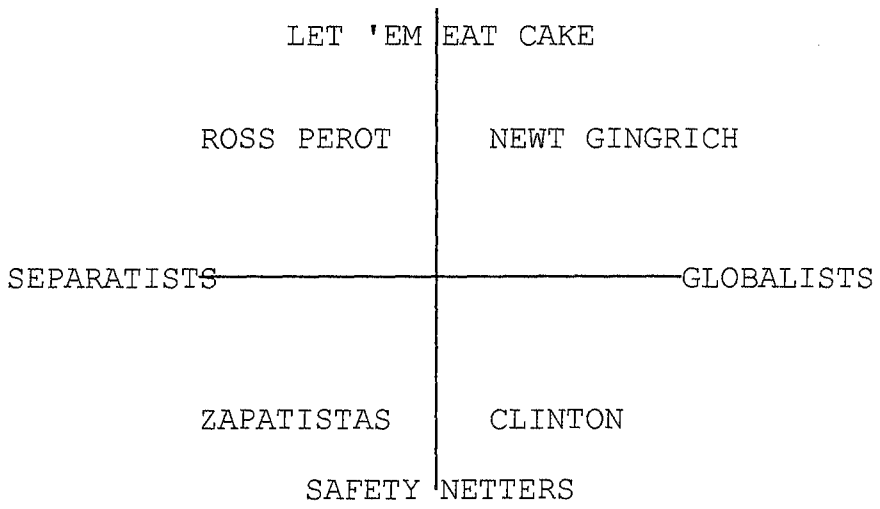
Politicians strive to move from the fourth to the first quadrant. [what is called "legacy"] A few, Lincoln, the Roosevelts, achieve it. As we age we all become useless, but it is important that the aged seek ways to stay or become relevant.

QUADRIC1.WP6 February 5, 1997

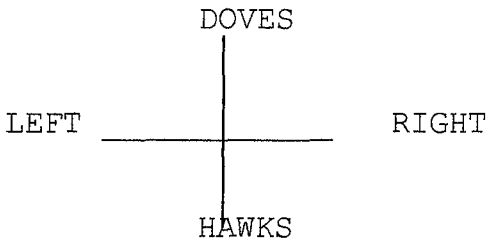
KUADRIK DIAGRAMS

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.

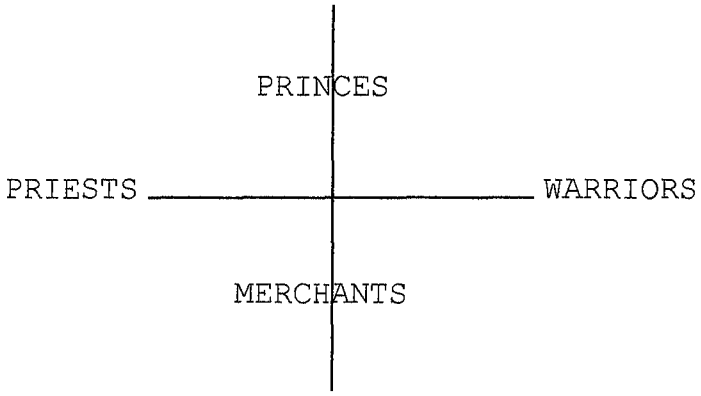
Friedman defines two dyads. The first is that of integrationists, those who want unregulated globalization of world trade; and separationists, those who support protectionism and economic boundaries. The second dyad is that of 'safety netters', those with concern for human values; and winner take all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



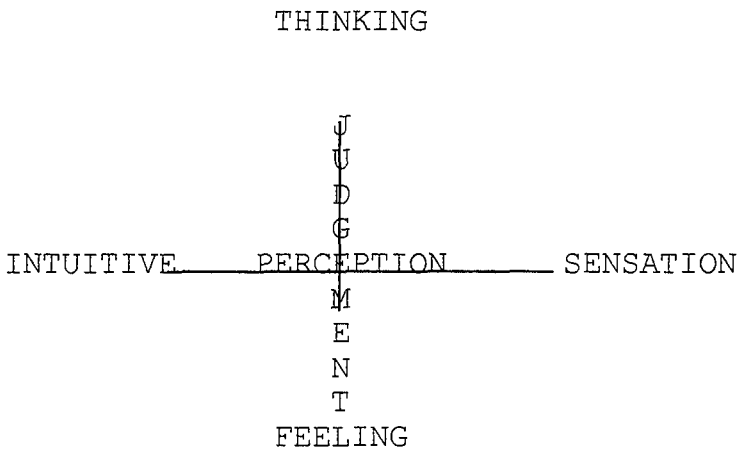
This type of diagram explains why we sometimes have strange bed fellows: Agreement on one aspect of an issue, disagreement on the other aspect of the issue. Friedman maintains that this quadric is now our central one, replacing the cold war quadric of left and right and doves and hawks.



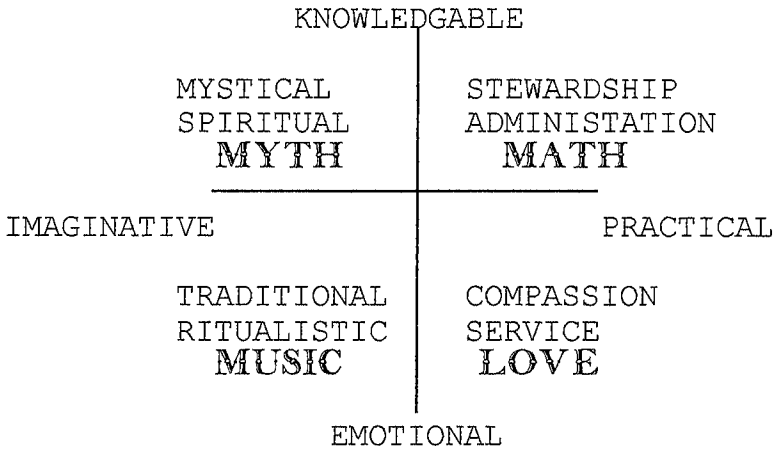
In addition to the pairing of dyads, intrinsic four fold structures display many of their features in a quadric diagram. Examples include the four fold organization of the social order:



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.

NOTE23.WPD October 12, 2004

FOUR GATES TO UNDERSTANDING THE COSMOS

GATE I THE LAWS OF SYMMETRY
These are the laws that establish and maintain equilibrium and balance
These are the unchanging Parmenidean Principles
These are conservation principles such as the conservation of energy.
movement to equilibrium

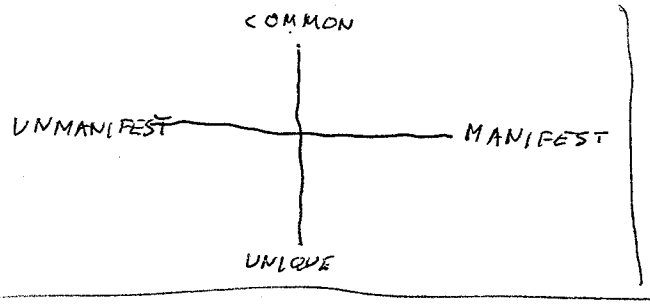
GATE II THE LAWS OF AGGREGATION
These are the laws governing modules and their structures
The species of organizations, and principles of organizing
These are modularization principles such as hierarchy
movement to optimazations

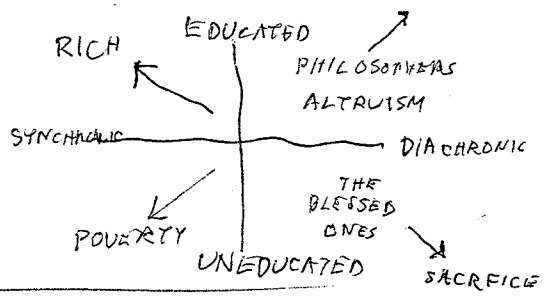
GATE III THE LAWS OF CHANGE
These are the laws governing growth and decay, evolution and emergence
These are such principles as the maximization of diversity and openness
These are diachronic principles such as the second law of thermodynamics
movement to limits

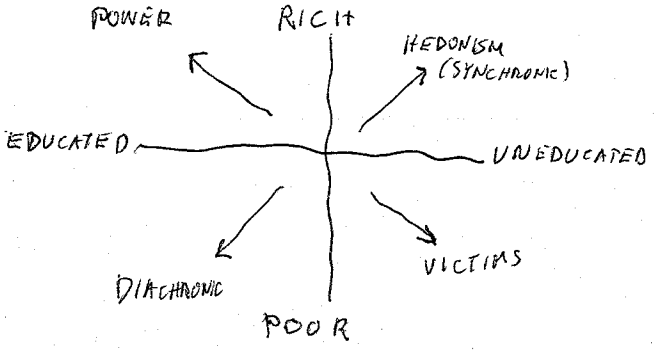
GATE IV THE DIALECTICAL LAWS
These are the laws that govern the interactions between the other three classes
These are species of bridges between time and space
These are oscillatory principles such as departure and return
movement to dis-equilibrate

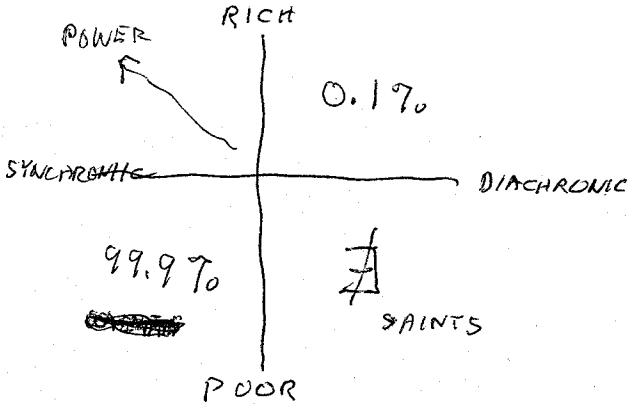
05-05-19

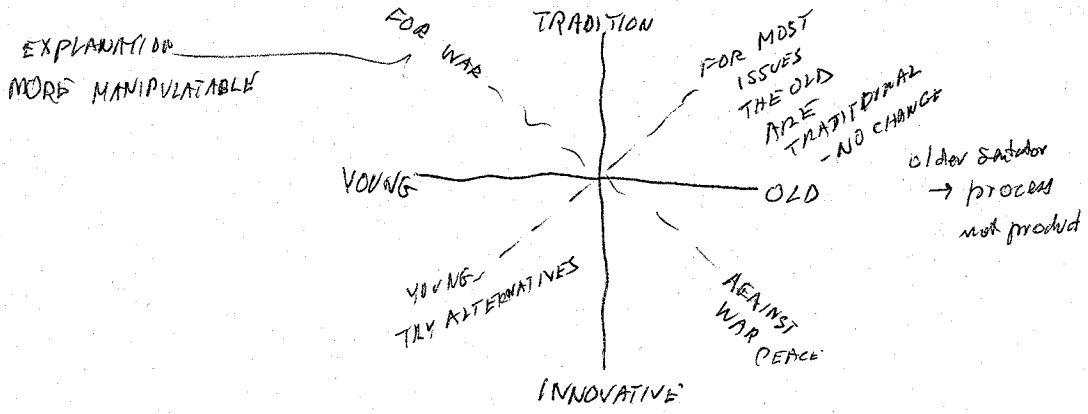
(4) → (8) Σ plus diagonals



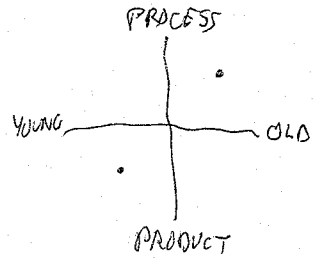


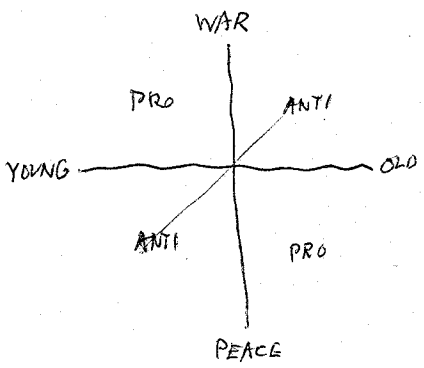


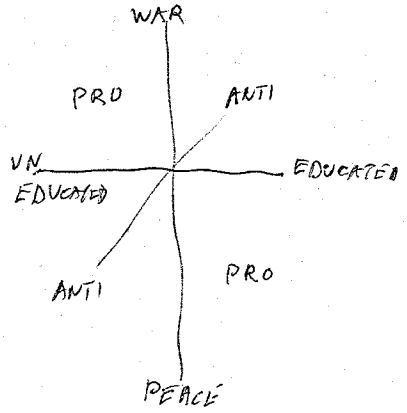


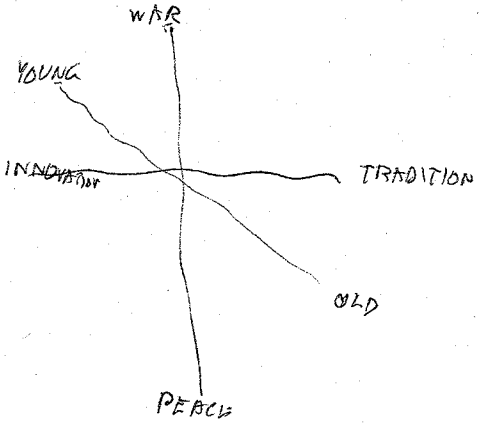


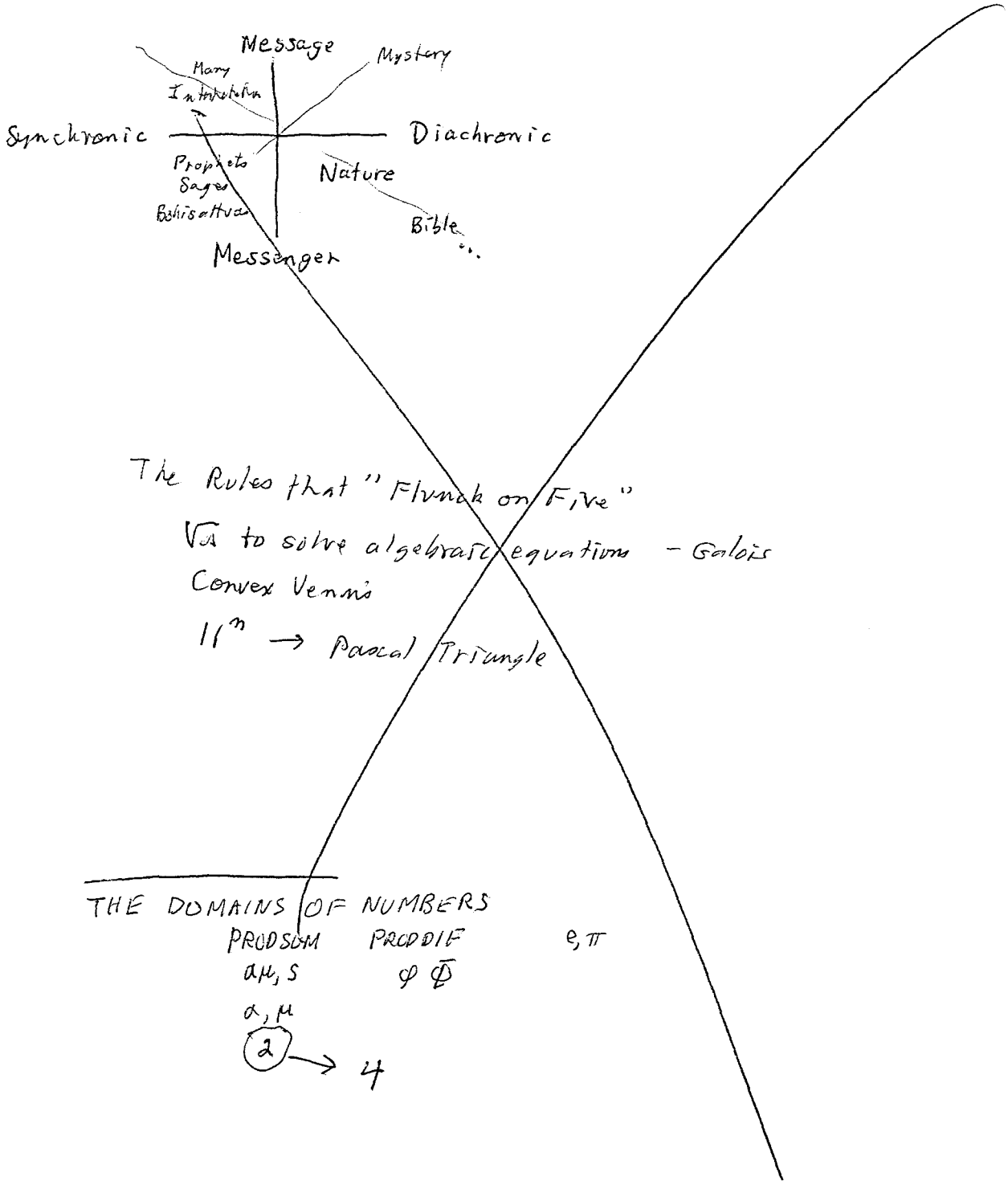
A cross dialectic?











The Rules that "Flunk on Five"

$\sqrt{\ }$ to solve algebraic equations - Galois

Convex Venn's

$11^n \rightarrow$ Pascal Triangle

THE DOMAINS OF NUMBERS

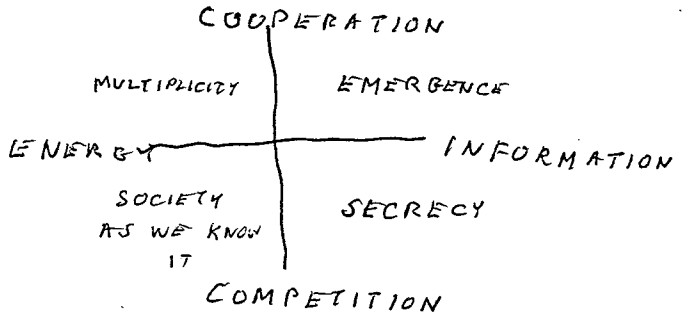
PRODSUM PRODDIF e, π

$a\mu, s$ $\varphi\ \bar{\varphi}$

α, μ

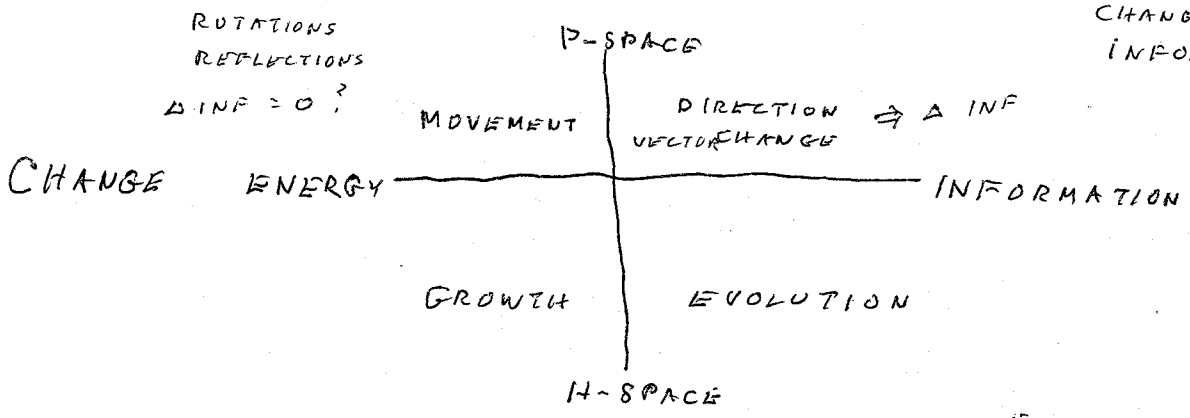
(2) → 4

QUADRADS

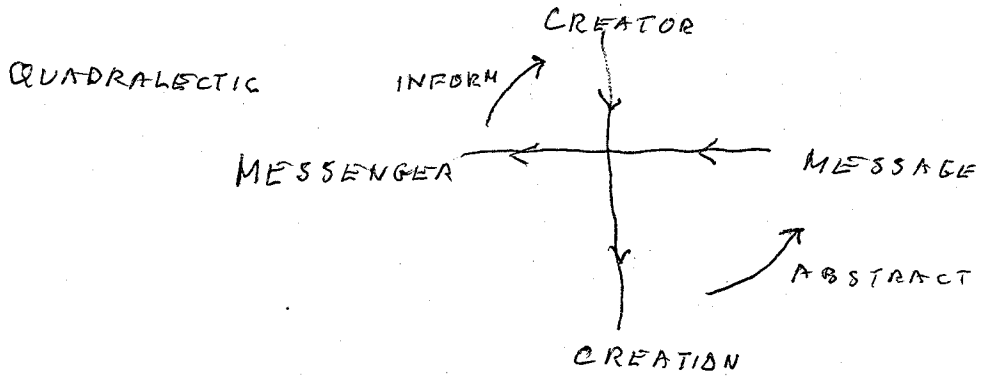


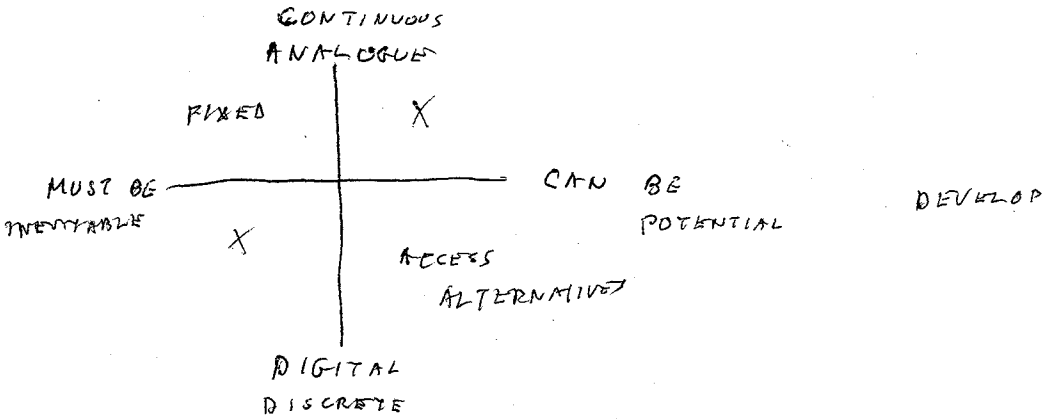
TRANSLATIONS
ROTATIONS
REFLECTIONS
Δ INF = 0 ?

DO ALL FORMS OF CHANGE INVOLVE INFORMATION TRANSFER?

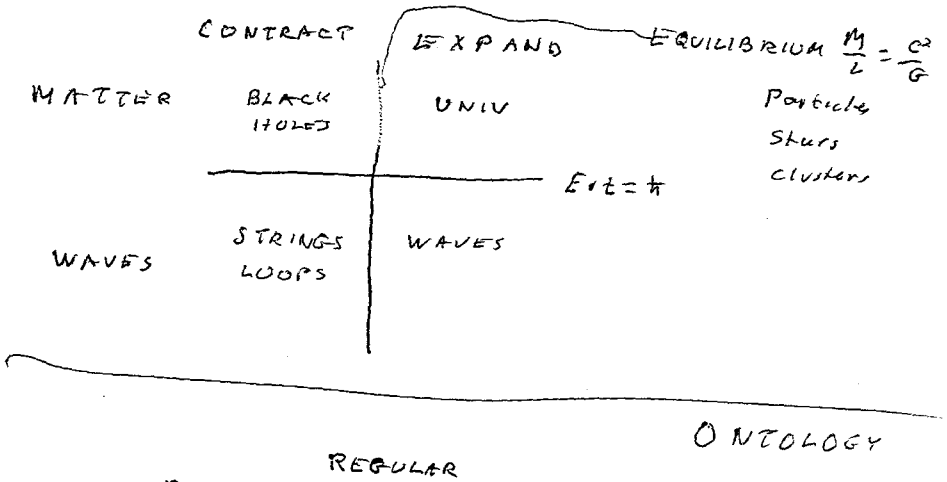


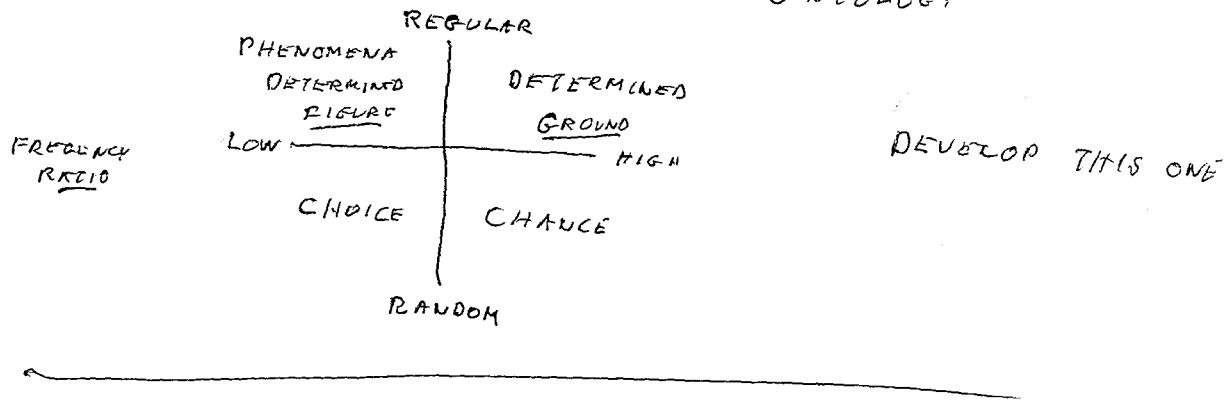
EMERGENCE ?
ORDER, ? ENTROPY ?



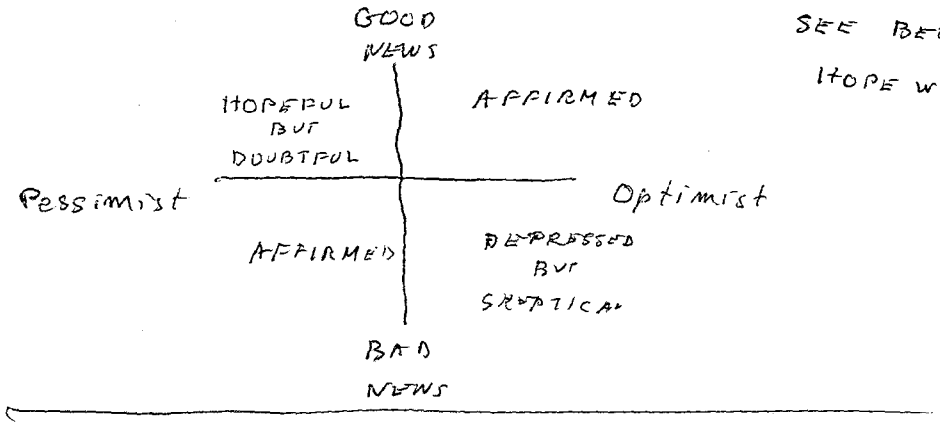


DEVELOP

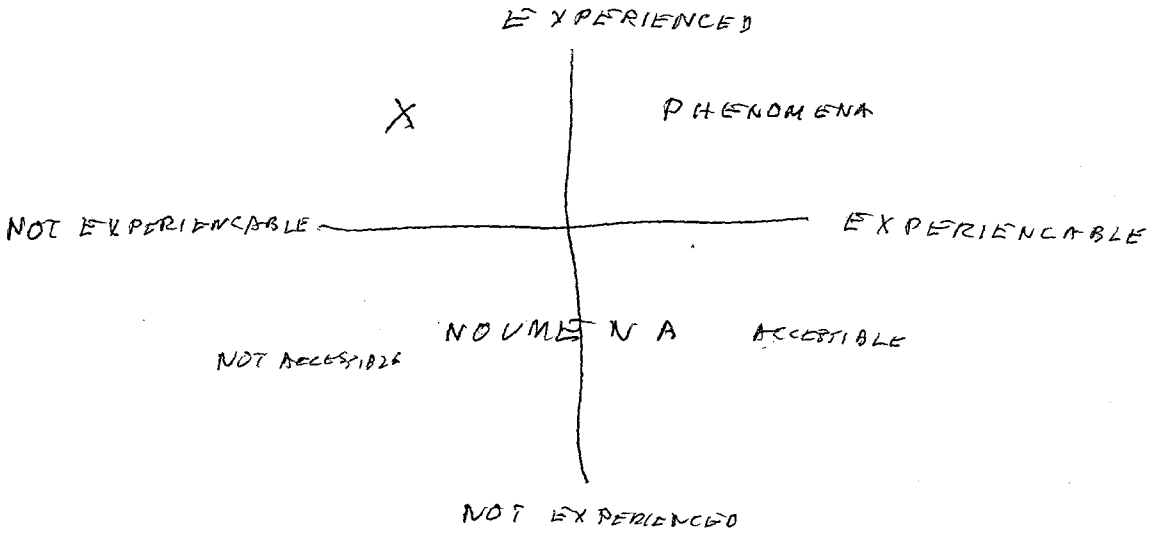




DEVELOP THIS ONE



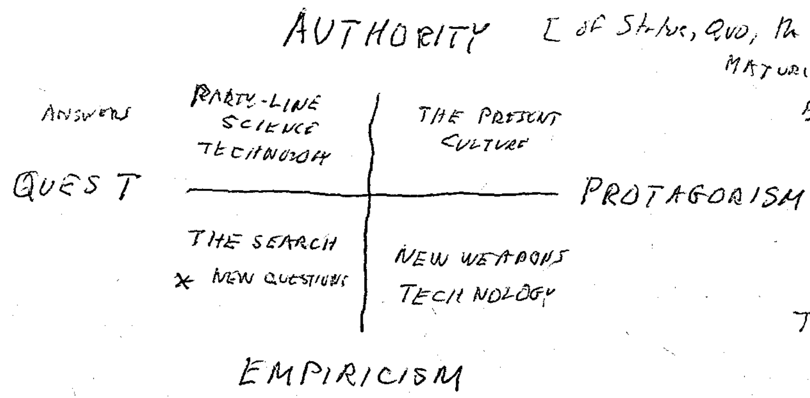
SEE BETTY SMITH'S
HOPE VS OPTIMISM



QUADRICS

"GOD CREATED THE INTEGERS. ALL THE REST IS THE WORK OF MAN"
— Leopold Kronecker

No! "GOD CREATED THE INTEGERS, ALL THE REST IS THE RESULT OF ~~THE~~ sic! INTEGERS SELF-ORGANIZING.



[of Status, Quo, the Past, Popes, Politics, Courts]
MAJORITIES, FORCE LEGALISM
BELIEF SYSTEMS

[WIN-LOSE GAMES]

TORTURE - DEFINED BY LEGAL AUTHORITY NOT EMPIRICALLY

* ANOTHER EMPTY QUADRANT

A DYADIC ASPECT OF CULTURE AND NATURE
PROTAGORAS, GAMES [NOT POKER]

A FOURNESS IN NATURE

$$\begin{matrix} D & & B \\ & e & \\ \bar{B} & & \bar{D} \end{matrix}$$ 4 species of matter