

1992-3

PUBLIC HEARING OCCIDENTAL ROAD PROJECT PHASE 3
THURSDAY, 21 JANUARY 1993

Remarks submitted by Albert G. Wilson* for the consideration of the Sonoma County Planning Commission:

The past two days all of us who use Occidental road are grateful for the implementation of phases one and two of this project. The new bridge and the new grade have raised the road well above the high water mark and kept the formerly submerged road continuously open. The justification for this phase of the project is clear to everyone. It was a necessary fix.

Now we come to phase three of the project, and what is not clear is the justification of what phase three intends to fix. The report states that this 0.7 mile is unsafe, there are ditches beside the road, the shoulders are too narrow, and the curves are too sharp for 40 mile per hour driving. Taking the five mile stretch of Occidental Road from a quarter mile west of Fulton to where phase one begins east of the bridge, there are ditches beside the road, the shoulders are too narrow, and three curves are too sharp for the speeds at which the drivers move. With greater traffic load on the 5 mile portion than on the 0.7 mile portion, why at this time is phase three given higher priority over more traveled portions of the road?

The answer I have heard for this is that phase three is part of an overall Sebastopol by-pass plan. But it is my understanding that the plan for the by-pass has not been decided on. If this is so, then it is wrong to implement phase three at this time as being part of a some possible plan. The present justification for phase three is then only as a fix. And it most important to distinguish between a plan and a fix, between doing what makes long term sense and bandaids.

We must ask, in view of tight budgets and all other current county requirements what is the proper priority of phase three as a fix? Does what it pretends to fix justify implementation at this time?

* Dr. Albert G. Wilson, Property owner 7327 Occidental Road
Sebastopol, CA 95472 (707)829-5045

Formerly:

- Lecturer Engineering Executive Program UCLA
Evaluation Technology
Technological and Social Forecasting
- Member National Research Council Highway Research
Committee on Traffic Flow
- Consultant
Institute Advanced Systems Studies
Institute for the Future

There are three basic ways to set priorities:

- The first of these is triage, the method to be used when the means are insufficient to meet all needs, (as in the present budget crunch). The injunctions of triage are to focus on the most urgent needs that can successfully be met and secondly, if it isn't broken, don't fix it.

From the point of view of triage, it is difficult to see how phase three's claim on county's funds is very high when school budgets are being slashed, library hours cut, and services to the needy reduced.

- A second common way of setting priorities is to oil the wheel that squeaks the loudest.

There are traffic conditions throughout the county, congestions and delays, which squeak much louder than having to slow to the speed limit on portions of Occidental Road.

- A third method is known as Osbekian's Imperative, named after a prominent mathematician and forecaster at USC. This rule states that people do a thing for no better reason than they can do it. This is not the rule for responsible planners, it is more the imperative for small boys, having been given a hammer, hit everything in sight, the closest things the first.

In the case of phase three, the hammer is the money available, appropriated before the present fiscal crisis. Whether the decision will be made on the basis of overall county priorities, or by Osbekian's Imperative, "we can do it, so let's do it", is up to the commission.

Finally, I would like to make a few comments about the details of the plan for Phase Three.

I have studied the plan in some detail and gone over several details with the engineering staff. I want to commend the engineering staff for the careful and professional way in which they have undertaken their task and for the courteous cooperation they have given to those of us involved.

There are some questions, however.

- On page 6 of the Supplemental Environmental Impact Report (SEIR)

paragraph 2 reads:

Increased Traffic: Future traffic volumes will be higher than described in the FEIR. Over the last five years traffic

volumes on Highway 116 have increased at an average annual rate of 3.6%. If traffic on Occidental Road increases at this rate, by the year 2005 the average daily traffic will be over 9000 vehicles.

I find the inferences in this paragraph flawed. In the absence of hard data regarding the increases in traffic on Occidental Road from High School Road to 116, there is no justification in using data from Highway 116 for prognostication, since these two roads are not serial in the road network.

■ On page 9 of the SEIR, under changes
Pavement width is increased from 32 feet to 36 feet. What is the justification for this when the shoulders are four feet or less along 85% of Occidental road. The report acknowledges that the price for this is "only...roadside trees". I submit that parking and leaving abandoned cars on the curves, which will be enabled by this additional width of shoulder, will be an increased hazard.

■ On page 13 of the SEIR, paragraph on alignment
"Curves should be no sharper than is consistent with a 40mph design speed."
The idea of 40mph speed on Occidental is a gross illusion. On straight portions of the road, the average speed in practice is 55 to 70 and on the curves 40 to 60mph. The effect of widening the road and lessening curvature will be even further increase in speed. I know the designers have no direct control over drivers' speeds, but if increasing safety is a justification for implementing phase three, we may safely predict that it will not ~~be~~ occur. Putting in speed bumps would be a cheaper solution.

■ One of the undisputed values of phase three is increased convenience for cyclists. I am in complete sympathy with increased pedestrian and bicycle safety. I suggest, however, that asphaltting the old railroad grade between High School Road and 116, in the manner this was beautifully done between Merced Road and Sebastopol, would be a better solution for cyclists than phase three.

In conclusion, the report states that 199 trees over 5 inches in diameter will be cut down, many of these are oaks over 20 inches in diameter. These are not replaceable for decades, if in our lifetime. I calculate that over the 0.7 mile involved in phase three, enabling motorists to go 10 miles per hour faster will allow them to arrive at the red light at Highway 116 about 12.6 seconds earlier. The bottom line is why in this beautiful county are we trading 199 trees for 12.6 seconds in our day?

HEARING OCCIDENTAL ROAD PROJECT PHASE 3
THURSDAY, 18 FEBRUARY 1993

Supplementary comments to those submitted to the Planning Commission at the January 21, 1993 hearing.--Albert Wilson*

I have studied the **RESPONSE TO COMMENTS** document prepared by the Sonoma County Department of Public Works clarifying points made at the January 21 hearing. I find that this document does clarify most of the questions I raised at the hearing. However, I would like to make a clarification of my own and submit two additional points to the commission at this time.

- On page three of the comments I submitted on that date, I referred to "speed bumps". I have subsequently been informed that what I had in mind should have been called "speed buttons". What I want to recommend is that a few yards east of the onset of the first curve west of High School Road, a set of speed buttons, (like those near the P.G. & E. offices on Occidental Road just east of Fulton), be placed across the west bound lane. The plan is to place a 40 miles per hour speed limit sign at approximately this location, but if conventional experience is taken into account, such signs either are not perceived or in any event not responded to by substantial numbers of drivers. The portion of Occidental Road covered by Phase 3 will of necessity contain many curves, unlike the miles of straight road to the east. Drivers coming west will be entering a zone of limited vision and additional hazard. It is important to get them out of soporific automatic and speed buttons help do that job. It might also be important to place speed buttons in the east bound lane before the first curve east of the 116 intersection. I hope the planners will give favorable consideration to this recommendation.
- My second point. I would like to applaud and endorse the efforts currently being made by members of the Department of Public Works design group to trade inches for trees. In several cases large oaks can be saved by altering the road plan by but a few inches. I urge this be done wherever possible.
- My final point concerns a matter not adequately covered in the Department's **RESPONSE TO COMMENTS** document. I wish to refer to the Department of Public Works **OCCIDENTAL ROAD FINAL EIR** Document dated February 11, 1988. Section 6, page VIII-12, last paragraph of section.
The following will be added to Section II, Project Description, Schedule of Work and Funding:
Because the question of the ultimate role of Occidental Road in a Sebastopol bypass route has not been determined, The Public Works

*Albert G. Wilson, Property Owner 7327 Occidental Road

Department will recommend to the Sonoma County Board of Supervisors that they approve phases 1 and 2, and that phase 3 not be approved until the question of funding and the role of Occidental Road in the bypass route has been resolved. Phase 3 is not Federally funded; its timing does not affect the phase 1, which is primarily a bridge replacement project.

This paragraph was the Department's response to "The portion of Occidental Road west of a point 220 yards west of High School Road should not be built until the bypass issue is resolved."

The question before the Department and the Commission is why has this recommendation been reversed. If there were fiscal, environmental, and other considerations that the department felt were valid for keeping the project in the open planning stage until the bypass route was settled, why has the Phase 3 issue been finalized. The public should be informed why the considerations leading to the recommendation of postponement of Phase 3 until the bypass route is resolved are no longer valid, or if they are still valid, why the decision to disregard them.

I want to conclude my remarks by again lauding those in the department who have worked out the details of the plan, and have demonstrated professionalism in all aspects of the design. The flaws in planning of Phase 3 are not in the design, they are in the thinking underlying the sequencing and timing for implementation of the plan. Good planning does not go for implementation while basic route decisions have yet to be made.

June 18, 1993

Edward J. Walker
Director of Public Works
Department of Public Works
County of Sonoma

Attn: Eric J. Nelson

re:
Statement of Just Compensation
Case: Albert G. & Donna S. Wilson
7327 Occidental Road, Sebastopol

After careful study of the County's proposal of June 10, 1993, we feel that some critical items have been overlooked.

We are closely in agreement with your appraisal of the land value at \$1.65 per sq. ft. and the resulting offer of \$14,031 for the purchase of right of way.

We are willing to accept your valuations of the oak and apple trees, leading to compensation of \$14,272.

It is the statement in the third point in your proposal that we feel ignores the realities of the situation. You state:

Amount of damages to remaining property due
to County's acquisition is:

\$ 0

An analysis of the project acquisition and construction
considering its advantages and disadvantages results in
no damage lawfully compensable to the remaining property.

Contradicting this, with fairness, the County has recognized that damages of both a temporary and permanent nature will be effected by the new routing of the road. In the accompanying AGREEMENT FOR PURCHASE AND SALE OF REAL PROPERTY page 3, item 8 ff., the County agrees to install at County's expense a fence to mitigate noise and fumes caused by the removal of natural protection and the increased proximity of the road to the dwellings. We feel, as desirable as this fence is, it alone does not correct the deteriorated conditions and loss of property value effected by the new road.

Other specific damages effected by the new road are loss of both privacy and security, which are presently supported by a steep bluff and eight foot blackberry hedge along the present right of way. The proposed fence alone does not correct this situation. From stations 115 to 118 the new road opens up our property to pedestrian and other passage destroying our privacy and reducing security.

Page 2.

The County's proposed compensation of \$28,300 plus the fence amounts to about 7 or 8% of the present value of the property. The total loss of re-sale value of the parcel is estimated as close to double this amount. We recognize the impossibility of estimating future values with precision, so in order to expedite the closure of this transaction, we are willing to forego our contention on the discrepancy between the County's 8% offer and a more reasonable 15 to 20% offer provided the County will offer an additional \$2500 to enable us to construct the necessary fences and gates to preserve the privacy and security of the parcel.

Sincerely yours,

Albert G. Wilson

Scraps
1992

SCRAPS 1992

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"TALL SKINNY BOX" REVISITED

Models are constructed as analogues, as metaphors, out of words, out of symbols, out of equations, out of archetypes,...

A model is a bridge between human understanding and a cosmos. A cosmos is multi-faceted, it can accept many projections, i.e. be modeled in many ways. Examples are the spiritual world, the Great Pyramid, both can accept many projections: Humans as finite creatures must select facets to serve as the total, it is our finiteness that underlies our requirement of consistency.*

In selecting a cosmos and a model for it, we are trying to understand ourselves for we are also a cosmos. Thus a model is a device to match four cosmoses. Man and World, Material and Spiritual.

cosmoses?

The value of a model is measured basically by three parameters:

- Comprehensiveness or Inclusiveness (how many fits) i.e. the extent of the domain or range of phenomena fitted.
- Precision or Accuracy (how good the fits) i.e. the degree of closeness of fit
- Simplicity or Succinctness (how straight the edges) i.e. the number of axioms ("epicycles") in the model; the number of inputs, of arbitrary constants, etc.

There is also the matter of consistency, of which there are two kinds, self or internal and consistency with other models. (This is the domain of Ratna Sambhava). The criterion of consistency

is related to the value of monism, the goal of total unity within the one. However, sometimes unity is a synonym for simplicity.

Other values, such as utility, range of applicability, or elegance are in large measure determined by the above three.

If we imagine a "cognition space" of three dimensions along whose axes are the measures of the above three parameters, then the value of a model is measured by the volume of the model in such a space. However, the reciprocal of simplicity must be used as the third axis.

In such a space we used to say the the notion of God, as a model or explanation, was like a tall skinny box. The inclusiveness was almost unlimited, the simplicity was in one sense ultimate, but the precision was almost entirely lacking, in that no predictions could be made with the model. A replacement hypothesis or model in modern times is the notion of 'Chance'. Its volume, like God's is very large in IP/S space. Its inclusiveness is somewhat less, its simplicity is about the same, but its precision is much greater. In any event at the present, the two models with the greatest volume are God and Chance. [i.e. Dice]

The approach of Karl Popper is to look at the negations of the parameters: What is the extent of non-fits or contradictions of the model, what is the extent of precision. Negation either delimits the inclusiveness or stretches the precision.

* There is really no such thing as inconsistency
only there are different views
of a more profound whole.

What is the plural of cosmos? - a word for which ~~is~~ a plural
of universe?

*also
prediction*

WP 5.1 FOR WINDOWS

"A theory is the more impressive, the greater is the simplicity of its premises, the more different are the kinds of things it relates, and the more extended is its range of applicability."

Albert Einstein

cf. more different
and extended range
one has to do with 1 dimension
in Hamming space
The other with the number
of dimensions in Hamming Space

also. fruitfulness for future development.

Pollington PPT p 339

1:1 correspondence

JOB, TECHNOLOGY, and POPULATION

1992cmp3.p51

disk: b:workdisk

July 2, 1992

There has and always will be a ruling class. It takes many different forms, chief and retainers, king and court, aristocracies, party elites, old boy networks, ...
In order for the rulers to carry out their agendas, it has always been necessary that there be a social contract between the rulers and others:
Slaves did the work, in return they were fed
Soldiers fought, in return they were fed and equipped
Workers produced, in return they were paid wages.

What is
Nero's
contract
Feb 1995

Rationale for
downsizing

But now something different has evolved. In the past production had to be not only for the wants of the rulers but for the needs of the slaves, warriors, and workers. The system was designed to produce for the total needs. But as mechanical slaves, warriors, and workers, replaced humans, the humans were less needed for production but were still needed as consumers to supply the market for what was being produced. In all of the earlier cases the slaves, soldiers, workers had given needed services in exchange for sustenance, but now the only service being performed by increasing numbers was to keep the market up. Was this a sufficient service to be given in exchange for their support? Was this really a needed service? Could we not cut back the production to what we rulers and those whose services were still required needed? [From now on we will replace the term rulers with the euphemism, society.] Why support people whose only role is to consume? Efficiency requires cut backs, the bottom line is we can no longer pay for unneeded services. *This has forced many down the economic ladder*

The
rational
for keeping
the market
up was
unprofitable
but if
profit
is dropped
from the
agenda,
we will
have what
is described
on this page

Thus was launched a negative spiral, even as the world's population increased, proportionally fewer people were needed to support society's agendas. What to do?

Candidate Solutions	Impact on Gaia
Adjust the population level down to the number required for agenda production. → common sharing	reduced
Reduce the time each works, distributing the work hours	neutral
Produce additional things not really needed (e.g. weapons, yachts ...)	increased
Create new needs, pseudo agendas (advertizing) <i>Services</i>	increased
Distribute the present total production (welfare)	increased

The second alternative requires a solution to the problem of leisure time. With the continuing growth of technology, it is inevitable that the number of jobs will continue to decrease.

Reducing w efficiency

ONPATTERN.P51

DISK: EPIONTOLOGY

10/22/87

92

O N P A T T E R N S

A pattern is a distribution in space of a set of nodes. If viewed with low resolving power, the various linkages connecting the nodes are invisible, and even more invisible are the various traffics that flow along the linkages from node to node. If viewed with high resolving power, the pattern may not be perceived at all, and its existence demonstrated only by a step by step process, node by node. *

The recognition of pattern is a fundamental cognitive operation, where the key word is 'recognition'. In order for a pattern--whether static or dynamic--to be recognized it must belong to the class of previously perceived and remembered patterns. But perception of a pattern does not automatically take place in response to the occurrence of the pattern. Only certain patterns are perceived or remembered. Which ones? Generally, in order to be remembered the pattern must either possess a simple structure or a high frequency of occurrence. That is to say that the greater the information content of the pattern the more repetitions are required for its perception and registration in memory.

How does a pattern cross over the threshold to perception and recognition? We tautologically say we recognize the familiar. What makes something familiar? One thing is frequency of occurrence. The more common and ubiquitous a pattern, the more likely we are to encounter it and the more readily become familiar with it. Certain simple patterns, linear patterns like triangles and squares and patterns possessing symmetries like circles are most apt to be recognized. Do we recognize them because they are simple or do we label them simple because they are so common and hence familiar?

Complex, subtle, and shimmering patterns are usually unperceived or ignored as useless. Only simple and universal patterns are accepted because these are the species of pattern that are accessible to all. These are the patterns recognized by the epistemology of science--which emphasizes repeatability and ubiquity. But the ease of perception or recognition of a pattern may have little to do with its basic importance or significance. Science may assume that the more ubiquitous the pattern, the more important, but we may take the occurrence of genius in human populations as a counter example. The deepest effects may result from complex shimmering patterns that only momentarily "tune in" but set up brief and powerful resonances with far reaching consequences. No statistical tests would convince us of their importance or even of their existence. These patterns lie beyond the ken of the scientific method.

* Science operates in this fashion

PATTERNS

³
PATERNO~~1~~.P51

EPIONTOLOGY

November 13, 1992

Our mode of interacting with the world may be described as the search for, and the creation of, patterns. The patterns we discern in nature and the patterns we create constitute a multi-dimensional spectrum with a twilight zone wherein we are unsure which patterns we have perceived and are indigenous to the world and which patterns we have ourselves constructed and projected onto the world.

At one extreme there is a school that holds all patterns are of our own construction. The world is a great void capable of receiving and incorporating whatever we project on it. At the other extreme is the obverse school that holds the world is a great smorgasbord from which we select all patterns. It consists of myriads of patterns only a small subset of which we can recognize and assimilate. This school holds we create nothing only select what preexists.

In his *Accent on Form* L. L. Whyte regards pattern as the dynamic idea of the science of the future, just as number, space, time, atom, energy, organism, mind, unconscious mind, historical process and statistics have each in turn been the dynamic ideas of the past, serving as he says, "directly as instruments for understanding the universe. To understand anything, one must penetrate sufficiently deeply towards the ultimate pattern. Only a new scientific doctrine of structure and form, i.e. pattern, can suggest the crucial experiments which can lead to the solution of the master problems of matter, life and mind."

See Diagram by Keith Albarn and Jenny Miall Smith p137

See also MYSTCONG.WPW 93-40

PATERN04.DOC

March 11, 1993

From BELONGING TO THE UNIVERSE p117-118

Self-organization

FRITJOF: The funny thing about the concept of self-organization is that it can be presented as having a "trinitarian" nature. These are the aspects: the pattern of organization, the structure, and the process.

The pattern of self-organization is the totality of relationships that define the living system's essential characteristics. This pattern can be described in an abstract way without referring to energy, physical substances, organisms, and so on, without using the language of physics and chemistry. It's an abstract pattern of relationships.

The structure of a living system is the physical realization of this pattern. The same pattern may be realized in different biological structures (a cell, for example, or a leaf or a flower), and these structures are described in the language of physics and chemistry.

The error most biologists make today is to work on the structure level and to believe that by knowing more and more about the structure, they will eventually know life. But, they will never know what life is as long as they limit themselves to its structural aspects. Only when they also take into account the pattern will they be able to really grasp the phenomenon of life.

Now, the continual realization of the pattern of self-organization in a specific biological structure involves a dynamic process, the life process. It involves the continual self-renewal of the organism, adaptation of the environment, learning, evolution, and so on. And this life process, according to Bateson, is essentially a mental process. That's the third part.

DAVID: Once you step from your pattern into the process of its realization, how do you avoid the idea that by studying, for instance, neurophysiology, you will come to understand psychological processes!

FRITJOF: You can not derive the pattern from the structure. You have to study and understand it independently. You see, I can tell you whether a given system is self-organizing or not. But if you give me the condition that I will have to stick to the language of physics and chemistry and not go beyond it, then I won't be able to tell you. I have to go beyond the material aspect and speak about abstract patterns of relationships.

Fritjof's three elements--pattern, structure, and process--are what I have been phrasing as Information, Matter/Energy, and Will/Enterprise. These are not independent. Information requires substance for manifestation. And information is related to the 'quality of energy', i.e. entropy. The presence of matter ~~by itself~~ creates density time, but kinetics requires that there be conversion from density time to motion time. This conversion process is covered by the word **will**.

PATTERN - A WORD THAT INCLUDES FORM

At the Clinton Economic Summit held in Little Rock, Arkansas on December 14, 15, 1992, John Sculley, CEO of Apple Computers, touched on a most significant factor affecting America's future. He said that the period when America's predominance was achieved through its vast natural resources has drawn to a close. We are no longer resource affluent and America's future will depend on a different kind of resource, its intellectual power, its ability to produce new ideas and convert them into wealth as we have converted nature's bounty to wealth in the past. This will depend on how well we can educate our people, not just the top 15%, but all of our people.

I do certainly agree. But there is more to be said. We are not a people who have valued the intellect. In this country it is not what you know, it is what you possess that gives status. This value must change before any program to educate America will work. We are a nation that is 80% Jung's sensation type. This type was just right for physically exploring and developing a new continent, but it is obsolete for pioneering in tomorrow's frontiers of the intellect. Tomorrow's giants will be countries like Germany, where scholars, professors and the intellect have been highly valued and honored; like Russia, where chess rather than football is the national sport; like China, whose tradition of intellectual discovery has been unequalled when averaged over three millennia; like India, where the natural talent for creation of intellectual products like software is already beginning to blossom. And even smaller

countries like Israel, where the people are gathered who have been the "people of the book" for centuries.

America's predominance in the last half century is in part owed to Hitler. The influx of European intellectuals to this country in the thirties, played no small part in America's rise in the sciences and record number of Nobel Laureates. The brain drain gave America a new lease on life, but this pool and their disciples have superannuated. While today over half of the slots in our graduate schools are filled with foreign students, most of these intend to return to their own countries. America will not be able to go it alone in the realm of ideas in the future. With the ball game changing we must put John Wayne into history and find new types for our heroes.

Not only is the era of abundant natural resources drawing to a close, but the era of America's role as the world's predominant innovator is drawing to a close. Whether this can be remedied by a world view change and an intensive educational program is doubtful. If we cannot sustain the innovator role, we must find a new niche. Japan has found its niche, not in innovating, but in perfecting. We have not been effectively competitive here, this is evidently not our thing. Given a people 80% sensation type, good at physical pioneering, what is our thing in the 21st century?

probably war

" Physical sciences have provided the infrastructure for much of the industrial and engineering accomplishments of the U.S. and the modern world. In the early part of this century, Europe led the world in making seminal discoveries while the U.S. benefited from converting the science into technology.

The second World War and the role science played in defense changed the picture completely. Through a national policy formulated by Vannevar Bush, the U.S. invested heavily in sciences that provided infrastructure for technologies needed for defense in the Cold War era. A substantial part of this support went to physical sciences which helped create the modern communications and information technologies where the U.S. excels today. But the world has changed once again. Cold war and the USSR are no longer the drivers for much of the U.S. research investments.

While one can provide clear social justification for supporting certain scientific research, e.g. molecular sciences for their connection to medicine and plant biology for its connection to agriculture, we have lost a similar thread that connects physical sciences to the economic well-being of the nation. For basic research in physical science to prosper in the remaining years of this century and in the next century, we need to raise a number of fundamental questions about the role of physical sciences in the society. "

C. Kumar N. Patel
UCLA Vice Chancellor research
Professor of Physics, Engineering & Chemistry
May 5, 1994

Scraps

1993

DIRECTORY OF SCRAPS 1993

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January 18, 1993

I am not much on keeping a diary, but today I am compelled to write down my feelings. I feel at odds with almost everything and everybody. Only when I look at the hills and the clouds do I feel related and in harmony. I am angry with the missile attacks on Baghdad, killing civilians in a hotel. I am angry with the hypocrisy of selective support of U.N. Resolutions. I am angry with the subverting of the constitution and the placid acceptance, even ignoring, of repeated subversions. I am even unhappy with the constitution itself and with all other great documents. They are found wanting in these times. I am upset with my church. It is emphasizing outreaching to get new members, while ignoring internal poison and doing nothing to correct the causes of departure of those already belonging to the church. I am annoyed with the scientific establishment and its drift from open searching to dogma and the persecution of those not subscribing to the party line. These items all seem to be matters of choice, things we can do something about, but don't. I am most unhappy with myself, I have accepted the American norm that the most criminal thing we can do in this society is to blow the whistle, rock the boat, not go along.

But there are other matters beyond present choice. Usually the result of past choices. The disparate distribution of the earth's resources, the ignoring of unchecked population increase, the worldview of growth as an unquestioned basic good, the oppressions of both "me-first" and of the collective, the whole signification process and its distorted product. At the deepest level, I am soured on our culture's epistemology and its consequent ontology. I long to make a break with it all, disavow the whole package. Only the natural order, that part not yet contaminated, radiates meaning, peace, and love. Man has goofed up. It is time to shut up, face the East, lift up our eyes, and listen.

January 19, 1993

ON THE BOOK MEGATRENDS 2000

by

John Naisbitt and Patricia Aburdene

Morrow, 1990

ISBN 0-688-07224-0

This is a very upbeat description of ten trends which the authors significate as of central importance in the next decade and on into the 21st century. It is very salubrious to be told that what is going on, the present trends, is right on track for a better world. We have the Reagan years to remind us of how good we feel just being told we are doing everything right. However, such illusory optimism is like being on drugs, it is living in a surrogate reality.

Futurists have long distinguished between trends and normative change, change directed by goal orientation. Naisbitt and Aburdene make us feel good by demolishing the error signal between where we should be headed (the normative) and where the trends appear to be taking us. While they sprinkle the book with minor caveats, in effect they are equating the trend with the normative. This removes correction from the process. Those who want no correction, who want to keep on doing what they are doing will find great satisfaction with the book and its trends. Those with a different normative foresee a bigger bump when the bubble bursts.

Endorsement or confirmation of a trend inhibits correction.

Trends are passive futurism.

↗ Innovation comes from outside the system.* Where does correction ← come from? There is contextual correction which comes from outside the system, eg ozone holes. And there is internal correction which is usually postponed until a large measure of violence occurs, eg the abolition of slavery in the United States.

We only discover the cliff by falling over it.

"Those who oppose stepwise change make violent change inevitable."
- JFK

* A contrary view is held by those who subscribe to the notion of "self-organizing systems".
What is self and its boundaries?

Innovation ~~vs~~ Correction

Vairachana

Ratna Sambhava

protection
by correction

01/22/93

SCIAMER1.P51

From Scientific American, February 1993 p20

See also #20-93

What If They Don't Have Radios?

" Are mathematical theorems and theories of physics universal truths, likely to be discovered by any beings given to pondering the nature of things? Or are they inventions, as much products of our idiosyncratic heritage and needs as eyeglasses or toasters?

This old conundrum could be put to a test of sorts by the National Aeronautics and Space Administration's ambitious new search for intelligent life elsewhere in the universe. Called the High Resolution Microwave Survey (the old name, the Search for Extraterrestrial Intelligence, or SETI, was scrapped because it was thought to evoke science fiction rather than science), it involves scanning the heavens for alien radio signals.

So far NASA has dedicated two telescopes to the effort. The 305-meter fixed dish at Arecibo, Puerto Rico, is tuning in to a select group of stars within 100 light-years of the earth, and a 34-meter movable dish at Goldstone, Calif., is sweeping broad swaths of the sky. NASA hopes to continue the effort for at least 10 years, for a total cost of \$ 100 million.

Why would workers expect either instrument to detect signs of intelligent life? Because, explains Frank D. Drake, a physicist at the University of California at Santa Cruz and a veteran SETI researcher, intelligent extraterrestrial beings would have "basically the same" systems of mathematics and physics that we have. "Many human societies developed science independently through a combination of curiosity and trying to create a better life," he notes, "and I think those same motivations would exist in other creatures."

Inevitably, he argues, alien scientists would discover gravity, electromagnetism and other fundamental physical phenomena. It follows that they would develop technologies such as radio communications. Drake also thinks intelligent aliens are likely to discover such esoteric concepts as the theory of general relativity, quantum-field theory and even superstrings.

This view is "infinitely parochial," argues Nicholas Rescher, a philosopher, at the University of Pittsburgh. "It's like saying they would have the same legal or political system that we do." Rescher contends that our science, mathematics and technology are unique outgrowths of our physiology, cognitive makeup and environment. Indeed, the whole SETI enterprise is "a waste of time, money and energy," Rescher says. "It's perfectly possible that there are other civilizations, and it's perfectly possible that they communicate in some way. But that they communicate in the same basic way we do is about as likely as it would be that they communicate in English."

An intermediate point of view is offered by John D. Barrow, an astronomer at the University of Sussex in England. Barrow, author of a new book, *Pi in the Sky*, that explores the issue of whether mathematics is discovered or invented, believes aliens may well share some basic ideas underlying mathematics and physics, such as the concepts of counting or of cause and effect. "There are certain aspects of the world that press themselves on us," he says. But as science becomes more removed from everyday reality, Barrow notes, its development may become more serendipitous. The theory of relativity, for example, became accepted only after observations of a solar eclipse confirmed Einstein's prediction about the bending of light. Those observations were possible because the sun and the moon, as seen from the earth, are almost exactly the same size. Actually, Barrow is more concerned about the ethics of little green men than about their science. If we meet aliens, will they have the equivalent of the Golden Rule: Do unto others as you would have them do unto you? "

— John Horgan

BOORSTIN.P51

01/25/93

In the following paragraph taken from *The Discoverers* by Daniel J. Boorstin (p295), are enumerated the epistemological parameters of a scientific theory:

To understand the paradoxical beginnings of modern science, we must recall that this beautiful symmetrical scheme, much ridiculed in the modern classroom, actually served very well for both astronomer and layman. 1) Accuracy It described the heavens precisely as they looked and fitted the observations and calculations made with the naked eye. The scheme's 2) Simplicity simplicity, symmetry, and common sense made it seem to confirm 3) Comprehensiveness countless axioms of philosophy, theology, and religion. And it actually performed some functions 4) Explanation of a scientific explanation. For it fitted the available facts, was a reasonably satisfactory device for 5) Prediction prediction, and harmonized with the accepted view of the rest of nature. In addition, 6) Economy it aided the astronomer's memory with a convenient coherent model, replacing the list of miscellaneous facts then known about the heavens. More than that, while this much maligned geocentric, or "Ptolemaic," scheme provided the layman with a clear picture to carry around in his head, 7) Usefulness it helped the astronomer reach out to the unknown. Even for the adventurous sailor and the navigator it served well enough, as Columbus proved. The modern advance 8) Stepping Stone to Copernicus' heliocentric system would be hard to imagine if the geocentric system had not been there available for revision. Copernicus would not change the shape of the system, he simply changed the location of the bodies.

Of course the traditional geocentric system of Aristotle and Ptolemy and so many others over centuries had its own weaknesses. For example, the system did not explain the irregularities observed in the motions of the planets. But the layman hardly noticed these irregularities, and anyway they seemed adequately described by the supposed movement of each planet within its own special ethereal sphere. Astronomers were adept at explaining away what seemed only minor problems by a variety of complicated epicycles, deferents, equants, and eccentrics, which gave them a heavy vested interest in the whole scheme. **The more copious this peripheral literature became, the more difficult it became to retreat to fundamentals.** If the central scheme was not correct, surely so many learned men would not have bothered to offer their many subtle corrections.

We see the same archetype being repeated in modern cosmology.

cf. MODEL501.P51

My italics (underlining)

1992 (1)

"

cf. Tall, Skinny, Bex

CONFED1.P51

DISK: LOSTATE \J491

January 25, 1993

RECAPTURE THE CONFEDERATE FLAG

In an age of dawning understanding, we can say that in every conflict both sides are right and both sides are wrong. In the triumph of one side, the right as well as the wrong in the defeated is vanquished and the wrong as well as the right in the victor is confirmed. To truly learn from history we must disavow the premise that might makes right and search out the right we have vanquished and the wrong we still enshrine.

In many a county, in many a state, in the court house square stands a statue to a soldier who fought in years long past for a cause called lost. Those who bother to stop and gaze upon the statue wonder how he could have fought for a cause we now abjure. We who have been conditioned, not by history, but by those who have written history, cannot place ourselves in his shoes. For us his cause was not only lost, it was wrong.

To the victor belong the spoils. And the most important spoil of all is custody of the record, the power to reshape what has happened in order to shape what will happen. The victor rewrote the lost cause into an ignoble cause. The victor rewrote his own cause into a lofty cause. That is why as we stand in the court house square today we cannot perceive what was in the heart of those who sacrificed all for what we have been told they fought for.

(Georgia?)

Today in a great state in the South a debate wages over whether to change that state's flag, to remove from it the portion that preserves the emblem that was the battle flag of that lost cause. It is argued that only 1.5 percent of that state's history was lived under that flag. And that is not what that state is about today. All of which is true. But the deeper reason for seeking this change is that the flag of the lost cause was left unprotected and it was stolen by bigots who rewrote its meaning to conform to their own ^{agendas} purposes. For each generation rewrites the meaning of its symbols in order to render them useful and understandable to its own agendas.

That there is contention over possession of this flag proves that it is still an energizing symbol. Even though less than two percent of that states history was lived under that flag, the devoted sacrifices of that time made that small percent one of the state's finest hours. The cause has died, ^{but} the flag still lives. ^{My name} And this flag belongs to all Americans, not to bigots who would distort it into a racist symbol. The flag ^{should} stand to remind us that while we remain united, we must ever oppose ^{over} centralization and homogenization. These ^{are the} values ^{of} the defeated's ^{that were their} right values, and ^{continue to} should speak today for cultural diversity and local selfhood as the victor's values speak for our unity and equality of opportunity. All of our history is our precious heritage.

The South was fighting in the spirit of '76
A new American Revolution. - in the spirit of Washington, Jefferson, etc.
The invading Yankees were like the British before
The idea of iterated revolution - was being born in the South
It was lost with the war.

Iterated revolutions seem too destabilizing
yet they are ~ evolution

The Confederate soldier was not fighting to preserve slavery.
He was fighting to not have centralized authority
imposed on him. He was fighting for his home.
local autonomy

In an economic sense, he was opposing change
- this was the loss.

The North was fighting for Union, centralized control
for Technology

Slavery's abolition was an opportunist's spin off
rewriting the entire struggle

Out of
the War

The war has ever
at the end of the
20th Century not
been digested
or resolved

Not only has the question of secession never been
constitutionally resolved, but the centralism
and its ^{prosperity} homogenization ~~not taken from~~
~~its enshrinement.~~ has been enshrined

There was a law in the Confederacy
that whoever owned more than
20 slaves was excluded from
military service.

The war was fought by non-slave
owners manipulated by slave
owners

HISTCYCL.P51

hist $\frac{dP}{dt} \propto P$

cyclical $\frac{d^2P}{dt^2} \propto P$

January 29, 1993

All processes of change contain two components: a linear or historical component and a cyclical or archetypal component.

Cycles have been conventionally represented in electrical theory by vectors. The length or magnitude of the vector representing amplitude, the direction or angle representing phase. One common way of representing a vector is in the exponential form:

$$V = e^{(\alpha t + i\omega t)}$$

In the complex number, $\alpha t + i\omega t$, the real part represents the linear or historical facet of the process while the imaginary part represents the the cyclical or archetypal facet of the process. The period or duration of the cycle is given by $t = 2\pi/\omega$. For the "historical" portion of the change to be actually linear, αt must be equal to $\ln(At)$, that is

$$V = Ate^{i\omega t}$$

This equation may be generalized by replacing the linear functions αt and ωt with the general functions $\alpha(t)$ and $\omega(t)$. Thus

$$V = e^{[\alpha(t) + i\omega(t)]}$$

represents the general equation of change.

The historical rate of change will be the real part of the derivative,

$$\dot{\alpha}(t) [e^{\alpha(t)} + \cos \omega(t)] - \dot{\omega}(t) \sin \omega(t)$$

The archetypal rate of change will be the imaginary part of the derivative,

$$\dot{\omega}(t) [e^{\alpha(t)} + \cos \omega(t)] + \dot{\alpha}(t) \sin \omega(t)$$

$$\text{Ratio of the length of the Journey cycle} = Q$$

In our experience $Q \gg 1$

but can we find cases of $Q < 1$?

Perhaps what we see as $\tau \in 20\sigma$ are
cases of $Q < 1$ Design

INTO THE UNKNOWN

Explored territory remains terra incognita until the explorer returns and reports the results of the exploration. America was not discovered when Columbus landed in the Bahamas. It was discovered only when the report was taken back to Spain.

I have been voyaging for many years through unknown waters, viewing mysterious scapes of mind and spirit that continually lure me on and on. I had heard no reports of these regions before starting out, but they seem to have been visited before by some who were also lured on and on, and who never bothered to report back. I too have not bothered to report back, to effect a discovery. In a sense it seems wrong not to report back, but then why? These realms ~~do~~ ^{and} exist and any who will sail out in a particular direction ^{and} will find them. Perhaps it is more important to give instructions how to reach these places than to attempt their description. Is this really not what the great teachers such as Guatama, Plato, and Jesus did, told how to find the realms, not what they contained.

Science demands that experience be repeatable if it is to be accepted. ^{as scientific} But once a domain becomes repeatable, its potential is cut off and it is frozen in the prison of actuality. Let us therefore be unscientific and only point the direction to go and permit each who go forth to find their own unlimited and unfrozen possibilities.

02/17/93

For some their proper task is to climb a mountain. For this they need guides and experts with climbing skills

For others their proper task is to learn all about the techniques needed for climbing mountains and to develop skills ^{as guides}.

^{But there} For a third group, ^{who} the only need is to have a mountain pointed out to them -- it exists. They are then motivated to find it, learn how to climb, and finally to climb it.

This is like the old Chinese adage:

You can feed a person a fish, that is only one meal.

You can teach them how to fish, that is many meals.

But we must add:

You can tell them that such and such is food, and they have more available to them than just fish.

OUT OF THE LOOP

Economics is best described by a set of interacting cycles.

The loss of jobs in the effort to make corporations lean and efficient in accord with the commandments of the CPA's bible, is removing many from access to the market place. With the benefits of a free market economy being removed from increasing portions of the population demands for the products of that economy are being reduced. This is a positive feedback situation--a vicious circle. The steps in the this cycle go like this:

Cycle No. 1

- 1) Technology makes it possible to perform the same tasks with fewer workers.
- 2) Efficiency requires that jobs no longer needed be terminated and that the unrequired workers holding those jobs be let go.
- 3) Unemployed workers, with reduced purchasing power buy less reducing the needed level of economic production and output.
- 4) The resulting loss of demand lowers the level of overall economic activity. This leads to further trimming to stay efficient. Even fewer workers are needed.

→ concentration
of
wealth
into
fewer and
fewer
hands

Cycle No. 1 continues until a balance between consumption and production is again achieved. In the meantime a large portion of the population is no longer needed, not needed for production because of steps 1) and 2), and not needed for consumption because of step 3) and 4).

opm aff → crime :: more police

But the earth's population is increasing. This offsets the reduction of consumption which results from the above cycle. A second cycle is involved here:

Cycle No. 2

- 1) Population increases and demand for goods increases. This demand begins to outstrip the capabilities of production.
- 2) Technology comes to the rescue, with improved methods of production the increased demand can be met.

avoid
malthus
limit

and agriculture

Technological change
has enabled
capitalism to
survive

Putting these two cycles in juxtaposition we see that growth of technology is beneficent when population is growing, and is destructive when population is static.

The present problems in the USA stem not just from the end of the cold war, but from the fact that the rate of growth of technology has been too rapid for our population growth.

However, as population increases other factors enter the picture-- the finiteness of the planet and such laws of nature as the second law of thermodynamics. These factors will soon require an end to growth economies. Other things being equal, this in turn will require a stabilization in the growth of technology. All of the above is predicated on the present equations relating jobs and the economy. We shall have to permit increasing participation in the consumption phase of the economy without increasing participation in the production phase. This does not mean if you don't work, you don't eat, it means our society will shift more and more to non-economic contributions--arts, education,...

→ sustain
economy

Services e.g. legal, → litigation

Non-Productive Roles

Create New "Needs" entertainment,

Jobs
Jobs + work

Industry
More to
chase
~ Production
Fresh resources
to exploit

Production:

Long term (life time) units

Metabolic - food

Attempt to offset production efficiencies

- 1) shorten life-times (break down the day after the warranty expires)
- 2) fashion changes
- 3) New Needs (unnecessary)
- 4) Competitive Consumerism

Such practices mitigate the effects of cycle 1
but are increasingly dangerous
as we encounter the ecological limits
And run counter to cycle 2.

Cycle 3 maybe a cleansing cycle (e.g. ice age etc)
beyond human control

Aids

The so-called business cycles may be
the result of "beats" between our instituted
social cycles and certain natural
cycles. or

metaphor of
beats

may arise from technological development and population
growth not being bound.

Question Can 2 growth the interaction of two growth
curves create "beats"?

Yes, if all growth process > cyclical engines

3rd World
Population rate > technology rate
USA
technology rate > population rate

If we go → sustain economy

- Choices: → Art, Non Material experience
→ Wars [the new use of war]
→ Outer Space

To offset the human need for challenge

Sustain ⇒ static

but we cannot live static

The process will continue until
the % of population with money to lose
reaches a critical mass value

Concentration
in too few hands

ON DESIGNS AND DESIGNERS

*The point is
It has been asked how*

Can we differentiate the dancer from the dance? The musician from the music? ~~the~~ designer from the design? Without the dancer there is no dance, without a dance there is no dancer. Without the designer there is no design, without a design there is no designer.

Can the same be asked of designers & design?

We can differentiate a dancer from the dance if the dancer can perform many dances ^{or} and if many dancers can perform the same dance. Otherwise differentiation is not possible. We can differentiate a designer from the design if the designer has designed many designs ^{or} and if the same design has been used by many designers. Otherwise differentiation is not possible.

When we come to the cosmos we ask two questions:

First, is there a design? If so, then there is a designer?

Second, is there more than one design? If so, the designer and the design can be distinguished. Otherwise the designer and the design are one. God and God's creation cannot be distinguished. God is his creation. *Creation is God*

Back to the first question. How are we to decide through a set of experiences that a design exists? *We must look for some self-referential activity. For this*

and
Question 2: How can we decide more than 1 design exists

Designers & Design are two levels

If \exists 1 designer \approx Monothelism

If \exists 1 design \approx Monism

\therefore Monism \Rightarrow 1 level

Creator \equiv Creation
God \equiv Creation

Pluralism \Rightarrow > 1 level

Creator \neq Creation
God \neq Creation

but \nRightarrow monothelism

i.e. there may be more than 1 designer

Two Creators have been postulated:

2 level 1) God, a designer apart from ~~the~~ creation

1 level 2) Chance, a designer implicit in the design

*The question is not time
nor is it any law of nature e.g. natural selection
It is all there & levels or 1.
Science has assumed a 1 level cosmos*

*Science
not
Fundamentalist*

02/06/93

By Supernatural we mean \geq more than one level

How is the Supernatural experienced?

1) per violations of level #1 "laws"

e.g. miracles

2) we ourselves can experience (glimpses)

the level #2 phenomena directly

Since some humans have spiritual experiences (e.g. mystics)

$\therefore \geq$ more than one level (whether or not \geq miracles,

i.e. ~~not~~ even if Brahma must always obey his own laws)

a) If there is only one level Creation \equiv Creator

and God is \therefore immanent — always in us

b) If \geq 2 (or more) levels \Rightarrow God is transcendent

\therefore there must be a vertical connection — a Christ

Both a) and b) are right! [which seems inconsistent to our minds]

i.e. The Creator \supset Creation, auto creation
and

The creator created creation

and

Mankind is the vertical connection

Man is actor and acted on

Thus the self-referential vertical connection
is consciousness

Consciousness \supset Christ.

Christ is an example of Consciousness

cf. The Great Dialectic

of iterated theophanies

Trinities

Designer - Designing - Design

Creator - makes - worlds

Subject - verb - object

again our language imprisons our epistemology
and hence our ontology

02/23/93 When we sing or ~~move~~ spontaneously, the singer and the song are one
move dancer and the dance

When we sing the songs of tradition, we separate the designer from the design
move movements (e.g. Tai Chi)

we remove God from Creation

But \geq a discipline in Tai Chi that has a value of its own

When should we ~~move~~ ^{move} spontaneously

and when should we ~~move~~ ^{move} in tradition and discipline?

An Answer:
Spontaneous
Spiritual Growth
Tradition
Built Community

TYPOLGY1.P51

February 7, 1993

THE ROBBER BARON TYPOLOGY

It is unusual that four men of great drive and ability can work around their egos and form an effective team. This, however, is what Leland Stanford, Mark Hopkins, Charles Crocker, and Collis Huntington were able to do. This team developed (and exploited) California, set up railroads, banks, corporations, governed the state and later even founded a famous university and museum.

Stanford was a very fine lawyer, a successful politician, who loved dealing with people. Mark Hopkins was an expert accountant, very thrifty, who knew the value (and price) of everything. Crocker was an organizer, an executive, a driver of men. Huntington, the real boss, was a wheeler dealer who worked behind the scenes. [see American Heritage History of Railroads, p88]

From these four we can generalize to the basic typology for a successful American business: Lawyer-Politician, Accountant, Lobbyist, Executive. The glue holding the team together is diversity, respect for each other's skills, a shared vision and most important, the same value system. (Which in the case of the above four was a high regard for power and wealth, and a ruthless disregard of human values.) Ambition and ego were not constrained, only channeled.

Does this four-fold typology map onto the Jungian types and onto the Kalahiri hunting party of chief, shaman, hunter, and clown?

It is oftentimes claimed that Americans do not resent the great imbalance in the distribution of wealth in this country. This is because the 'Royal Lie' is that you too can be rich.

The closest approximation to honesty in any writer of consequence remarking on the great princes of the rails was achieved by Ambrose Bierce who, on San Francisco morning in the nineties, was observed by a friend to be speculatively, even longingly, eyeing the fine swinging doors of Flood and O'Briens's Saloon in Sutter Street.

"There," sighed the noisiest crusader against vested corruption of his generation. "there, lapped in luxury and upholstered in Babylonish devisings, sipping rare vintages of great cost and plotting further brigandage against the toiling people, are those arch-thieves and conscienceless pillagers, Leland Stanford, Charles Crocker, Mark Hopkins, and Collis Huntington. Even now, no doubt, they scheme to loot more outrageously than ever the people and commonwealth of California! I wish I might be one of them!"

[Highball, A Pageant of Trains, Lucius Beebe, p5]

This is what preserves the system. Not the possibility of great wealth, which is an illusion, but the dream of the possibility, sustains the status quo.

"I could be one of them"

Lawyer
Lobbyist
Accountant
Executive

The team of the future will be different.

Researcher - Forecaster

Relator - Human values

Executive

Organizer - re-organizer

shaman

clown

Chief

hunter

worked
well
in a
clearly
defined
opportunity
vacuum

The Parable of the Talents
Matt 25:14-30
esp 29, 30

10. 11.
INCLUDE THE PARABLE
OF THE WORKERS HIRED
FOR THE VINEYARD
MATTHEW 20:1-16

TRANJUST.P51

Jesus preached unfairness

February 10, 1993

JONAH 3:10 ff

BEYOND JUSTICE

The world is not fair. The natural order is not just. Indeed, justice per retribution, punishment or equalization is limited to human affairs, these are absent from the processes of nature. The religions and institutions of man, however, are deeply concerned with the concept of justice. Our religions compensate for the absence of justice in the world by attributing to God the intention for ultimate justice and correction. Everything is to be set aright at some Last Judgement with all the unfairness in the world to be compensated for at some future time. Without this hope life seems too unfair to endure and the compulsion to set things aright as soon as possible is overwhelming.

But, whatever may be concerning a Last Judgement, seeking justice in the world is futile. We cannot impose our value and notion of fairness on the natural order. We say, perhaps not on nature, but certainly on our portion of the order of things, on human institutions. Yes, that is our compulsion. But if in the larger order of things fairness as we see it is not involved, we must accept what we cannot change and ask is there some more basic or general principle than fairness at work in the natural order? And if so, can we identify it and incorporate it in human activity?

Kant's categorical imperative states that we should structure our behavior in accord with those principles we would see become universal guides for behavior. This covers activity within the human domain, but does not lead to an answer regarding the principles involved in the larger order of nature.

There are many examples in human behavior where we ignore fairness in order to expedite some other process or principle. Ninety nine percent of these are behaviors to expedite individual advantage, fairness be damned. But there are examples where fairness is transcended in order to further some other value. Certainly there is nothing fair in the relation of a mother and her child. But it can be argued that this is compensated for when the child becomes in turn a mother ultimately restoring fairness. Seniority is considered to be the fair way to assign positions and rewards. But seniority is quite frequently ignored in order to put the best person on the job. The principle of efficiency overrules fairness. We oftentimes see in traffic congestion someone giving up their turn, which is their right under fairness, in order to expedite the overall flow of traffic. The transcending principle seems to be "do not that which is fair but do that which expedites the process at hand" be it fair or not. The question then devolves to how do we determine in any situation the proper process to be expedited?

down
singing
The
hook
Totem pole
for Kant
One should not pursue fairness and justice, but should behave so as to contribute what is possible to expediting the proper processes at hand.

The Bodhisattva has no concern for fairness.

cf DEP WORK.P51
Deposits + withdrawn

08/26/91

Other values

Order

Progress

Life

Minimize Suffering

Measures of Individual Growth

Processes & values perceived as basic

Scope of identification

me, family, polis, race, nation, species, ecology, ...

What is the role of sacrifice?
in these processes?

A Bodhisattva disregards fairness completely

Is triage fair? Seniority?

Lifeboat ethics vs fairness

Egalité = High entropy

Jesus did not preach egalite
He preached charity

Egalite and The Trolley Metaphor

God had a "chosen"

To whom much has been given
from such much is expected
ref. Luke?

It is not ^{how much} what you have
It is what you do with what you have
- Jesus

ON ONTOLOGY

- The Universe is many faceted, but humans are capable of experiencing only a few of its facets. We further restrict our experience of the Universe by ignoring much of what we experience. We do this by 1) limiting acceptable experience to what is articulatable and communicable, frequently to the most common level; 2) by restricting "reality" to those experiences filtered by a consensus based epistemology; and 3) by logical consistency. *and only to what fits our models*
- By choosing to emphasize certain experiences and ignore or deny others, we in effect "elect" a universe, i.e. select a sub-set of the Universe and call it the universe.
- Some specific factors operating in our epistemological filter are:
 - Recurrence and Repetition. Accepted experience must possess a large probability of occurrence in order for it to attract our notice. Only those situations which repeatedly happen are incorporated into our world views. *But repetition alone is insufficient. There must be regularity of repetition and predictability before an experience can be accepted.*
 - An exception to this is an event of great magnitude. Such events, even though not repeated, are marked as possibly having happened. But unless such events are repeated at least once, * there is strong disbelief in them (the Aksobyia effect) An example is the Resurrection.
 - Beyond a critical frequency of occurrence the experience is shifted from figure to ground. The experience is so ubiquitous it is no longer noticed. (Possibly because of the Weber-Fechner Law). This leads to the state noted by Eddington: **Sameness is indistinguishable from non-existence.**
- All phenomena from material existence to life and intelligence seem to occur at interfaces between density (i.e. time and frequency) domains. Galaxies occur on the periphery of voids, life occurs at a solid/gas interface. And as noted above, our cognitive world lies in the zone bounded by a frequency of occurrence sufficiently often to afford recognition, and a frequency so high as to drown itself in sameness.

09/24/93

If once, ~~#~~ ; If rare - ~~disbelieved~~ ; if ubiquitous, not perceived
Pythagoras *not believed*

* If it happened only once, it didn't happen. It could not be recognized

We live in the frequency zone between
 too rare to be believed (Whitehead)
 and too common to be perceived (Eddington)

The Eddington-Whitehead Zone

If ~~#~~ an alternative, the parameter is not perceived
recognized

Belief, Faith at the rare end

How do we penetrate the high frequency end?
 by finding alternatives - branches

Natives could not see Columbus' ships

ONTOLOGA, WPW

2-15-93

3-11-93

02/17/93

25

13.

See EPION01.WPW
#52-93

Quantum
Mechanics
don't affect
the observer
- His world view

On Epistemology

An epistemology is a strategy for encountering an unknown (or partially unknown) world. In general its goals are to

represent experience

- Make a map or model or theory that represents that world
- Discover the bounds or limits of the world
- Enumerate the variety of phenomena (species) encountered together with their frequency of occurrence. and relationships

Rashmi Sambhu

Amitaba

An epistemological strategy is a dialectical process. That is, it is a process that oscillates between two phases. The typical epistemological dialectic consists of 1) constructing a framework (model, theory, map) to contain all of the data (experience, phenomena, terrain) encountered. And 2) placing the data in the framework. Whenever there is no place for the data in the framework, return to phase 1 and reconstruct the framework. This process is like going forward by walking, moving the left foot then the right foot. Sometimes the frame foot is not moved forward, the data that does not fit is instead ignored or discarded. This limits further movement of the data foot. Sometimes a frame will handle only part of the data, while another frame will take care of other parts. Sometimes several frames are needed, some perhaps overlapping, but no one of which is capable of containing all of the data. There seems to be an **epistemological imperative** that requires reduction of all frames to a single frame.

It must not be assumed that the unknown world is immune from the acts of the explorer or from the consequences of being explored. In the case of the astronomical universe, we assume that our observations of it have no affect on its structure or behavior. However, there are other domains in which our observations and exploration alter their nature. Examples include the anthropological study of native tribes, and the micro quantum world. Hence it is wrong to think of an epistemology as purely a strategy of exploration. Encountering or engaging the unknown world may involve creation, as well as exploration, invention as well as discovery, and teaching as well as learning. The explorer may alter the world he explores. His map may describe himself as well as of the unknown world. The world of mathematics is an example of one in which the boundary between discovery and invention is uncertain. Thus unknown worlds lie in a spectrum that extends from frozen in concrete to be encountered purely by exploration, to amorphous and pliable to be encountered purely through creativity.

or that
the explorer
is not
modified

and alteration

It follows that a more general epistemological strategy must allow for both discovery and invention, for both exploration and creation, for both science and art. How then are the above three goals of an exploration epistemology to be generalized for an exploration-creation epistemology? What are the criteria for discrimination between frozen and pliable domains, between domains for discovery and domains for invention.

The serenity prayer

The story of the stranger
who comes to town: "What
kind of people does one find
around here?" "What kind
where you came from?"
That the kind you will find here.

PISTEMA. WPW

2-17-93

SIGNIFICATIONS 1993

EPISTEMOLOGY

THE PROBLEM OF INTRINSIC STRUCTURE VS IMPOSED STRUCTURE. DO WE EXPLORE OR CREATE THE COSMOS? WHAT IN THE WORLD IS 'OUT THERE' INITIALLY AND WHAT IS OUR OWN CREATION? WHAT IS NATURAL AND WHAT IS CONSTRUCTED? e.g. IS MATHEMATICS DISCOVERED OR INVENTED?

Kronecker Quote re the integers

LOGIC

WHAT ARE THE LIMITS OF ARISTOTELEAN BINARY LOGIC? WHAT IS THE PROPER LOGIC FOR QUANTUM REALITY?, SPIRITUAL REALITY? IS TWO VALUED LOGIC AT ROOT OF MANY OF OUR PROBLEMS? HOW DO WE TRANSCEND OUR BINARY MINDSETS?

ONTOLOGY

WHAT ARE THE LEVELS OF EXISTENCE? WHAT IS THE ROLE OF CONSCIOUSNESS IN ONTOLOGY? DO REALITIES EXTERNAL TO TIME AND SPACE EXIST? WHAT ARE THE STEPS IN ENTERING A NEW REALITY? *EXISTENCE ONLY IN INTERSTICES*

Disembodied Information?

AXIOLOGY

WHAT HIGHER VALUE IS THERE TO REPLACE FAIRNESS AND JUSTICE?

THEOLOGY

IS RELIGION A BRANCH OF PSYCHOLOGY OR IS PSYCHOLOGY A BRANCH OF RELIGION? WHAT ARE THE ERRORS OF MONOTHEISM AND THEIR CONSEQUENCES? WHAT IS THE NEXT, LONG OVERDUE, THEOPHANY?

OBLITERATION OF SPIRITUAL LEVELS, HIGHER GODS, CONFUSION OF PERSONAL GUIDE WITH GOD

TEMPORALITY

WHAT IS THE FUNDAMENTAL ZEITGEBER IN THE COSMOS? HOW DO WE INTEGRATE MOTION DERIVED TIME WITH DENSITY DERIVED TIME? ARE WE USING THE CORRECT CLOCKS IN OUR COSMOLOGICAL MODELS?

SOCIOLOGY

WHAT IS THE RESOLUTION OF THE COUNTER TRENDS OF ECONOMIC UNITY AND CULTURAL PLURALISM. ARE WE ENTERING A PERIOD OF HOMOGENIZATION OR FRACTIONALIZATION? WHAT KIND OF MELTING POT IS EVOLVING IN AMERICA?

WHAT IS THE *(CIVIL)* RELIGION IN AMERICA? *See E.D. HIRSCH*

Secular

Cultural Literacy

ECONOMICS

WHAT IS THE ENDPOINT OF THE THREE ECONOMIC LOOPS?

CONSOLIDATION or DIVESTITURE?

02/20/93

The objection to a personal god arises
from the equating of God the creator
with the personal god (i.e. it arises
from the ~~Platonic~~ equation). The
Christian notion of Fraternity gets
around this objection. But better
is the idea of a spiritual hierarchy
going from a personal god (guide)
to a ^{the} Pancreator.

CATEGORY CRISIS and the CROSS DIALECTIC

2 kinds of category crisis 15.
The first occurs within
Aristotelean categories (T, F)
When I am item which is
neither T nor F or both T and F
The second type of category
crisis occurs when two
dyads compete. Am I
pro-union, pro-slavery Douglass
pro-secession, pro-slavery Davis
pro-union, anti-slavery Lincoln
pro-secession, anti-slavery Lee

An identity crisis is inability to select a category in which to place oneself. A category crisis is that no category exists that fits the thing to be identified. Existing categories do not fit do not work. These crises are related to the two epistemological levels of framework construction and placing items properly in the framework. An identity crisis arises with difficulty in finding the proper place in an existing framework, a category crisis arises when the framework itself is defective, no longer supplying proper places for all items. A category crisis may also arise when two categories are split ~~split~~ in two leading to a new alignment. The crisis arises over whether the old or the new categories are more important. This latter situation is here termed the **cross dialectic**.

Type 2
category
crisis
called here
cross-dialectic

NOTES ON THE CROSS DIALECTIC:

Stability and preservation of the status quo depend on maintaining Aristotelian dyads. A structure becomes stabilized around dyads, characteristics and their opposites, in groups and out groups, 'us and them'. Aristotelian two valued logic leads implicitly to adversarial relations which allow energy to stabilize in a dyadic configuration. An adversary, enemy, other, is essential to survival. However, such configurations rapidly become unstable and breakdown whenever a second dyad intervenes that divides both sides of the original dyad. This creates four groups and removes the situation from Aristotelian dyadism. Instead of one 'us against them' balance, there are now three struggles: the original 'us against them', struggle along the lines defined by the second dyad, and struggle over which of the two dyads is to be the more important. The introduction of the second dyad has produced a category crisis.

HALF-BREEDS
TRANSEXUALS
ANGLO-INDIANS
BLACK/WHITE / HINDU

CAN BREAK
DOWN ANY
ENTRENCHED
INSTITUTION
WITH A
DOMINANT
DYAD
SHIFT

EXAMPLES OF THE CROSS DIALECTIC:

Luther/the Papacy//Copernicus/Ptolemy

These two dyads resulted in the success of the reformation and the acceptance of the Copernican Theory.

Wittenberg 1517
the Reformation 1543
COPERNICUS BROUGHT AN END TO THE
PROTESTANT/CATHOLIC STRIFE
BOTH WERE SEEN TO BE WRONG
THE DOMINANT DYAD BECAME INTELLECTUAL
INSTEAD OF RELIGIOUS

The Civil War in the United States
Slavery/Abolition//Union/Secession

Lincoln's genius was in converting the two dyads into one equating union with abolition and secession with slavery.

The slavery dyad was dissolved when South Carolina
injected the secession dyad - the undoing of slavery

World War I

Great Britain/Germany//Colonialism/Independence

World War I brought the colonial dyad to the front, and within 30 years colonialism was dead. In World War II, Indians fought with both Britain and Japan.

The Cold War

USA/USSR//cultural independence

When the issue of national independence began to override the communism/capitalism dyad, the USSR broke down and the cold war came to an end. The issues are still unresolved. For a spell Lithuania vs Russia was the dominant issue, subsequently economics again became the dominant issue and Communism was restored in Lithuania.

Red & White see 1994-36

1996: PAT BUCHANAN: POPULISM + CAPITALISM

CATEGORY CRISIS AND THE CROSS DIALECTIC PAGE 2

■ The 1992 U.S. Election

Republicans/Democrats//Choice/Life

The second dyad split both parties, hitting the Republicans the hardest. Another dyad affecting this election was the presence of Ross Perot. The almost predictable re-election of Bush, the economy notwithstanding, was altered by the presence of these additional dyads.

■ An example from physics

here/there ontology//everywhere/nowhere ontology

In Quantum reality definitive location of here/not here is out, replaced by an everywhere/nowhere dyad. This has resulted in the breakdown of classical physics and its worldview.

SOME POSSIBLE FUTURE EXAMPLES:

- Israel/Arab States — { Palestinians - Israelis }
Peace - Hardline
- economic unions//cultural pluralism this is already a cross dialectic
- straights/gays a second dyad here could result in the breakdown of male dominance
- USA melting pot Dominant culture and language//cultural pluralism
- Book of Job good, therefore rewarded --> rewarded, therefore good
- The Church Today Fundamentalism/"Jung"//Sectarianism
CHARISMATICS PROTESTANT/CATHOLIC

■ THE THOMAS SUPREME COURT HEARINGS

BLACK/WHITE//MALE/FEMALE

also CONSERVATIVE/LIBERAL

LIFE/CHOICE

SEVERAL DYAD SHIFTS

1996 Presidential Election

Past - Future

Choice - Life

Budget - Care

Elran as cross dialectic 1999
-2000

LEVELS AND FUNCTIONS

See 1996-47
1996-53

THE PSYCHO-STATIC LEVEL

The functions in the psychostatic level are metabolic functions, i.e. they have to do with supporting stasis, the status quo. They perform the metabolism of the social order. They are the components of the engine that makes society work. They are located in and focus on the present.

THE STEERSMEN

THE CHIEF, KING, RULER
THE PILOT, DECISION MAKER
THE RULE MAKER, JUDGE

THE MAINTAINERS

SHAMAN, PRIEST
HEALER, ENTERTAINER

THE PROTECTORS

DEFENDERS, TEACHERS
WARRIORS, HUNTERS

THE SUSTAINERS

FARMERS, WORKERS
MERCHANTS, FINANCIERS

THE PSYCHO-KINETIC LEVEL

The functions in the psychokinetic level are evolutionary and innovative functions, i.e. they have to do with introducing and managing change in the social order, and with the measurement and evaluation of change. Their concern is with the future and their focus is on both the past and the future. *Transformation*

THE NAVIGATORS

SIGNIFICATORS
PHILOSOPHERS
[LIVING IN THE CAUSE]

THE CREATORS

INVENTORS
ARTISTS

THE DISCOVERERS

EXPLORERS
SCIENTISTS

THE RECORDERS

HISTORIANS
LIBRARIANS, SELF REFERENCERS
[LIVING IN THE EFFECT]

THE THIRD LEVEL *TELEOS*

The creators of the smorgasbord, those who create potential, the glimpsers, the Artists, dreamers, the focus on the trans-future. and finally Dorje Chang.

ON DANCE AND THE DANCER

cf DESIGN01.P51
1993-#9

The poet has asked, How do we differentiate the dancer from the dance? The singer from the song? Without the dancer there is no dance, and without the singer there is no song. But is it not also true that without a dance there is no dancer, and without a song there is no singer.

We can differentiate the dancer from the dance only if other dancers can perform the dance or if the dancer can perform other dances. We can differentiate the singer from the song only if other singers can sing the song or if the singer can sing other songs. Otherwise differentiation is not possible.

When we dance spontaneously, we and our dance are one. When we sing spontaneously, we and our song are one. No one else can dance our dance or sing our song. But if our dance is copied, in the minds of others we and our dance have been differentiated. And if our song is simulated, in the minds of others we and our song are separate.

When we dance a copied dance, it is not our own dance and we and the dance cannot be one in the same sense as when we dance our own dance. When we sing another's song it is not our own song and we and that song are separate. In dancing and singing the dances and songs from tradition we have separated the creators from their creations

When is it appropriate to dance our own dance, to move spontaneously, and when is it appropriate to dance the rituals of tradition? When must we sing our own song and when should we sing the songs of tradition? What happens to us in spontaneity and what happens to us through the repetition of the movements and songs of tradition? In spontaneity we celebrate the oneness of creator and creation. In repetition of tradition we separate creator and creation in an attempt to make the creation our own. For in some limited sense whenever we sing another's song it does become partly our creation.

All of this is of relevance in our practice of religion wherein we have two objectives: we wish to create and participate in community and we seek spiritual union with the Higher. There is great disciplinary value in the rites of tradition, and it is these rites that are basic to community. We build our community in singing the songs of tradition and moving to the rituals of tradition. But in all of this we have separated the Creator from Creation. Perhaps ^{this is} the price of community. But the spiritual path requires something different, that creation and creator be one. We cannot find God except through God's Creation, so we must not separate God from Creation. We preserve this unity by achieving unity with our own creation. Thus to find God we must learn to sing our own song and dance our own dance.

Can we dance more than one dance?

"O body swayed to music,
O brightening glance,
How can we know the dancer from the dance?"

ON MEDITATION

The practice of meditation is a special kind of process. Whereas ordinary processes produce specific products, meditation is a process that also produces other processes and consequently many products. It is thus improper to impose specific goals on meditation, to limit its products. To impose goals is to prevent meditation from bearing all of the fruits of which it is capable. Meditation should thus be entered with a state of mind completely detached from results. If practiced with commitment, it will produce much more than any preset goal can conceive.

One of the products of meditation is the development of presence--mastery of the sensate situation. In turn, one of the products of presence is compassion. Another, more advanced, product of meditation is inner presence--mastery of quintessence. This, in turn, leads to guidance along the path to understanding and wisdom. There is an outer-inner tension producing the precious discrimination between presence and guidance.

Some species of meditation:

- *Samatha, a sanskrit word meaning tranquility. This involves the direction of attention to a single object of contemplation. This is usually in the beginning focus on breath, and the achievement of mental stability.**
- *Vipassana or insight meditation. (after the mastery of samatha) Let the mind have free rein, focus where it chooses, bringing the sub-conscious into the scope of awareness. **
- *Samma Samadhi or right concentration. Brief glimpses of Truth are not rare for many, but Samadhi is a sustained glimpse of Truth.**
 * Living Buddhism pp25-28

MEDIT 01. WPM

02/24/93

03/11/93

06/01/93

The Egret as Meditation Instructor

The moving patterns, lights, ... as
marks on the gatehouse to the
"meditation garden" They are not
the destination

ON MEDITATION CONTINUED

Approaches to meditation:

- *The method of continuing return.*
Focus on some object, image, or koan. Whenever awareness comes that mind is elsewhere, immediately restore focus to the object. But do not struggle to maintain the focus, merely restore the focus to the center whenever there is the realization that it has drifted away. Be detached from results.
- *The method of continuing self-reference.* (Mindfulness)
Continually verbalize everything you are doing and thinking. Moment to moment describe in words what you are thinking and feeling. But do not get lost in a regression by articulating your articulation. Be aware of the levels of the regression in which the subjective and objective are located.
- *The method of merging.*
Whereas the methods of continuing focusing and continuing self-reference require a mental mitosis into observer and a meta-observer who watches the observer. The method of merging reverses the process and seeks to merge the object of observation with the observer to attain oneness. All discriminations are removed and blend into unity.
- *The method of clearing.*
All voices are hushed, all images are erased. The universe returns to the Sunyata from which it originally emerged. All becomes nothing and the nothingness is ONE. When there is but ONE, since ONE cannot exist, actuality ceases to exist. With actuality zero, potentiality becomes infinite.

*Mitosis to Merging
 Bhakti Yoga to Jnana Yoga*

Focus on breath is sometimes too slow to hold attention

∴ Focus on sub-breath each of the "whiffs" constituting a breath. Focus on the effect of these whiffs on the nostrils.

{I → c. $\frac{1}{8}$ sec, i.e. lepton time. This keeps the mind focused

A DREAM
March 4, 1993

I was returning to my house from which I had been absent for a long time. Outside the front door there a noisy group, clamor and confusion. I pushed myself through and got to the door. It was open and I entered. Those outside did not follow me in although the door was still open.

Inside I went from room to room and was astounded at the size, beauty, and novelty of the various rooms and halls. I could not remember why I had ever left. However, on closer inspection I saw that everything was covered with dust, webs, and was generally run down. In one room the floor was covered with nut shells and other remains suggesting rodents had invaded the house.

I began to pick up the remains and collecting them into a pile. One mass of junk I picked up resembled a dead animal, perhaps a mouse. I quickly dropped it and when I did the animal woke up. I was repulsed and frightened. But the animal started to eat the shells and other remains, so I moved the pile near to it and it continued to eat and clean the mess up. I then tried to get the animal to move by nudging it with my foot. It snarled at me at snapped at my shoe. Meantime it was growing. At first it had been about five inches in length and was bare, but soon it had doubled in size and was growing fur. It no longer snapped at me, but it knew that I wanted it to move and it didn't want to. After a catch and go game I finally caught it by the tail and carried it outside where I thought it could find plenty to eat and be happy.

I then continued to explore my house, noting various fireplaces, some of brick and curious spiral staircases. I was intrigued by the multi-leveled arrangement of the halls and rooms. Finally I reached the attic and found a room filled with pieces of stored furniture, chests, cabinets, bookcases, some carved and all closely packed together in the available space. I was figuring out how to gain access to one of the chests, when I saw the animal coming up the stairs. It had re-entered the house and was evidently looking for me. It had grown to about four feet in length and was now covered with a beautiful coat of fur. I was alarmed and distraught that it had come back. It headed straight for me, but instead of snarling and snapping it put its head on my knee and nuzzled me. I patted it and it lay down and seemed like a large friendly dog. I sat down and it put its head in my lap and I hugged it. There was a new mutual understanding between us, an exchange of warmth. I told it that it could stay. And then it seemed to speak to me, not to my ears but to my mind. I understood that we were really working together on some important task for which we needed each other.

DREAM 034.P51

ALIENINT.WPW

March 5, 1993

See also #3-93

For several decades there have been afoot projects designed to search for extra-terrestrial intelligence. Most of these are predicated on the premise that what we are looking for is very much like us, derived from an anthropocentric notion of intelligence. The logic says, We belong to the class Intelligent, Those who belong to this class must therefore belong to the class human-like. This is of course nonsense. The class intelligent is bigger than the class humans and human-like. We cannot say that all that lies within the class intelligent must also lie within the class human-like.

In practice, the SETI (Search for Extraterrestrial Intelligence) people are not looking for alien intelligence, they are looking for alien radio engineers. Further, there are alien intelligences here on earth. These range from plant life to teenagers. We would do well to encounter and communicate with the local aliens before searching for extra-terrestrials.

What are some general clues to use in a search for extraterrestrial intelligence (as contrasted with such anthropocentric specifics as they will use the 21cm band).

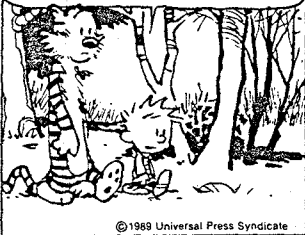
- Whereas the cosmos itself may be intelligent, we are looking for local intelligences. This means we are looking for local anomalies, departures from structures and processes that seem to be global, which we call the laws of nature. We are looking for the existence of local complexities (or simplicities) that appear to be at variance with natural or global phenomena. For example, we are looking for localities where the Second Law of Thermodynamics seems to be subverted. Or since the natural order appears to be built on the infrastructure of 1/f noise. Local departures from 1/f patterns either in the direction of simplicity or complexity could suggest the presence of local intelligence, something besides nature alone operating.
- Higher forms and complexity seem to occur along the interfaces of two regimes. On the surface of density discontinuities, along fault lines, along sea shores, wherever two diverse domains juxtapose. We should therefore expect anomalies such as life and intelligence to occur in the interstices.

edge

The Cosmological Principle:
"What is local is global"
If not true, refutes the above
We only see our own local
in the cosmos

CLASSIC CALVIN AND HOBBS Bill Waterson

I WAS READING ABOUT HOW
COUNTLESS SPECIES ARE
BEING PUSHED TOWARD
EXTINCTION BY MAN'S
DESTRUCTION OF FORESTS.



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SOMETIMES I THINK THE SUREST
SIGN THAT INTELLIGENT LIFE
EXISTS ELSEWHERE IN THE
UNIVERSE IS THAT NONE OF IT
HAS TRIED TO CONTACT US.

11-9

Y

21.

GPMYST.WPW DISK:GRTPYR May 9, 1990, March 10, 1993

SOME EPISTEMOLOGICAL APHORISMS

It seems even more of a mystery than nature itself, that we can create an object which can contain so many projections (or has so many facets).

Knowledge of nature is not extracted from nature, it is projected onto nature. And a Cosmos or Universe is that which is capable of receiving all projections.

A mystery is like a partially silvered glass. It is both a window and a mirror, opening onto the Other but also showing us to ourselves.

In nature evolution tends toward increasing complexity. But human history is filled examples of loss of complexity, loss of knowledge and understanding. (Sometimes called the Fall of Man)

We project ourselves into other cultures just as we project ourselves into nature.

The epistemology of archeology (exploration of artifacts) is not the same as the as the epistemology of natural science. Someday when we encounter ruins left by aliens, we shall need a third epistemology.

The detection of life and intelligence in the universe boils down to determining what is local as against what is global. Structures and activities that are local, not global, reveal the presence of opposition to the second law. Universal or global laws belong to the natural order, local anomalies belong to something like life and intelligence.

Behind the divisible there is always something indivisible.
Behind the disputable there is always something indisputable.

Chuang Tzu

Sometimes we discover patterns in our own creations that we did not consciously build into them. Whenever we get more out than we have put in, we have tapped into truth.

Investigations and theories are often directed by prejudice and the "truth" that they come up with is often only one truth from many and that truth is the one which their predisposition has led them to discover.

Roger T. Stevens
Fractal Programming in C p21

The pentagon is the figure of life, growth, and change.
The hexagon is the figure of crystals, snowflakes, and stasis.

(Y)

SOME EPISTEMOLOGICAL APHORISMS

page 2

The method of our time is to use not a single model but multiple models for exploration. [cf Fritz Zwicky] The technique of the suspended judgement is the discovery of the twentieth century as the technique of invention was the discovery of the nineteenth.

Marshall McLuhan

We are called to confront nature and the cosmos with the multi-faceted, pluralistic approach of art rather than the mono-view of science. *and religion*

Electric circuitry is orientalizing the West. the contained, the distinct, the separate--our Western legacy--are being replaced by the flowing, the unified, the fused.

Marshall McLuhan

In the last analysis magic, religion, and science are nothing but theories of thought; and as science has supplanted its predecessors so it may be itself superseded by some more perfect hypothesis, perhaps by some totally different way of looking at phenomena.

Frazer

In his **Accent on Form** L.L.Whyte regards pattern as the dynamic idea of the science of the future, just as number, space, time, atom, energy, organism, mind ,unconscious mind, historical process and statistics have each in turn been the dynamic ideas of the past, serving as he says, "directly as instruments for understanding the universe. To understand anything, one must penetrate sufficiently deeply towards the ultimate pattern. Only a new scientific doctrine of structure and form, i.e. pattern, can suggest the crucial experiments which can lead to the solution of the master problems of matter, life and mind."

Diagram p137

FORMS AND PLACES OF MYSTERY

Certain forms invite projections onto themselves. And some such forms can accept many projections. For example, the Great Pyramid of Cheops has invited and accepted countless projections on its form, scale, and structure. People have projected onto it history and prophecy, mathematical relations, esoteric and practical applications. Similarly, the great cathedrals have invited and accepted projections some of which may have been actually built in by the designers, but others have come into existence only later through the interaction of the cathedral with the mind and feelings of the beholder.

What is it in certain forms that invite and allow projections to be accepted?
What is it that makes certain forms and places psychologically powerful and mysterious?

Is it

- ☐ Their history? Have past events stored their energies in the place or form. For example, does a library in some sense contain the presence of all who have written and been written about in the books on its shelves, or is some spirit present in the words themselves? Or on a battlefield is an essence of all who have sacrificed themselves there somehow forever present?
- ☐ Time? Does time by itself encrust a form or place with spiritual essences. Does just being ancient make a form or place assume magic and mystery?
- ☐ Place itself? Are some locations per se energy centers? Are there special places on the earth having properties that are found nowhere else? Sacred mountains, rocks, groves, rivers...
- ☐ Complexity? Are some forms intriguing because they are puzzles, their complexity inviting exploration in the hope of finding a hidden key, a secret treasure?
- ☐ that they Liberate us? Do some forms and places have the power to free us from the prison of the mundane? After we have been there we somehow know that our lives will forever be different.
- ☐ Ambiguity? The form can take on many aspects, and it cannot be reduced to one meaning, one interpretation. Its nature forbids an unequivocal categorization. This intrigues and challenges us.

Which, if any or all, explain the power of these forms to entertain our projections? Perhaps such forms are mirrors, they reflect some part of ourselves back to us. We **recognize** something in the form that we already know because it is in us. Or perhaps such forms have "frequencies" with which we **resonate**. Both recognition and resonance are aspects of projection. Lastly, we may say that a mystery permits no orthodoxy, and consequently there can be no heresies.

FORMYST.WPW 03/10/93

THE NEW PARADIGMS

The new paradigms of thought and values [Einstein Quote]
from Belonging to the Universe

Fritjof Capra's five new paradigms (from Belonging to the Universe)

- Parts ---> Wholes
The interdependence of all phenomena and their embeddedness in the cosmos p70
- Structure ---> Process
- Objective ---> Epistemic
The epistemology selects the universe
Constructivism as the new epistemology p124
The observer is a necessary part of the observation
What we observe is not a world that exists objectively and is then represented, but rather a world that is ^{selected} created in the process of knowing {[the cognitive operator]}
- A building ---> A network as metaphor for knowledge
No up no down, no foundation, no primaries, only network
{[What about islands and continents?]}
- Truth ---> Approximations

Other changes mentioned by Capra

- Rational ---> Intuitive
Rational is the compartmentalized, the catagorized
- Analysis ---> Synthesis
- Reductionism ---> Holism
- Linear ---> Non-linear

Thinking and values are intertwined. Consequently new paradigms of thought will create new values. p74

- Self assertion ---> Integration
- Competition ---> Cooperation
- Expansion/Growth ---> Conservation/Sustainability
- Quantity ---> Quality
- Domination ---> Participation

Other developments: "The Great Dialectic" p125

Two Systems Schools von Neuman input-output, information processing
Norbert Wiener cybernetics, self-organizing

NewThink. WPW 03/11/93

page two

Other Paradigm Shifts

- Zwicky-McLuhan Multiple Model Approach
 - Listen to more than one composer's music
 - Mystery does not allow an orthodoxy
- Parallel Computing
 - The end of linear, sequential, mono thinking
 - The end of monotheism (---> pan-entheism)
- Pluralism
 - Tolerating and valuing differences
- Facetism, Complementarity, Aspectism,
 - Defacetize vs. generalize and abstract
- Whyte's Patternism
 - Pattern, Structure, Process
 - Information, Matter/Energy, Will
- Einstein's Absolutes ---> Invariants
- McLuhan's Suspended Judgement
- Thompson's Juxtaposition
- THE ROLES OF ANALOG AND DIGITAL
PLATOONING (e.g. clothes - washing)

INPUT and OUTPUT

Considered as a physical system, the human's material inputs are food and oxygen, material outputs are feces, urine and CO₂. The informational inputs are sense data--sight, hearing, smell, taste, touch and inertial conditions; informational outputs are actions--speech, expressions, poses. Energy flows are involved in all.

*Thou shalt
not live
by bread
alone*

It is documented that when one is blind the sense of feel is enhanced. When one or more senses are impaired, others oftentimes become more sensitive. In the case of Helen Keller, some complex integration of touch and smell data allowed her to synthesize other forms of information. If we extrapolate these properties of sense deprivation to the state of death, when it is assumed that all sense input ceases, what happens?

It must be said at the outset that all that is known for sure concerning physical death is that output ceases, what happens to input is uncertain. With living metabolic operations and functions halted, it has been reasonable to assume input also ceases. But with the above noted changes in information channels under sense deprivation, may not there be informational enhancements of some sort in the state of death? And does information processing continue to take place somewhere"

At this point we must question whether there exist in living systems informational inputs besides those of the five (or six) senses. We must also question whether all informational processing takes place in the brain and sensory organs. Did Helen Keller form her informational patterns solely from a gestalt of touch-smell-taste data or were there other channels in operation? Do "insights" come from synthesizing sense data or from other channels? Are intuitions arrived at by information processing or through non sensory channels? Are there informational containers other than the physical? Can we design experiments to decide? Are experiments on the properties of living systems of any use in penetrating the informational barrier of death?

Soul1.p51

March 23, 1993

THE APOSTLE'S CREED

I believe in ... the resurrection of the body
and the life everlasting.

Date: ?

THE NICENE CREED

We look for the resurrection of the dead
and the life of the world to come.

Council of Nicea c. 325 A.D.

Bible

Jehovah's Witnesses ^{claim} point out that nowhere in the Bible is the concept of soul put forth. They hold that the soul is a pagan, not a Hebrew concept, and that resurrection has nothing to do with soul, but refers to the body. (Immortality for the Hebrews resided primarily in the House of Israel). This Hebrew view is also present in Christianity through its early interpretation of the Resurrection. The Apostle's Creed refers to "the resurrection of the body". The later Nicene Creed, under Greek influence, changes to "resurrection of the dead", not specifying body or soul. However, in twentieth century Christian theology a differentiation has been made between 'revivification' and resurrection. Some modern theologians reject completely the idea that resurrection is to be interpreted as a revivification of the body. This forces either something like the individual pagan soul into Christian dogma, or an interpretation of resurrection in some other spiritual sense.

Soul is mentioned 6 times in Matthew

4 times in Mark

3 times in Luke

in I Thes

twice in Hebrews

in I Peter

in II Peter

in III John

what about ?

"What profit it a man
to gain the whole
world yet lose his own
soul" ?
Matt 16:26

13 times in the New Testament

Holy Spirit

Ps 51:11

Isaiah 63:10

" 63:11

3x in

Old Testament

9x in Deut

2x in Joshua
in Judges

3x in I Sam

2x in I Kings

2x in II Kings

in I Chr

3x in II Chr

11x in Job

50x in Psalms

11x in Proverbs

7x in Isaiah

1 in Jeremiah

2x in Lamentations

4x in Ezekiel

1 in Micah

110 times in the
Old Testament

TRANSFG6.WPW

revised 11/19/93
see 93-51, 25
April 10, 1993also 91-13
91-22
91-84
30 Draft see 94-40

THE GREAT DIALECTIC

The Transfiguration is an event in the Gospels which is generally ignored by most churches. When not overlooked, it is usually relegated to a minor role and interpreted in a superficial manner. This may be because the message of the Transfiguration threatens the traditional power establishment which controls the church. Indeed, it was only on the eve of the Reformation that the Roman Church finally recognized this event in its calendar. It was recognized by Anglican groups only at the end of the nineteenth century. Another reason the Transfiguration may have been overlooked is that the most important messages are invariably camouflaged by more flashy and obvious messages. Only those of great discipline are not misled and can see the real message. However, there are theologians and even branches of the church that significate the Transfiguration as the most fundamental event recorded in the Gospels. In this time when the church as well as many secular institutions are caught up in imperative crises of change, it is requisite to reexamine the content and context of the Transfiguration.

What marks the Bible, as well as many other holy writs, is its containment of wisdom of many levels. The mythic and historic stories contain not only moral and ethical lessons but also allow metaphorical interpretations leading to even more profound understanding. For example, the story of the Exodus, Moses leading the Children of Israel out of their bondage in Egypt: Metaphorically, the Children of Israel were led out of the bondage of idolatry to limited gods, to a theophany on

Or the God of Abraham

Mount Sinai revealing to them a new and higher God. And **there exists no greater liberation from bondage than that of a new theophany.** That the Jews in possession of this precious experience, rejected iterated Exoduses to remain idolaters to this particular Exodus is their tragedy. And this takes us to the central message of the Transfiguration: the ongoing iteration of theophanies and Exoduses, leading to ever higher and deeper understanding of the nature of GOD.

The story of the Transfiguration is reported in the Gospels of Matthew (17:1-13), Mark (9:2-9), and Luke (9:28-36) and amplified by Peter (II Peter 1:16-19). That the Transfiguration is missing from the Gospel of John, has been explained by holding that the entire Gospel of John is an amplification of the Transfiguration. An amplification, yes, but the amplification of a particular interpretation. The Transfiguration, like other Mysteries, contains multiple meanings which are manifested in accord with level of spiritual understanding. To settle for truncated understandings decreed by ecclesiastical politicians is to abandon Living Faith.

In the Gospels the Transfiguration is the form given to the message that the path to God is through successive theophanies. This message is made much more explicit in the New Testament story of the Transfiguration than in the story of Exodus. However, the message is still largely misunderstood and ignored. Priesthoods and power elites with a lifetime investment in an

Paradoxically, it is the old theophany
that becomes the primary obstacle to
the birth of the new. Though Pharaoh
or Herod would put the infant to
death, in time the outcome is always
that the child survives and leads
the people to a higher place.

The Transfiguration is for Christians
what the Exodus is for Jews

An event of liberation - going to a new place

But why only one exodus?

Why blindness to the archetype
and focus on a single manifestation?

established theophany find it difficult to accept change and vigorously oppose the new. The history of crucifixions, burnings at the stake, and religious wars all attest to this aspect of the structure of the archetype of theophany change. It is a paradox that the old theophany which serves as the launch pad for the new also becomes the primary obstacle to the birth of the new. Though Pharaoh or Herod would put the infant to death, in time the outcome is always that the child survives and leads the people to a higher place. It is the outcasts and those with no stake in the existing order who are the apostles of the new.

The first occurrence of an archetype is never recognized as an archetype. The second occurrence is not seen as an archetype but as having been prophesied by the first occurrence. So it is with the parallel occurrences in the Old and New Testaments interpreted in the New Testament as fulfillment of prophecy.

The theophany of Moses and the theophany of Jesus were not seen as steps in a succession of many divine revelations, but as a prophecy and its fulfillment. This interpretation cut off belief in the possibility of subsequent occurrences of the archetype and of the revelation of new theophanies. The theophany of Jesus was taken to be final. The Christ Event was held to be unique and could occur only once. This belief fitted well with the ecclesiastical power centers' control of religion and with their ability to continue their control. It allowed all challenges to their authority to be labeled heresy and subdued in the name of God.

In spite of this doctrine of finality the Jews still look for the coming of the Messiah

and the Christians for the second coming of Christ. The true nature of the archetype penetrates the distortions imposed by those who would forbid God from again making contact with the physical world. Not even the doctrine that the second coming is for judgement deflects the hope in human hearts for seeing more clearly what we now see dimly and only in part.

But the archetype of successive theophanies is not peculiar to Judaism and Christianity. It is exhibited in the development of many other religions. It is found in the avatars of Vishnu, in the multi returns of Quetzalcoatl, in the successive Hopi exits and entrances through the hole in the floor of the kiva, in Maitreya the Buddha yet to come, in Kukai's ten levels of religion leading finally to Shingon.

At some point in the archetype comes the moment of liberation. The moment when freedom finally arrives. The euphoria of this moment has few rivals in human experience. It is experienced in the first days of a revolution when potential becomes boundless before actualization sets in. It is experienced when an idea is first heard that suddenly removes the shackles of frozen authority. It happens when something is learned that immediately is recognized as true though never before articulated. It is the passage of the Red Sea. It is the moment of discovery of the empty tomb. It is the experimental verification of non-locality. It is at such times that we get a brief glimpse of who we are and what we can become. And of all liberating ideas, a new theophany --a new vision of God-- is the greatest.

ITEMS OF LONG SHELF LIFE

The shelf life of good mathematics is virtually infinite.

--Ian Stewart

The Problems of Mathematics p312

In noting that some of the mathematics developed by the Babylonians, Egyptians, and other ancient peoples is still valid, basic, and in much use today, Stewart challenges us to list other items in our culture that have as long a shelf life as does good mathematics.

- ☐ The Hebrew notion of "The Chosen" appears to have great vitality and survival value. It has kept a people's identity alive for some 3500 years. This is one of the few political notions in this class.
- ☐ The Pythagorean notion that number is the basic foundation of the cosmos, while related to Stewart's claim for mathematics, goes deeper. From time to time there is a glimpse confirming Pythagoras' view, even though there has been no school of philosophy nor religion that has incorporated his perception. While lacking continuity Pythagoras "religion" produces an occasional prophet. A Kepler, an Eddington, a Dirac. It may be that the lack of ^{visible} continuity, punctuated with occasional new insights, is the most enduring form of long shelf life.
- ☐ Great works of art have long shelf life. The immediate question is what differentiates a great work from the rest. The cave paintings of Lascelle, perhaps tens of thousands of years old are noted not only for their age but for their aesthetic appeal.
- ☐ The appeal of freedom. Whereas freedom has many meanings and shades, the basic notion of liberation from a status quo is timelessly vitalizing.
- ☐ The so-called Perennial Philosophy

SHELFLIF. WPW

WORKDISK

APRIL 14, 1993

4/19/93
~~02/19/86~~

ON AUTHORITY

Authority is a mental construct. It is a concept that the Chief, the Pope, the Academy,... will be the source of the criteria for my decision making. In this authority is projected. We project authority then place ourselves under it. But projections may be given and they may also be withdrawn. Power is intimately associated with authority. Direct power limits my options for action. The indirect power of authority limits my options through placing mental limits on my option space.

Authority works because each of us as a helpless child had to place ourselves under the authority of our parents to survive. The process becomes habitual. Further the confusion created by a large option space leads us to seek constraints. At times it is a relief to have some one tell us what to do, what not to do. All choice and decision is difficult, correct choice and decision demands maturity.

Authority supports itself by threats to resort to direct power. You will either limit your option space or we will do it for you. However, once the projection of authority is withdrawn, the power behind it quickly erodes. No power can sustain itself for long once its authority has been lost. The first step in revolution and rebellion is the withdrawal of authority. Preceding this is usually loss of respect. i.e. respect is usually the first aspect of authority to be lost.

Authority should belong to every individual, as with sovereignty according to Thomas Jefferson.

The most powerful authority operating in the world is the authority of the past. This includes established institutions, traditions, customs, and habits. We live in a past oriented society. We hold that the past is this best guide to the future, but this idea is breaking down in our times.

-



Thinktank Reflections

We come together, all from a different place. In this state enriching and rewarding dialogue is not possible. Before there can be anything beyond a random exchange of self advertisements, there must be a common language, a common intent, a focus on shared problems and on questions mutually deemed to be important. This does not mean we must be in agreement, it means that we must be accepting of each other. We must be open and patient and willing to take the time to build trust and to create a common code book which will allow us to understand one another. Only after this is done can we agree on the rules of the game we wish to play together. But having agreed on the game and its rules it does not mean we have to always play on the same side. The game we play may evolve as we grow in trust and understanding. We must not limit our potential with specific expectations, we must remain detached from results, yet alive to the assurance that something better than we could prescribe will in time happen.

We begin by telling our own stories. Indeed, people must tell their own stories, write their own operation manuals, assemble their own prayer books. But, paradoxically, we do this through sharing. Without sharing we cannot recognize our own uniqueness and the uniqueness of each other. Through telling our stories and listening to each other we also come to treasure our common humanity. If in hearing you, I find you have articulated something that has eluded me, but which I recognize as valuable for me, I can adopt it, coopt it into my own operating manual. It is only in this manner that we proselyte. I hear you, question you, distill your message, then take that portion that feeds my needs.

Then we each write our discoveries for ourselves--an act of self-reference sealing our growth and transformation. But there is value beyond this. When we recognize something, a laugh, a tear, an inspiration, a revulsion, then it becomes a part of our **common story**--our Book of Common Prayer.

THEOTHTK.WPW 04/20/93

WHITBY.P51

April 20, 1993

SOME NOTES ON THE SYNOD OF WHITBY

Christianity had been in the British Isles for some four centuries when in 597 Pope Gregory sent Augustine (of Canterbury) to Britain to convert the islanders. The indigenous church located in Ireland, Scotland, Cornwall and Wales was based on Christian traditions going back to St. Joseph of Arimathea, and followed forms and doctrines attributed to the Apostle John. Some even termed the British church the church of St. John as counter to the Roman church of St. Peter. The indigenous church was also seasoned with many Celtic traditions including important clerical roles for women and reverence for the earth. After the arrival of Augustine a Roman church was established in Kent and the two Christian traditions fell into an adversarial position, largely because of a power take over initiated by Rome. The outward issues, however, were not power but were formulated around the difference in the way the date of Easter was determined and in the manner monks cut their hair.

Finally matters came to a head and a synod was called in the year 664 to settle the disputes. The synod met in the east coast town of Whitby in a monastery governed by the abbess Hilda (who had founded this monastery and another at Heruteu). Advocates of both traditions debated the way in which Easter was to be calculated. King Oswy of Northumbria, who had been urged to summon the synod, was to decide which tradition should be followed. The Celtic position was defended by Bishop Colman and Abbess Hilda, the Roman position by Bishop Agilbert and the Abbot Wilfrid. It seems that Oswy was strongly influenced by his wife, Queen Eanfled, who had come under the influence of Canterbury and he decided in favor of Rome on the basis of an historical argument for the relation between Passover and Easter.

The Celtic church based on more significant differences than the date of Easter did not disappear overnight, Colman returned to Ireland and Hilda later became St. Hilda, but over the next hundred years the Celtic traditions gradually lost support in the face of the homogenizing power of Rome.

The Roman clergy accused the Celtic church of the heresy of Pelagianism, (Pelagius, a British theologian c.360 - c.420), which held

- Adam would have died even if he had not sinned.
- The sin of Adam injured himself alone, not the human race.
- New born children are in the same condition as Adam before the fall, i.e. infants, though unbaptized, have eternal life.
- The whole human race does not die because of Adam's sin, nor will the race rise again because of the resurrection of Christ
- The law gives entrance to heaven as well as the Gospel.
- Even before the coming of Christ there were those entirely without sin.

References:

Bede's Ecclesiastical History of ^{the English People} ~~Britain~~ St. Hilda (614-680)

on Hilda p 184, 187, 243-7, 327

Synod of Whitby 187-193

Pelagian Heresy - p 662

Also Encyclopedia Britannica

power01.p51

April 23, 1993

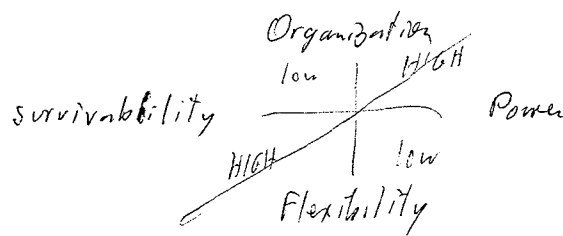
Power and its exercise is a function of level of organization. The degree of organization, even with other things not being equal, manifests itself as power in competitive situations.

Survivability, on the other hand, is a function of flexibility and adaptability. Total effectiveness therefore depends on a high level of organization, but which at the same time is "meta-organized" for change.

Granting the above, the question is how do we measure the level of organization? The physical world, the German Army, and the Mormon Church are examples of highly organized systems, all seem to have displayed effectiveness and so far survivability.

The constitution of the United States has certainly contributed to the effectiveness of this country, and its capability of being modified has allowed it to survive for over 200 years, somewhat of a political record for modern times. But American's strength has always lay in their ability to organize. Whereas the Germans are perhaps better, they handicap themselves by being frozen into a certain inflexibility.

The story is told of an international scientific meeting held some 25 years after World War II, in which at a lunch some American scientists and German scientists were sharing the same table. It developed that one of the Germans and one of the Americans had both been in intelligence in their respective armies. After talking it was learned that they had been opposite each other during an important engagement. They began to reminisce the details of the battle and what lead up to it. It turned out that both sides knew the exact battle plans of the other side. The American asked, "If you knew all of that about our plans, how is it that we won that battle, you had the superior forces. The German replied, "I know that, the difference was that we Germans always carry out our plans, but you Americans never do, you each seem to do what you damn please and our command couldn't cope with that."



EAST IS EAST AND WEST IS WEST AND THE TWAIN HAVE MET IN CALIFORNIA

Hva

The descendants of the Celts driving west met the descendants of King Wha driving east at Promontory Point Utah in 1869. Both then came to California.

Two journeys that began in the fjords of Scandinavia ended in California, completing a circling of the earth. One group of Northmen, the Varangians, went east across the Baltic, down the great rivers of Muscovy, across the steppes, to the Pacific, and with the Dane Bering to Alaska. They did not halt until finally they reached a river they called Slavianska, the Rio Russo, now the Russian River in Sonoma County, California. The same Northmen went west, twice conquering the British Isles, first as Danes, second as Normans. After preliminary drives to Iceland, Greenland, they came to Vinland, now called America. Six centuries later the descendants of the Normans came again to America this time to stay and to push west until they came to the same Pacific. They raised a flag of independence in Sonoma while their distant cousins were selling their holdings at Fort Ross. The Northmen had encircled the world.

But all of this is only a prologue to the real meeting of the East and the West that is now taking place in California. It is as though two great cultural waves have clashed and the aftermath is the emergence of a great synthesis, perhaps the greatest since first century Alexandria when Greeks, Romans, Persians, Hebrews, and Egyptians melted together their heritages into the alloy we now call Western Culture. Today in California the Dharma has arrived from Tibet, Shingon from Japan, Dao from China, Orthodoxy from Alaska, Romanism from Mexico, Protestantism from Oklahoma, Judaism from New York, Poma Indians and other tribes already here, and scientific empiricism from local labs. In this modern Alexandria, a new melting pot has been ignited. One encounters the colors of many splinter sects surfacing on this cultural brew. But what the final alloy itself will be it is too early to say; all we can definitely say is that the change will be as sweeping as that of 2000 years ago.

EAST WEST. WPW

04/30/93

THE SPECIES OF SPACE

METRIC SPACES

CURVATURE PARAMETER

$K = 0$ EUCLIDIAN OR FLAT SPACE

An "interface" space *

Has the property that form and scale are independent †

$K \neq 0$ NON-EUCLIDIAN SPACES

Positive curvature: Closed spaces

Negative curvature: Open spaces

DISTANCE \nleftrightarrow SEPARATION

SCALE \nleftrightarrow FORM

DIMENSION PARAMETER

PROJECTIVE SPACES

TOPOLOGICAL SPACES

HAMMING SPACES

SIMILARITY SPACES

SEPARATION \propto FORM DIFFERENCE

Form-metric dependence (not same as form-scale dependence)

COGNITION SPACES

INFORMATION SPACES

ENTITY \nleftrightarrow RELATION

NODE - LINK

INTEGRITY SPACES

TOTAL RELATIONAL MODULES [NODES]

No internally severed relations

GLOBAL

LOCAL

PARTIAL RELATIONAL MODULES

ORGANISMS

SOLIPSISTIC MODULES

No contexts

* Flat euclidian space, the space in which we physically exist, is an interface space between open and closed spaces. Being an interface it is not surprising that it is a breeding region for complex systems.

† In non-flat metric spaces form and size are not independent. There are no such things as similar triangles, for example, i.e. same shape^{b, c} different size. On a sphere of fixed radius the angles of an equilateral triangle depend on the size of the triangle.

Combine Hamming space ^{to} ~~with~~ ^W expanding Riemannian Space
Form changes

Theorem: ~~for~~ ^{for} objects to maintain constant separation in Hamming space their size must change.

~~Unchangingness~~ ^{expanding} in physical space
⇒ change in Hamming space

No change in Hamming space requires
change of size in exp phys space

A Parmenides Universe (now + always the same)
requires from a Heraclitean physical universe
change of size

An alternate to Empedocles way of
reconciling Parmenides and Heraclides

Unchanging Ground demands changing figure

But figure can remain
unchanging when ground changes

What is the effect of a change
in Hamming space?

the ground?
context

An expanding universe
is a special case of
a Heraclitean space
w/ an particular kind of change

(But the change must be
relative to something unchanging
or changing at a different rate

Poincaré
Night of Scale Doubling

Additional Notes

ONTAPH1.WP5

DISK: EPIONTOLOGY

March 2, 1990

APHORISMS RE ONTOLOGY-EPISTEMOLOGY

We never hear the music of the spheres because we hear it all the time.
Pythagoras

Uniform sameness is philosophically indistinguishable from non-existence.
Eddington

Apart from recurrence, knowledge would be impossible; for nothing could be referred to our past experience.
Whitehead (The World of Mathematics Vol I p411)

Apart from regularity of recurrence measurement would be impossible. In our experience as we gain the idea of exactness, recurrence is fundamental.
Whitehead (ibid)

Sameness may be endless repetition of the same pattern regardless of the simplicity or complexity of the pattern.

LK

It follows from Eddington that a breakdown in sameness is necessary, if not for the creation of existence, then for the manifestation of existence. It follows from Whitehead that recurrence is essential for recognition and therefore for knowledge. These two precepts delimit the knowable world between a certain absence of sameness and recurrence of sameness. If LK's definition of sameness is to be assumed then the existence occurs only where there are irregularities, and knowledge is restricted to those patterns which are irregularly recurrent. We are restrained by Parmenides on one side and by Herakleidos on the other.

For manifestation, there must be both recurrence and irregularity, some parameters that repeat and some that do not. For example, there must be both cyclicity and linearity. A class of objects which have this property are fractals.

Recurrence is a form of self reference. Uniqueness is a form of irregularity. The manifested universe is therefore consists of the unique and the self-referential.

Music & Ontology

cf The odd and even harmonics in music
provide provide
diffusion recurrence
(sameness)

With no odd harmonics — no notes, no music

With no even harmonics — no recurrence, no recognition

Spontaneity (Virgin Birth)

Passed on Father to Son
even unto the 7th

Interjecting into chaos' ^{Generation ... until then he a Virgin Birth} deterministic stream

The Flapping of the butterfly's wing is spontaneous

(Spontaneity > both random and entelechy)

Maxwell's singular point (event)

Can we effect a spontaneous event?

or like grace - an interjection from outside

Scraps
cf. 93-#34, #35

Compare the tracks in chaos space
with the tracks in Hamming Space

How does figure change → ground change

well adapted & readily adaptable

and there will always be Remorovsky's
who are both well adapted and readily adaptable

It is essential to view reality as the interplay
of two worlds

which modern science does not do

Reality, being ^{existence}, occurs at the interface
between two worlds

in no man's land
between Seminary ridge
and Cemetery ridge

there is
reality!!
The presence
of battle

NOVUM COSMOLOGIUM

We experience the world as a flat euclidian space. We find that objects of any given form may exist in different sizes. However, this property of form and size independence is peculiar to flat spaces, those with curvature $\kappa = 0$. In non-flat spaces, those in which the curvature $\kappa \neq 0$, a change in size of the object effects a change in form. For example, in such spaces there could be no such thing as similar triangles, the angles of an equilateral triangle would depend on the size of the triangle.

there is
another relation
between information
and energy

In non-flat spaces if one wished to have an object of different size with the same form as a specified object, the **scale** of the space would have to be changed, which is to say the curvature or its reciprocal, the radius of curvature would have to be changed. For example, if we wanted an equilateral spherical triangle of twice the size but having the same angles, the radius of the sphere would have to be doubled. On an expanding sphere, if objects were to remain the same size their forms would have to change or if they were to preserve the same form their size would have to change. For spaces with $\kappa \neq 0$ form, size, and scale are interdependent.

⇒ form has
to do with
information content

⇒ some
info
⇒ size
increase

- Energy of Expansion
- Negentropy Form

In an expanding non-flat universe the shapes of galaxies would have to change if their size did not remain proportional to the universe' radius of curvature. Co-moving coordinates are used in describing expanding models. In these models, form is preserved because everything is assumed to "co-move", i.e. to expand. But if this assumption is wrong, morphology would depend on the scale of the universe. We traditionally interpret a change of form as being caused by the action of forces. Thus scale change may be what underlies force. [All of this is sort of like coming to the general theory of relativity through the back door. The dynamics of the universe are manifestations of its geometry, with the force involved being gravity.]

Another example of a form that changes with scale in an expanding non-flat universe, is a sine wave or some other cyclical form. The wave-length, like the sides of a triangle, would change with scale. How does this ^{is} ^{related to} explain the red-shift?

Does the universe expand simply because $\kappa > 0$? Is there some imperative to preserve form?

An imperative to preserve form could
cause a $\kappa \neq 0$ universe to be unstable.
e.g. information seeks to preserve itself.

see also COSMODEL.P51

DISK COSNUMBERS

05/04/91

69

Can we decide $\kappa > 0$, or $\kappa < 0$
on the basis of how form changes
as size increases?
In a closed space (e.g. on a sphere)
as $R \uparrow$,

Is the octant
triangle an
exception?
A property of
orthogonality

Feb 26, 1995 Work out the implications of $R \neq 0$ on scale & form

If scale \uparrow \Rightarrow an energy effect but also an deformation effect,
Do these change type with entropy/negentropy?
etc.

We notice similar forms in nebulae & on earth

This suggests $R=0$ for the universe

The straight geodesics in the Coma Nebula $\Rightarrow R=0$

THE CITY AS COSMOS

Throughout history, in the thinking of those who dwell within its bounds, the polis has been the cosmos. For the city dweller of ancient Athens, Alexandria, or Rome; of modern New York, Paris, or Moscow their city represents the universe. Its story is regarded as the only story, its culture as the only culture, its troubles as the only troubles, its deity as the only God. What is it that allows the city to substitute for the cosmos? It is not self-sufficiency, and certainly not all inclusiveness. Yet there is some degree of inclusiveness reached by the city that permits it to sustain exclusiveness, some degree of openness that supports closure and allows the city to represent the cosmos.

To explore this phenomenon let us put cities as we understand them and the universe as we understand it, into juxtaposition. What commonalities exist?

- In a study of cities from ancient to modern times, the architect and city planner C. A. Doxiadis found that, whatever the mode of transportation, and whatever the size of the city, the time taken to cross the city was always less than a fixed amount. In other words if r is the radius of the city, and v is the available velocity afforded by the current mode of transportation, then

(1)

$$\frac{r}{v} \leq t \quad \text{or} \quad \frac{r}{t} \leq v$$

In juxtaposition, in the case of the universe, we find that whatever the size R and whatever the time T , it is the velocity that is always bounded

(2)

$$\frac{R}{T} = V \leq c$$

where c is the velocity of light.

- A second parameter defining both the city and the universe is the global and local density of matter.

PARADES.WPW

DISK:WORK02

May 15, 1993

When I first moved to Pasadena in 1941, we lived a half block from Colorado Street, the street along which the famous Rose Parade moved every January 1. I saw many of the parades, very convenient, having to walk only a few steps. I heard then that there was another city in California that had a Rose Parade, somewhere up north. Today I got to see that other Rose Parade-- the Santa Rosa Rose Parade. There is a big difference. For one thing, the only roses I saw were on the first car in the parade, a car carrying our Congresswoman, Lynn Woolsey. But it is unfair to compare, The Pasadena Parade is a national institution, the local parade, only Sonoma County.

But I am writing this not to compare rose parades, but to compare the times, the parades I saw and participated in as a boy in Denver in the twenties and thirties and the parade I saw today in the nineties. Sometime about 1928 the G.A.R. held a reunion in Denver and we were privileged to see a parade of veterans of the Civil War near the end of their era. Most rode in cars, but there were quite a few who marched, some with shouldered rifles. That parade was supplemented with veterans of World War I, men mostly in their thirties. Today, there were a few WWI veterans in cars and only about 6 who marched. I have seen quite a bit of history in passing parades. Our turn is next to be last, we who are the veterans of World War II.

But the impression I got today was that, whatever the war, the veterans are all fading away. They now seem to belong only to history. It is not only the Vietnam Veterans who are not honored, no veterans are the national heroes they once were. If this reflects our feelings about war, then it is well. Being ignored out of distaste of war is a sacrifice I feel most veterans willingly accept. Maybe at last there is light at the end of the tunnel.

Another impression, there were relatively few flags today compared with 60 years ago. And I was surprised to notice that no one salutes or puts their hand over their heart when the flag passes, which used to be de rigueur. (Also no one takes off a hat when the flag passes, maybe because there are no hats.)

What I am trying to say is that I have lost sight of so many things that have radically changed in my time. Seeing the parade today made me aware of some of them.

THE ZEITGEBERS

THE FERMIONIC CLOCKS

The general theory of relativity postulates the equivalence of space-time geometry and the dynamic or mechanical properties of matter. The equivalence of geometry and dynamics allows alternate descriptions of the world; the properties of space and time may be formulated in terms of the properties of energy and matter and vice versa. An example of this is the equivalence of mass densities and temporal periods. We have dimensionally,

$$(1) \quad [T^2] = \left[\frac{R^3}{GM} \right]$$

More specifically, if T represents the fundamental temporal period associated with a spherical object of radius R and mass M , then

$$(2) \quad T^2 = 4\pi^2 \frac{R^3}{GM}$$

where G is the Newtonian gravitational constant. Equation (2) is recognized as the Schuster period of a gravitating body, i.e. as the limiting case of Kepler's third law when the orbiting radius is equal to the object radius. Equation (2) may be rewritten in the form

$$(3) \quad T = \sqrt{\frac{3\pi}{G\rho}}$$

where ρ is the mass density. It follows that the frequency associated with a mass is proportional to the square root of the mass density.

Three specific examples of equation (2) give us the fundamental periods of three universal clocks. The first of these is the *atom clock* based on the proton mass m_p and the Bohr radius a_0 .

$$(4) \quad \tau^2 = 4\pi^2 \frac{a_0^3}{Gm_p}$$

The second is the *baryon clock* based on the ^{nuclear} ~~electron~~ radius r_e and the proton mass m_p .

$$(5) \quad T^2 = 4\pi^2 \frac{r_e^3}{Gm_p}$$

More density clocks:

$$\left. \begin{array}{l} \tau = 120 \text{ minutes} \\ S_{h\oplus} = 84 \text{ minutes} \end{array} \right\} \Rightarrow 7 \text{ day week} = 1440 \text{ m}$$

$$\left. \begin{array}{l} \text{Rot}_{\oplus} = 24 \text{ hr} \\ S_{h\oplus} = 84 \text{ m} \end{array} \right\} \rightarrow 7 \text{ day week}$$

$$\frac{\text{Rot}_{\oplus}}{S_{h\oplus}} = \frac{1440}{84} = \frac{120}{7}$$

120 Sh in 7 days

$$\frac{R}{\tau} = \frac{1440}{120} = 12 \Rightarrow 12 \tau \text{ per day}$$

$$\frac{\tau}{S_{h\oplus}} = \frac{120}{84} = \frac{10}{7} \Rightarrow 7 \tau = 10 S_{h\oplus}$$

$$S_{h\oplus} = ?$$

Boson Clocks (Radar, Light travel Time)
mass = 0

Interaction of Fermion + Boson clocks

$$\text{diam } \oplus = 12,800 \text{ km}$$

$$c = 3 \times 10^5 \text{ km/sec.}$$

$$\frac{12800}{3 \times 10^5} = 0.0426 \text{ sec} \times \pi = 0.135 \text{ sec}$$

i.e. The period light around earth c. 8 h3
c.f. Lepton Time

Check light in earth orbit

Light around sch time

D

page 2

The third is the *lepton clock* based on the electron radius r_e and the electron mass m_e .

$$(6) \quad t^2 = 4\pi^2 \frac{r_e^3}{Gm_e}$$

Using the values [1]

$$\begin{aligned} a_0 &= 5.291772 \times 10^{-9} \text{ cm}, m_p = 1.672623 \times 10^{-24} \text{ gm} \\ r_e &= 2.817941 \times 10^{-13} \text{ cm}, m_e = 9.109390 \times 10^{-28} \text{ gm} \end{aligned}$$

The following values for periods and frequencies are obtained:

CLOCK	PERIOD	FREQUENCY
ATOM	$\tau = 7239.94 \text{ sec}$ ^{7237.93 <i>was</i> m_H} _{m_p}	0.000138 hz
BARYON	$T = 0.0028134 \text{ sec}$	355.44 hz*
LEPTON	$t = 0.120537 \text{ sec}$ ⁵⁵	8.296 hz

* The frequency 355.44 hz lies between F (349.23) and F# (369.99) above middle C.

These values are approximately 2 hours and 40 seconds for the *atom clock*, 2.8 milliseconds for the *baryon clock*, and one eighth second for the *lepton clock*.

The ratios of the periods are given by:

$$\frac{T}{\tau} = \alpha^3, \quad \frac{t}{T} = \sqrt{\mu}, \quad \frac{t}{\tau} = \alpha^3 \sqrt{\mu}$$

where α is the fine structure constant and μ is the ratio of the proton to the electron mass.

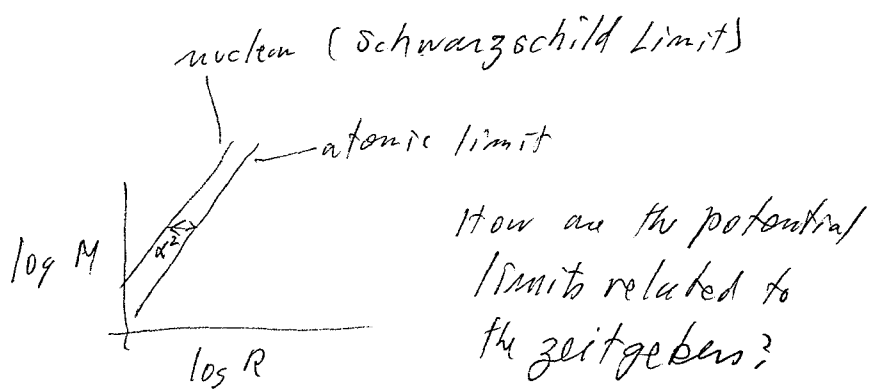
$$(\alpha = 7.297 \ 353 \ 08 \times 10^{-3} \text{ and } \mu = 1.836 \ 152 \ 701 \times 10^3) [1]$$

THE BOSONIC CLOCKS

Bent's and Synchro

$$f_1 + f_2$$

$$f_1 - f_2$$



THE PARTICLE ZOO

AUTOMATE EMIGRATE EVAPORATE

Automate, Emigrate, or Evaporate--America's choices in the global economy.

The World Future Society

When labor costs go up you automate, emigrate or evaporate.

These choices are given as economic choices for businesses in the 90's. However, their validity and comprehensiveness extends far beyond economics and the present decade. These are actually the choices open to all species under the forces of evolution. In broader terms, the choices become: for automate, **emerge** become a new more complex organism with new attributes; for emigrate, **adapt** find a new niche in which your present attributes will permit you to survive; for evaporate, **become extinct**.

In the case of human societies, the traditional choices have been emigrate or evaporate. Find new grazing ground or die, go where the fish are or starve, move on to where the soil is not exhausted or perish. Gradually with the technological improvement of tools, weapons, and general know-how, automate became a viable alternative to emigrate. Indeed, had not automate become a significant alternative, Malthus' limit would long since have been reached on a global scale. Today, since emigrate is becoming increasingly less an option, there has arisen a cult of eternal salvation through automation. Forever "more for less through science and technology" (e.g. Buckminster Fuller). Perhaps these cultists are right and Malthus can be kept eternally ^{at bay} away by technological innovation. But there are indications, such as the pollution back lash, that the total cost of automate has been ignored and the cultists are living with an illusion. With automate joining emigrate as obsolete options, must we conclude that only evaporate remains?

On reexamining the triad: Automate-Emigrate-Evaporate we find that a fourth alternative has been overlooked. This is **stagnate**. What a dirty word! It repels us more than evaporate-extinction. Grow or die is one of our deepest imperatives. To live in balance, to abandon the Principle of Plenitude, the aspirations of the cancer cell, is of utmost repugnance to us. Galapagos turtles have been around for ages, neither automating, emigrating, nor evaporating. So survival is possible if one is willing to substitute sustain for grow. But in our heart of hearts we know we will never go this route. Small may be beautiful, but turtles are not aesthetic.

On further reexamining the triad, we find that we may have given too narrow an interpretation to automate. If it is indeed but a special form of emergence, what are the more general forms that may be available to us. One of these is for automation-growth-emergence to take place in some dimension other than the economic. To live in balance and sustainability with the ecology and transform ourselves from economic consumers to cognitive consumers, appreciators and creators. To explore ourselves and see what we can become in cooperation with the world, to find what we can contribute to the world and abandon our drive to subdue it.

See Revision of This

94-#43

See also
ON PATTERN -92

IS GOD A MYSTERY?
A CONGERIES?
A FANTASY?

May 25, 1993

409

- aristotelian
2 valued
all or none

MYSTCONG.WPW
ORIGINAL May 23, 1993

DISK:EPIONTOLOGY

MYSTERIA

See Also

into the Unknown

ON MYSTERIES AND CONGERIES

ex. shalock Holmes sense

A MYSTERY IS A SET OF POSSIBILITIES ONLY ONE OF WHICH IS TRUE.

A CONGERIES IS A SET OF FACETS ALL OF WHICH ARE TRUE.

Fermi-
Dirac

A FANTASY IS A SET OF SPECULATIONS NONE OF WHICH ARE 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 ?

2) The second category we shall term a congeries. 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.

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 congeries.

EXAMPLE: Afterlife. Is there life after death, if so is it a mystery or a congeries? 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 congeries?

example: Ontology

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

*(usually per
substitution)*

Pre-existing (fixed)

Mystery - - - - - | - - - - - Congeries

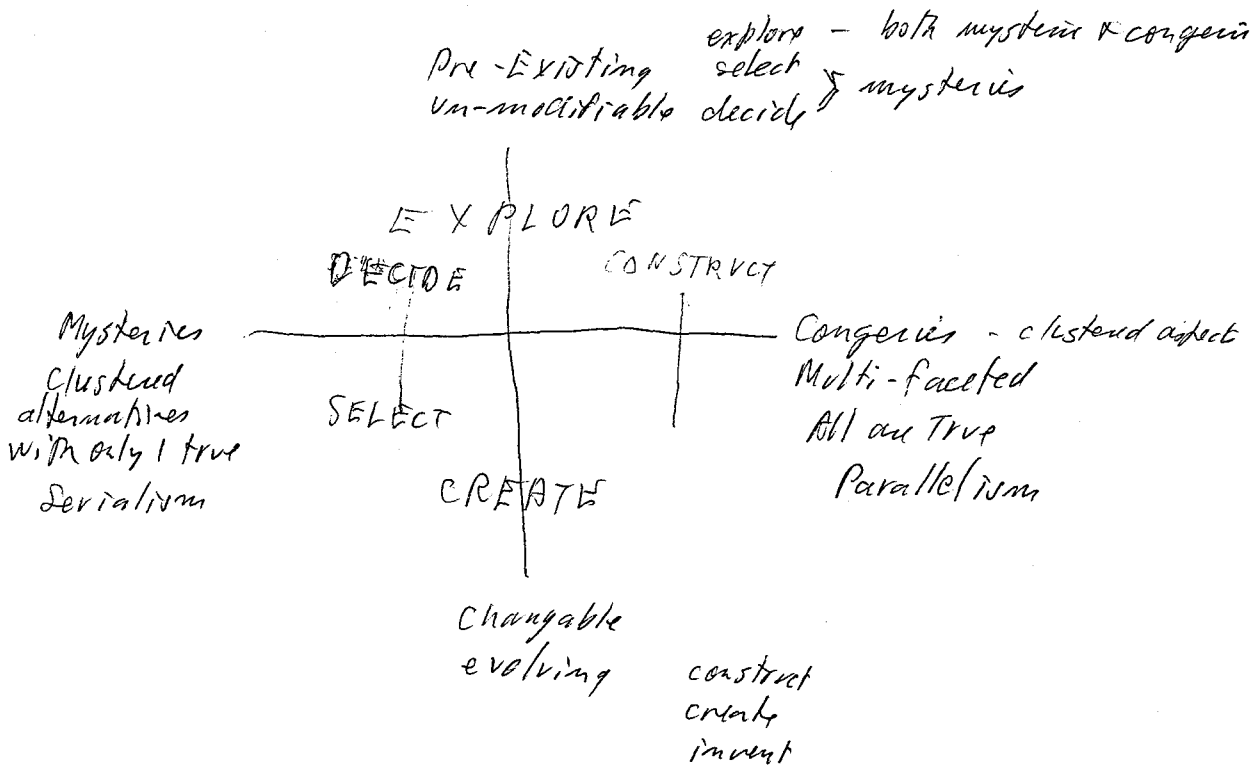
1 true

Currently Created

(changing)

many true

In congeries there are no decisions



If \exists but 1 reality

- Eddington: if No alternatives \rightarrow parameter disappears
loss of ~~free~~ dimension of existence
- Alternatives are illusions
- Mystery differs from a collection of alternatives
only one of which may be true by the alternatives
being "highly concentrated in similarity space"

What about the mystery for which there is no solution
We look for a solution when there is none

e.g. -

cf "it exists"

more of which in the
- Fantasy

page 2.

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 7 beats)

But do we sometimes convert a congeries into a mystery by imposing the imperative of decidability, the monistic constraint that only one member of the set is "true". Humans feel uncomfortable with alternatives, ambiguities

not this, not this, ... NOT
→ BRAHMAN

MYSTERY AND ORTHODOXY ARE INCOMPATIBLE

IN CONGERIES THERE ARE TOO HERESIES

The trade-off between Mystery and Orthodoxy
St. John St. Peter

Orthodoxy is closure

we approach the world as though it were a mystery,
when actually it is a ^{congerie} ~~mystery~~ ^{Mysterium}

From E.T. Bell's DEVELOPMENT OF MATHEMATICS p 363

The principles of mechanics are founded
on postulates not on truths. (Lagrange)

02/18/94 §1.1 - Science differentiates its models from the world,
A model is not a description of the world, but
a structure based on postulate - which are arbitrary

Why then do these models seem to afford descriptions
of the world? It is not the nature of the model
that makes this so, but the nature of the world.

The world is a ^{mysterium} congerie. Many alternate models
and sets of postulates would also appear to
describe the world - not the same facet of the
world that the postulates of physics describes,
but some other facet.

The most famous example of ^{mysterium} congerie is the Indian Fable
of the blind men and the elephant. Each explored
a facet of the elephant, leg, trunk, ear, tusk, ...
Each generalized as to what the elephant was.

We do the same in sampling a leg of the universe
(or is it the trunk?) And think what we have
learned about the leg is about the universe

MORE NOTES ON BUDDHISM

05/16/93

Suffering in Buddhism is best translated as **frustrated striving**

1. All is either desire or aversion.
2. Impermanence is the law of the world.

Buddhism is practical, it is empirical, test it, Practice!
 {[Practice is a process, it should not be goal oriented]}

Buddhism has no personal god.
 Buddhism may be described as being "polymonotheistic"

{[Christianity and Judaism focus on community, Buddhism focuses more on the individual path.]}

05/30/93

The Four Truths

1. The preciousness of the body
2. Impermanence
3. Karma cause --> effect
4. Things go wrong (Murphy's Law)

These four truths must be internalized before there can be **metanoia**.

The Four Pots

The upside down pot that can receive nothing.

The cracked pot that can be filled but quickly loses whatever is poured in.

The contaminated pot that poisons whatever is poured in it.

The pot that is whole, clean and right side up ready to receive and retain that which is poured into it.

The Sower (Mark 4:3-8)

Some seed fell by the wayside and the fowls of the air came and devoured it up.

Some fell on stony ground, where it had not much earth, and immediately it sprang up. But when the sun was up, it was scorched and because it had no root it withered away.

Some fell among thorns and the thorns grew up and choked it and it yielded no fruit.

And some fell on good ground and did yield fruit that sprang up and increased.

first 03/18/98

PLANTAN1.WPW

DISK:WORK02

June 21, 1993

THE TWO KINGDOMS OF LIFE

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

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

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

PLANTS		ANIMALS	
Minimize V/S	$\frac{\text{volume}}{\text{surface}}$	Maximize V/S	
~ repulsion forces		~ attraction forces	
tuned to 365 day cycle		tuned to 24 hour cycle	
Magnesium #12 wt 24.312 (3x8)		Iron #26 wt 55.847 (7x8)	

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

	$n \times 4$	n	$C - x$	
C	12	3	1d	Other Carbon life at $n \times 4$
Mg	24	6	2d	
Fe	56	14	14d	
earth	Si 28	7	7d	} \Rightarrow the week
air	N 14		7d	

Tuned to Seasons
i.e. Sun

Tuned to the Moon

We customarily use the scale

inanimate
viruses
mono-cellular
plants
animals
humans

If we make the scale on parameterization
with regard to what "software" the hardware has access to:

inanimate
cellular
plants animals
trees humans
:
:

i.e. I a bifurcated scale with
the possibilities in the plant
kingdom as great as in the animal

We have yet to learn to communicate
between levels and branches

On the subject of V/S

09/26/94

Contrasts
in juxtaposition

also
St. Sophia
Byzantium
and various
stupas

- The Round Towers and beehive Cells of Celtic Monasteries
e.g. Glendalough (St. Kevin) c. 600 C.E.

- The Minarets and mosque domes of Islam
e.g. Samarkand c. 1100 C.E.

- The Trilon and perisphere, World's Fair NYC 1939
- Solar Towers and Telescope Domes, Mt. Wilson 1920's
- Rockets and Terradomes on Mars 21--



The Trilon minimizes V/S, The Perisphere Maximizes it.
etc.,

Presence of The two extreme geometric examples of $\frac{V}{S}$
seem to be important for the creation
of Sacred Space

astrol01.wpw disk:work2 July 12, 1993

Some notes on the signs of the zodiac:
The following symbols were taken from Eileen's
24 pt, 1 2 3 4 5 6 7 8 9 0 - =



TABLE I

CARDINAL	FIXED	MUTABLE
ARIES	TAURUS	GEMINI
CANCER	LEO	VIRGO
LIBRA	SCORPIO	SAGITTARIUS
CAPRICORN	AQUARIUS	PISCES

TABLE II

FIRE	EARTH	AIR	WATER
ARIES	TAURUS	GEMINI	CANCER
LEO	VIRGO	LIBRA	SCORPIO
SAGITTARIUS	CAPRICORN	AQUARIUS	PISCES

NOTE THAT THE FOUR FIXED SIGNS IN TABLE I ARE THOSE MAPPED ONTO
THE FOUR EVANGELISTS:

ST. LUKE THE OX
ST. MARK THE LION
ST. JOHN THE EAGLE (THE HIGHER SCORPIO SIGN)
ST. MATTHEW THE MAN

SOME AUGUST THOUGHTS

August is the month of the end of beginnings and the beginning of ends. The end of beginnings with the final end of a series of Roman Empires with the termination of the Holy Roman Empire (1806), the end of the 'era of enlightenment' with the invasion of Belgium beginning World War I (1914), the finale of Watergate (1974). Also the beginning of ends with the beginning of the end of World War I with the "Black Day of the German Army"(1918), the beginning of the end of World War II at Hiroshima (1945), the beginning of the end of 'we know not yet what' with the invasion of Kuwait (1991). August is indeed the month of the initiation and consummation of change. It is fitting that the Feast of the Transfiguration, which is the profound symbolizer of all change, should occur in August.

After weeks of summer interruptions, I return today to look at the world. The view is an August view-- depressing if we eschew change. From whatever perspective, personal, local, national, global, the developments are changeful and distressful. Personal: health matters, teeth, ears, eyes. Family: Art out of work and having to sell house, Nan out of work, Suz in job bind, bookstore depressed, Clayton in marriage dilemma. Local: Judy in cash flow crunch with health problems, Amory's bicycle stolen, all stressed out, everybody working harder, earning less, traffic vicious and dangerous, opaque school boards, unbending clerics and parishioners. National, crime ubiquitous, violence everywhere, greed rampant, downsizing, joblessness, drugs, homelessness, partisan and me-first politicians, general indifference, shoddy standards and values, egos on power trips. Global, floods, hurricanes, ozone depletion, wars, fragmentation, intolerance, one set of rules for me another set for you. Indeed, All of creation seems to groan with suffering.

More specifically:

- Ronald Reagan's and Al Neuharth's America: the American Dream as the sacred right to get rich. This version of the American Dream is Socrates' royal lie. It violates that other America, the America of the Constitution and bill of rights.
- The randomizing of time: The dephasing and desynchronizing of clocks and calendars. Invoices and billing, days notice, charges and payments instead of occurring at fixed intervals are increasingly occurring at odd intervals.
- Rights without obligations, e.g. the media. The Media are a third power with the checks and balances largely underdefined. Who sets the agenda, the government or the media?
- Rights destroy obligations, guaranteeing the handicap certain rights should not relieve the rest of us from our obligations.

America's Royal lie:

1) You too can become rich

2) Political Freedom \Rightarrow Total Economic Freedom
Liberty Liberty

ASK #132

These must be bound together and the link
~~are~~ unquestioned

- There are increasing numbers being excluded from access to the market place. Two things must be remembered: 1) Those with no investment in or access to the existing order *may even welcome* do not fear its destruction. 2) "Those who oppose peaceful stepwise change make violent change inevitable"-- John F. Kennedy

- When it comes to productivity and jobs, productivity per technology prevails. The unquestioned premise in our culture is that, whatever the social consequences, technology must always march on.

- There exists ^{a curious} an economic engine driving car crimes. Cars are stolen and chopped, the parts resold at a greater price than the car would bring. This is a result of the costs of car repairs and the insurance structure. It is curious to have any whole valued at less than the sum of its parts. Here we have an economic anomaly generating the social anomaly of car crime. (cf the bounty on rats)

AUGUST SIEGE

aug15.wpw

DISK: WORK02

SUNDAY
August 15, 1993

Today brought a vivid experience: a direct encounter with a burglar. About 12:30, after my lunch bowl of soup, I decided to write up some instructions with the word processor. Hardly seated at the computer, when I heard a loud crash that shook the entire house. I thought earthquake, but no shaking, then I thought a sonic boom. But then there was a second loud crash. I began to feel that whatever was going on was more local than an earthquake or sonic boom. Then I heard other noises, tinkling and shuffling. That got me up and I went down the hall to see what was happening. Through the kitchen door I saw the deck door had been shattered, that meant human beings, burglars. Then as I rounded from the hall into the living room, I stood at about six feet distance face to face with a rather hefty young Mexican about 5'7" wearing a baseball cap and a mustache. Since I had had the warning of seeing the shattered door, and he was under the impression that no one was at home, I was slightly less surprised than he. I shouted at him: "Who are you? What are you doing here? You have no business being here. Get the hell out of here right now." He was very much startled but raised his right arm and pointed his index finger at me as though he held a gun. He shouted back at me, "Who are you?", then turned and went out. I hesitated to follow, not knowing how many others might be outside. Quite confused, I decided to dial the sheriff, 211, that was wrong, 911. I finally got through and relayed the situation, reporting that no one was apparently still in the house but that there might be several outside. They kept me on the phone for a few minutes, that was good, I didn't exactly feel like going outside and confronting whatever might be there. After a bit, I felt they were not going to invade again and probably had left. The sheriff's lady said it was O.K. to hang up. I then called Judy and asked her to come over. The sheriff arrived about 15 minutes later and went through all the angles with me, then Judy and the kids arrived. She surveyed the situation and called Gary and Danielle to come over and help. Amory and I went to buy a couple of sheets of plywood to cover the smashed doors. Then everyone pitched in cleaning up the glass which was all over the living room, and helping put up a temporary plywood wall until the sliding door could be replaced. I am very grateful to these fine friends who came to my aid when I was pretty much in a state of shock.

A curious thing I felt later. Some hours after the siege bombardment, I began to feel in some strange way somewhat simpatico with the burglar. We had both experienced an intense moment of surprise and fright. In some sense our sharing of this experience has made, at least me, feel somewhat comradely toward him. We had been through the same frightening ordeal together. Sharing this seemed more powerful in bonding us than the power of all the adversarial elements that separated us. But if the encounter had been unequal this could never have happened. However, I am very grateful he turned and left.

Thursday:

This has been a week of re-runs of what happened last Sunday. The minor damage is the broken doorknob, the heavy damage is to my state of mind. I try all kinds of scenarios to heal myself. Finally, I found an acceptable one. The intruder was not a human burglar, it was Siva in the disguise of a human. He shouted back at me - "Who are you?"

I've been fumbling to find an answer ever since.

Perhaps in some way yet to be learned. This was a "gift of Siva".

The efficacy of the shouting goes back to the principle of righteous anger and its great power. Elijah saying to King Ahab (1 Kgs 22:28) "The Lord says you have killed Naboth and possessed his vineyard. In the place where the dogs licked up the blood of Naboth, dogs will also lick up your blood." And Nathan's denunciation of David, for the murder of Uriah and the taking of his wife, Bathsheba.

^{see 2 Samuel 12:7, 9, 11-12, 14}
In neither case did the kings ^{in effect} oppose the prophets

I was yelling at the burglar - "You have violated a sacred space, get out before disaster strikes". He left.

FORUM

Ending life's adventure

By ARIANNA HUFFINGTON

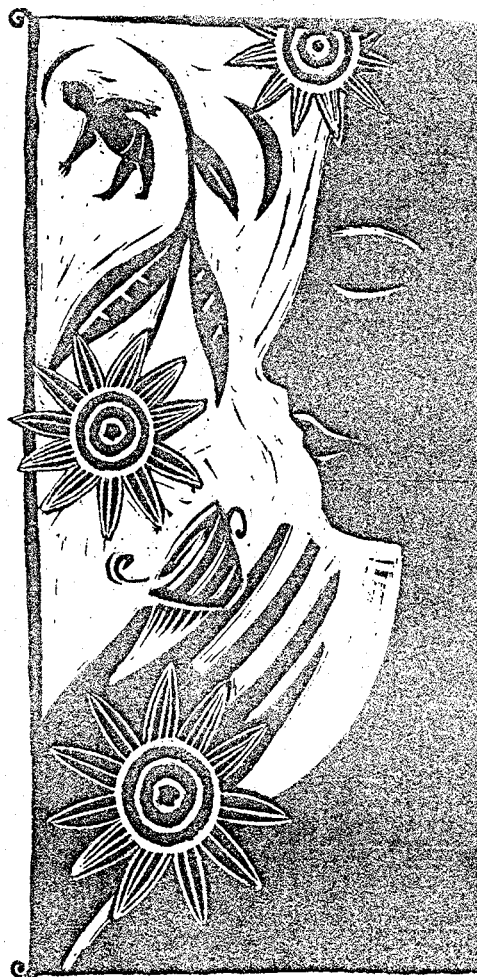
My mother died three and a half months to the day after my father's death. She had a massive stroke in my home, which has always been her home, too. In the two weeks since her death, I've realized that she and I had an unspoken deal: hers would be the rhythm of a timeless world, a child's rhythm; mine was the rhythm of the modern world.

While I had the sense every time I looked at my watch that it was later than I thought, she lived in a world where there were no impersonal encounters, where a trip to the farmer's market happily filled half a day, where there was always enough time for wonder at how lovely the rosemary looked next to the lavender. In fact, going through the market with her was like walking through the Louvre with an art connoisseur — except that you could touch and smell these still lifes.

She left no will and no prized possessions. Which is not surprising, considering her habit of giving such things away. For instance, there was the time we tried to give her a second watch — and within 48 hours she had given it to someone else. So what she's left us with is the treasure house of her spirit. It's as though certain gifts can be bequeathed only at one's death, that while she was alive she so embodied the qualities of nurturing, simplicity, unconditional loving and a connection with the sacred that it felt as if those dimensions of life were taken care of for all those blessed to be in her orbit. Why learn how to cook when you live with the Iron Chef? And now that she's gone, I know that however difficult, inconvenient, even unnatural it may be for a while, there is only one way to honor her — by living differently, living more like she lived.

The last time my mother was upset with me was when she saw me talking with my children and opening my mail at the same time. She despised multi-tasking. She believed it was a way to miss life, to miss the gifts that come only when you give 100 percent of yourself to a task, a relationship, a moment.

The night before she died, we were hav-



DONNA MARIE GRETHEN-TONG/LOS ANGELES TIMES SYNDICATE

ing dinner at the home of some good friends. Near the end of the evening, our host asked everyone to talk about an important experience from their lives. When my mother's turn came, she talked about a moment that not only defined her but how she believed life should be lived. It was the moment when she had been captured by the Germans in the Greek mountains where she had gone to join the resistance to the Nazi occupation of Greece.

"Put your guns down," she told them in

flawless German. Miraculously, the soldiers complied — perhaps dumbfounded by the 23-year-old's audacity. Because she was fluent in German, she quickly became the translator between the prisoners and their captors. When the soldiers asked her if there were any Jews among them, she unhesitatingly replied, "No." They were, in fact, hiding two Jewish teen-age girls. When she had told this story to my children once, I remember one of them asking "So, Yaya — you lied?" "To save two lives? You bet I did!" she replied, giving them an important lesson in ethics and in courage.

That story — which ended up being the last one she told in her life — really captured her: her indomitable spirit, her defiance of authority, her trust in life, her fearlessness. There was a magnificence in the way she approached everything in her life. Especially her role as mother. She brought me up to believe that there was nothing I should be afraid to try while at the same time making it clear that she would love me not one iota less if I failed.

As I scan our lives together, I realize that there isn't a single corner of my life that isn't filled with her. She is, without question, the foundation of my existence. So much of what I believe in and think is important was formed around the kitchen table in our little apartment in Athens. Hours spent talking about everything, while she kept producing more and more food. And then a little bit more food. I'm convinced that she absolutely believed that something terrible would happen to her children — and her grandchildren and her friends — if they went 20 minutes without eating.

Food was the most obvious — but the least important — way she sustained those around her. She used to say that the goal of life is not to see what we can make of it, but what it can make of us. Well, she made of life a grand adventure — and it made of her a magnificent tour guide.

Lincoln once said that "everyone is born an original, but most die copies." She was an original from beginning to end.

Arianna Huffington's column is distributed by the Los Angeles Times. E-mail her at arianna@ariannaonline.com.

It's not just German soldiers
who obey orders, almost everyone
obeys the first thing shouted at
them.

HIERARCHY AS AN INTEGRATIVE THEME

Ever since the first conference on hierarchy, held in 1968 in Huntington Beach, California, there have been questions concerning how many things we are talking about when we use the term hierarchy. The conference was called on the premise that hierarchical structures, which occurred in many natural and artificial contexts, on some level of abstraction possessed a commonality which was the result of some deeper physical or informational principles. The conference adjourned with this suspicion confirmed for some of the organizations we call hierarchies, but also with the disturbing question of "to how many sets do what we conventionally call hierarchies belong." We have been left with the task of cataloguing the various species of hierarchies, before we can hope to penetrate more deeply into what optimization principles may be involved in their origin. After a quarter of a century the subject is still open and since no one has been able to write the "second sentence" on hierarchies, interest in the concept has subsided.

An educational project has recently been organized around the idea of integrative themes. Among themes proposed--structures common to various areas of science, hierarchy promptly came to mind. But is hierarchy an integrative theme or unifying schema? With the term used to refer to so many different things it is possible that the only commonality is semantic. This is patently not so, but specifically what are the commonalities and what forms do they assume?

1 So what are hierarchies? Let us see if we can classify them.

2 The term 'hierarchy' has many meanings, but in most modern usage it designates a structure or organization involving discrete levels.

2.1 Some examples or species of hierarchies

2.1.1 Dominance hierarchies--for purposes of control, *influence*

2.1.1.1 Government

2.1.1.2 Military

2.1.1.3 Corporations

2.1.1.4 Church

Heaven's Hierarchy, Heiros

2.1.2 Taxonomic hierarchies--for classification and retrieval

2.1.2.1 Animal and plant taxonomies

2.1.2.2 Library decimal systems

2.1.2.3 Outlines

2.1.2.4 Structural trees

- 2.1.3 Ranking hierarchies--for ordering *Hindu Caste System*
 - 2.1.3.1 Biological scala *scala are non-branching trees*
 - 2.1.3.1.1 proterzoa, viruses,...
 - 2.1.3.2 Geological ages and strata
 - 2.1.3.2.1 archeozoic, proterozoic, paleozoic,...
 - 2.1.3.3 Physical particles
 - 2.1.3.3.1 quarks, baryons, atoms, ...
 - 2.1.3.4 Astronomical bodies
 - 2.1.3.4.1 meteoroids, planetessimals, planets,....
 - 2.1.3.5 Computer software
 - 2.1.3.5.1 ROM, operating system, applications,...
 - 2.1.3.6 Numbers and dimensions in mathematics
 - 2.1.3.6.1 integers, rationals, irrationals, ...
- 2.1.4 Modular hierarchies--for economy
 - 2.1.4.1 Social groupings *clusters*
 - 2.1.4.2 Cosmological clustering *groups*
- 2.1.5 Miscellaneous hierarchies *aggregates*
 - 2.1.5.1 Fractals [continuous hierarchies]
 - 2.1.5.2 Looped hierarchies [Hofstadter]
 - 2.1.5.3 Zipf's Law [rank vs. log(size)]
 - 2.1.5.4 Pyramid sales schemes
 - 2.1.5.5 Chain letters
 - 2.1.5.6 Russian dolls

2.2 Problems with the term 'hierarchy'

- 2.2.1 Political associations with oligarchy and tyranny
- 2.2.2 Social associations with elitism and authoritarianism
 - 2.2.2.1 Anti-democratic, anti-egalitarian
 - 2.2.2.2 Widespread impression that all hierarchies are dominance hierarchies

2.3 Problems with the concept of hierarchy

- 2.3.1 The concept is too general
 - 2.3.1.1 Loosely and variably defined
 - 2.3.1.2 Not all ordering or nesting schemes are hierarchies
 - 2.3.1.3 Hierarchies confused with networks
- 2.3.2 Opposition to the notion of levels and multi-levels
 - 2.3.2.1 Philosophical dogmas re one level reality

- 3 Attributes or features of hierarchies
 - 3.1 Ordering or ranking in discrete levels
 - 3.1.1 Discontinuous or discrete 'vertical' structure
 - 3.1.2 Existence of gaps
 - 3.2 Progression across levels in at least one common parameter
 - 3.2.1 Levels are self similar but distinct
 - 3.2.2 Levels must be homomorphic (many to one) not isomorphic (one to one)
 - 3.3 Upper levels have powers or capabilities beyond those implied by parametric progression (emergence)
- 4 Functions of hierarchies: Why do they exist?
 - 4.1 Advantages *Handle large numbers*
 - 4.1.1 Only structure supporting unity with diversity (E Pluribus Unum) *Allows experimentation*
 - 4.1.1.1 Permits heterogeneity, parallelism and pluralism *Creates potential for diversity*
 - 4.1.2 Economies of control and information diffusion
 - 4.1.2.1 Reduction of retrieval and dissemination paths
 - 4.1.2.2 Economies of repetition (subroutines)
 - 4.1.3 Supports emergence *Optimizes as Charles' Night Sky*
 - 4.2 Disadvantages
 - 4.2.1 Complex, no good theory, no real understanding

Not only the term hierarchy, but the term level is ambiguous. If any attribute is common to the concept level, it is discreteness. Levels occupy discrete positions in a continuum, like the integers in the field of real numbers. Levels are separated by gaps and are thus in some sense isolated from one another. We might appropriately then look at the species of isolation in trying to get a handle on the species of levels, and hence on hierarchies.

SOME SPECIES OF ISOLATION:

1. Orthogonality as isolator.
2. Distance as isolator.
3. Frequency as isolator.
4. Speed as isolator.
5. Walls as isolators.
6. Reduced linkage or communication as isolator.
7. Designation, self reference, as isolator.

Levels originating in dichotomic sets.

that are Non-dualistic i.e. not interchangeable

e.g. balls & boxes (statistical mechanics)
content & address

Aristotelean A, \bar{A} logic governs the horizontal
inadequate for the vertical (multi-classes, classes of classes)

LEVEL01.WPW
September 30, 1993

DISK:KINKO

August 28, 1993

See also
Vertical Mitosis
Scraps 91, #31
VERTMIT.P51

ON LEVELS AND HIERARCHY

Both the terms hierarchy and level are used with many different meanings so the concepts are ambiguous. However, it is possible to abstract certain features common to general usage, allowing us to say that:

Hierarchies are representable by two dimensional arrays in which one dimension (the vertical) is discrete and the other dimension (the horizontal) may be either discrete (a matrix) or continuous. The discrete or vertical dimension is a scala which consists of occupied levels separated by empty gaps.

As to levels, if any attribute is common to the concept level, it is discreteness. Levels occupy discrete positions in a continuum, like the integers in the field of real numbers. Levels are separated by gaps and are thus in one sense or other isolated from one another.

- Very generally, levels must possess both similarities and differences.
- More specifically, the occupants of each level must be related to those of other levels by at least one parameter which represents a common property but which has a different value at each level. Sometimes the parameter is measurable, as when it specifies, size, number, age, mass, etc. But in these cases the distribution must be discrete, which is to say there must be some isolation of the levels. For other examples, the common property may not be measurable, such as levels of abstraction, complexity, etc. When not measurable, simple ranking is substituted for a parametric value. Levels may also be distinguished by being related to one another by containment or control.
- Levels maintain their similarity through form (eg. fractals), through function (eg. control), through horizontal internal organization (eg. organisms), etc.
- Levels maintain their discreteness by differing in such parameters as scale, time rates, energy content, communication capability, access scope, etc. And by forbidding vertical movement to certain commerce that is allowed horizontal movement.
- While levels must represent at least one common property that progresses discretely from level to level, the degree of discreteness may lie in the resolving power used in the description.

ESSENTIAL
RELATIONAL
ISOLATION
ITERATION

FOUR SPECIES OF LEVELS + HIERARCHY

SPECIES OF LEVELS

WHERE DOES
NESTING BELONG?

RUSSIAN DILLS?
RELATIONAL

• ESSENTIAL DISCRETENESS

RANK, ORDER

One class of levels is discrete because the levels are mapped onto the positive integers. As remarked, the integers are an example of a discretum embedded in a continuum, in this case the continuum of the real numbers. The discreteness of the integers depends on their intrinsic properties, not upon the action of external isolators. The concept of rank derives from its isomorphic relation to the ordinal integers, for rank is always mapped onto the positive integers. Hence, one class of level, that involving rank, finds the origin of its discreteness in the discreteness of the positive integers themselves. Another example of levels having essential discreteness are dimensions. The addition of a dimension to a system creates another level in the system. Orthogonality is an intrinsic property of dimension that effects discreteness independently of outside isolators. (Orthogonality itself as an isolator is discussed below.)

• RELATIONAL DISCRETENESS

CONTAINMENT, CONTROL, DOMINANCE

A second class of level derives not from ordering alone but from additional relational features among the levels. Examples include actual containment or nesting and actual dominance or control. The ordering of levels depends on some essential physical or informational property.

• DISCRETENESS BY ISOLATION

INHIBITORS, ISOLATORS

A third class of level depends on some variety of isolator to account for the gaps that isolate the levels from one another. This class occurs when the possibility for continuity exists.

related to rank above
rank a special case?

• GROUPING, CLUSTERING, DISCRETENESS BY ITERATION

First a laundry list of some isolators:

1. Walls and fences
 - Tariffs
 - Change of density
 - Change of medium or state
2. Distance
3. Relative motion and speed
4. Temporal period
5. Frequency
6. Degree of linkage
6. Orthogonality as an isolator.
7. Self reference as an isolator.

But wherein
lies unity?

Entritiation and isolation
H

8. Any Difference (Humming Space distance)

PROPERTIES OF ISOLATORS

1. Walls and fences

Fences and cliffs as isolators depend on dimensionality. A fence or cliff may isolate domains in a two dimensional world but is meaningless to birds who live in a three dimensional world. Walls and jungles are examples of isolating barriers effected by a change in density. Moats, rivers, deserts, (and also jungles) are barriers created by a change in medium. Ice, a change in state. Electric fences, a change in potential. A tariff is a fiscal cliff, not an obstacle to smugglers who operate in a third economic dimension.

2. Distance in space

Inverse square laws of force and inverse distance laws of potential underly the effectiveness of distance as an isolator. Both result in the diffusion of linkages. However, for humans distance is an isolator due to the time of travel necessitated by finite speeds.

3. Relative motion and speed

special relativity

October 17, 1993

Every time we eat of the tree of knowledge,
we become aware of some new nakedness. ^a x

A myth is a description of an archetype in story form. An archetype is a pattern-in-time that is forever repeating, though the specifics of place, persons, setting, ... may be very different. Those interpretations of a myth that refer to a pattern that repeats are those that refer to the archetype involved. Other interpretations are more superficial.

For example, the story of Adam, Eve, the tree, and the garden is a myth. It describes an archetype. While the myth has been interpreted in many ways, (even taken literally), it refers to a pattern that is often repeated. We must ask, what is the repeating pattern in this case?

One aspect of the myth that is forever repeating is the eating of the fruit of the tree of knowledge. In our time learning and research are on-going partaking from the tree. The myth first tells us that after we eat the fruit we become aware that we are naked. That is to say, each time our knowledge or awareness increases we become vulnerable. (cf the parable of the cleansed house) One trenchant 20th century example of this is the aftermath of the Trinity explosion of the first atomic bomb at Alamogordo, New Mexico in 1945. Those present were awe struck not only by the power of the bomb, but by the implications of human vulnerability to the decisions that must now be made. Vulnerability is seen here to be related to having to make the correct choices. We become vulnerable whenever we come to a fork in the road. If whenever our knowledge or awareness increases we are faced with choices, we are vulnerable to wrong choice. cusp

But sometimes the nakedness that follows new knowledge does not involve choice, but it still involves vulnerability. In the case of the original Eden story, Adam and Eve's nakedness was the new awareness of their mortality. And mortality was apparently not subject to any choices. [The story holds that Adam and Eve were not mortal until they had eaten of the tree. Was it not rather that they were not aware of their mortality until they had eaten of the tree? Else why was God prohibiting eating of the second tree, the Tree of Life, if they were already immortal?] The story relates that there exists a second tree whose fruit can remove the vulnerability caused by eating of the knowledge tree. [But why should God not want us to remove our vulnerability? And is the only dangerous knowledge the knowledge of good and evil?] What is this second tree? It must be something beside the intellect. [What would the story be like if Adam and Eve had eaten of the second tree instead of the first?] cf
Blagius

Not only
vulnerability
but loss of
access

* Does this possibly have to do with the destruction
of potentiality, see 1995 #21

Two other nakedness stories in the Bible.

St. Mark 14: 51-52

Genesis - Joseph + Potiphar's wife

39

THE ITERATED RE-CREATION OF GOD AND MAN

The Archetype of the Great Dialectic

Antiphony

REWRITE OF

93-26

20 DRAFT Ser 94-40
30 DRAFT

Sacred writs, e.g.

The Bible, as well as many other holy writs, is marked by its containment of wisdom on many levels. The mythic and historic stories contain not only moral and ethical lessons, but when interpreted metaphorically can lead to profound understanding. For example, the story of the Exodus, Moses leading the Children of Israel out of their bondage in Egypt: When viewed metaphorically, the Children of Israel were led not only out of the bondage under pharaoh but were led out of their idolatry, to out of a primitive (view of the) God of Abraham through a theophany on Mount Sinai to the revelation of a God of justice and protection. The vision of this new and higher God was a greater liberation from bondage than the escape from pharaoh. And for all time there exists no greater liberation from bondage than that of a new theophany. But the Jews, though in possession of this experience, rejected later Exoduses and remained idolaters to this particular Exodus. The tragedy of the Jews, and of many others, is in the failure to see specific historical events as but one manifestation of an ever recurring archetype, the ongoing iteration of exodus and theophany, leading to ever higher and deeper understanding of the nature of GOD.

This same archetype is repeated in the New Testament. But not only is it repeated, it is made explicit in the singular event of the Transfiguration. But as with the Jews of the earlier time, the Christians became stuck on a particular manifestation of the archetype and failed to understand the most profound event in the Gospels. This event, the

Transfiguration, except in the case of some of the Eastern Churches, has been generally ignored, relegated to minor significance and superficially interpreted. It was only on the eve of the Reformation that the Roman Church finally recognized the Transfiguration in its calendar. And Anglican groups recognized it only at the end of the nineteenth century. This may in part be because the message of the Transfiguration, that no human view of God is final, was sensed as threatening to an ecclesiastical power establishment that maintains it is the custodian of God for their flock. Another reason the Transfiguration may have been neglected is that the most profound events are lost in the glare of the more spectacular (e.g. Resurrection) and understandable (e.g. Crucifixion) events. Be this as it may, there are theologians and even branches of the church that signify the Transfiguration as the most fundamental event recorded in the Gospels. In this age when the church, as well as many secular institutions, are caught up in crises of change, it is most important to reexamine the content and context of the Transfiguration.

The story of the Transfiguration is reported in the Gospels of Matthew (17:1-13), Mark (9:2-9), and Luke (9:28-36) and amplified by Peter (II Peter 1:16-19). That the Transfiguration is missing from the Gospel of John, has been explained by the view that the entire Gospel of John is an amplification of the Transfiguration. An amplification, perhaps, but the amplification of but one interpretation. The Transfiguration, like

ARCHGTDL, AGW

DISK GTDIAL

11/19/93

Revision of

other Mysteries, contains multiple meanings which are manifested in accord with level of spiritual understanding of the witness. To settle for truncated interpretations decreed by ecclesiastical politicians is to abandon Living Faith.

insert here details Moses
The Transfiguration is the form given in the Gospels to the message that the path to God is through successive theophanies. This message ^{could} be made much more explicit in the New Testament than was possible in the Old Testament story of Exodus. This is because the first occurrence of an archetype is never recognized as an archetype. The second occurrence is also not recognized as an archetype but is seen as a prophetic fulfillment of the first occurrence. Thus the parallel occurrences of archetypes in the Old and New Testaments ^{are} interpreted as New Testament fulfillments of Old Testament prophecies. But even so, the message is still largely misunderstood and ignored. Priesthoods and power elites with a lifetime investment in an established theophany find it difficult to accept change and vigorously oppose ~~their~~ replacement. Crucifixions, burnings at the stake, and religious wars all attest to this aspect of the archetype of theophany change. It is a paradox that the old theophany which serves as the launch pad for the new also becomes the primary obstacle to the birth of the new. *on by the archetypes by recognized for what it is*
Though Pharaoh or Herod would put the infant to death, in time the outcome is always that the child survives and leads the people to a higher place. It is the outcasts and those with no stake in the existing order, not the princes and priests, who ^{are} the apostles of the new order.

The theophany of Moses and the theophany of Jesus were not seen as steps in a succession of multiple divine revelations, but

needs further recognizing

as a prophecy and its fulfillment. This interpretation cut off belief in the possibility of subsequent occurrences of the archetype and of the revelation of new theophanies. The theophany of Jesus was taken to be final. The Christ Event was held to be unique and could occur only once. This belief fitted well with the ecclesiastical power centers' control of religion and with their ability to continue their control. It allowed all challenges to their authority to be labeled heresy and subdued in the name of God. But in spite of this doctrine of finality, Christians still look for the second coming of the Christ just as the Jews still look for the coming of the Messiah. The power of the archetype overcomes the distortions imposed by those who would forbid God from again making contact with this world. Not even the doctrine that the second coming is solely for judgement deflects the hope in human hearts for a brighter vision of God.

But the archetype of successive theophanies is not peculiar to the Bible. It is exhibited in the development of many other religions. It is seen in the avatars of Vishnu, in the succession of Buddhas, particularly in Maitreya the Buddha next to come. It is recounted in the multi returns of Quetzalcoatl, and metaphorically in the successive Hopi exits and entrances through the hole in the floor of the kiva, and abstractly in Kukai's ten levels of ^{consciousness} ~~religious~~ understanding leading to Shingon. This eternal expectancy of the One yet to come supports in no small way the spiritual dynamic of collective religious experience.

At some point in the unfolding of the archetype comes the moment of liberation. The moment when freedom finally arrives. The euphoria of this moment has few rivals in human experience. It is experienced

when something is heard that immediately is recognized as true even though never before articulated, when suddenly the shackles of frozen authority are removed. It is experienced in the first days of a revolution when potential becomes boundless before actualization sets in. It is the completion of the passage of the Red Sea. It is the moment of discovery of the empty tomb. It is the experimental verification of non-locality. It is when we get a glimpse of who we really are and what we can become. And of all liberating events, a new theophany --a brighter vision of God-- is the greatest.

An amplification of the two epistemological levels: *phase* *See 13-93*
EPISTEMA.WPW

- The basic problem of scientific explanation is to find the best model that fits the observations.
- The basic problem of ~~applied~~ *pure* mathematics is to provide a smorgasbord of models from which the scientist may select the most suitable.
- The basic problem of philosophy is to supply one or more meta-models which can contain all extant *models*.

There seem to be several species of existence: material existence, informational existence, numerical existence, spiritual existence, theo existence (the non-existent existence of God), ... We cannot assert whether these different species of existence are independent or exclusive or affirm in what ways they are interdependent. For example, we have no instances or experience of pure information, information totally detached from matter. Materialists maintain that information is an attribute of matter, others hold that matter is "frozen" information. A proper meta-model allows not only for the possible varieties of existence and also for the conceivable ways in which the varieties may be related or unrelated.

Returning to mathematics, in saying that the basic task of mathematical physics (or biology, ...) is to provide a smorgasbord of models from which the scientist may select the most suitable, mathematics is not "queen of the sciences", but is a chef to the sciences. But mathematics is more than a servant to the sciences. It is itself an independent and alternate approach to understanding. Theories are generally tied to observations at several points, but mathematics may sustain an existence independent of observations, data, and sensory experience. The Pythagorean view is that math does not derive from the sensory, but that it derives from number and that number has a different sort of existence than ^{do} material objects.

also Kant's views

MORE ON EXPLORATION

cf UNKNOWN, AGW 7-93
NEWBROD.WPW
December 9, 1993

DUMATCH1.WPW

DISK: EPIONTOLOGY

SOME ADVENT THOUGHTS

THERE SEEM TO BE TWO VARIETIES OF EXPLORATION: 1) THE SEARCH FOR THE COMMON, THE GENERAL, THE UBIQUITOUS, THE REPETITIVE, THE REPRODUCIBLE, AND THE UNIVERSAL; AND 2) THE SEARCH FOR THE INDIVIDUAL, THE UNIQUE, THE SPECIAL, THE RARE, THE MIRACULOUS, AND THE POSSIBLE.

We usually associate science with the first type of exploration. But science is also concerned with such matters as the varieties of organisms, rocks, stars, atoms, particles etc. But science collects "2)" in order to do "1)" that is, science's ultimate focus is on the unity underlying diversity.

Basically "2)" is a matter of knowledge while the construction of a framework to bind together either "1)" or "2)" requires imagination. Einstein said that imagination is more important than knowledge, and Feynman said that too much knowledge is paralyzing. Both of these statements infer that the construction of unifying frameworks is held to be the essence of science.

But is it important to find a framework for binding together the unique? Is it not more important to savor the uniqueness than to try to classify it? Sometimes a scientist focusing on "2)" does so not to build a framework nor to find ultimate unity, but to relish uniqueness for its own sake. Here the work of Loren Eisley comes to mind. But delving into uniqueness in the manner of Eisley is not regarded as science. It departs from the purely objective and focuses on what happens to the observer in making the observation. Quantum mechanics tells us we cannot make an observation without affecting what is observed. Is it not also true that we cannot make an observation without affecting the observer? In this sense, in exploring the world we are recreating it, and not only the world, but we are recreating ourselves. I would conclude that exploration which focuses on savoring the unique is an act akin to what has been traditionally called worship. Science can become a spiritual path when we are willing to let our explorations change us.

THE
SACRED

Here we come upon the interface between exploration and creation and the interface between science and religion.

*Framework building is for the purpose of
grasping experience and compressing
it into our limited informational
processing capacities.*

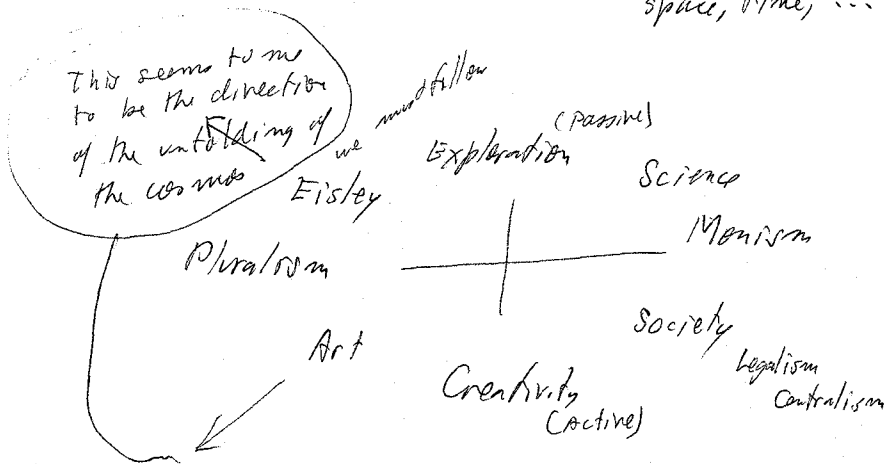
Rather than Science & Religion

We have the dyad:

• Search for general frameworks drive to homogenization
- usually monistic drang nach einheit

• Search for the essence in uniqueness → 1
celebrate uniqueness
The place, the moment
Contemplate what is possible

We are missing something in ignoring the uniqueness in
space, time, ...



The explore/create dyad
is related to the
Great Dialectic

E Pluribus Unum
Wholes + Parts

TRENDS01.W60

DISK:

December 15, 1993

THE EMERGING ISSUE OF THE COMING DECADES

There are two contravening tidal forces sweeping global society at this time. The first is the drive for economic unity and universal access to goods and services. The second is a retrenching of cultural identity and survival in the face of the economic homogenization. These two trends contravene and lead to the questioning in many quarters of the assumptions of capitalist dogma that if we are to have the benefits of technology and industrialization we must do it "our way". Every nation, institution, and group that seeks to participate in the global economy is told it must adopt the capitalist value systems and methods. The forcefulness of the capitalist drive has been multiplied many fold by the demise of the only alternative economic structure--the Marxist-Leninist. While Marxism-Leninism was deeply flawed from the outset, it served the purpose of holding unrestrained capitalism in check and forced it to moderation. With the disappearance of the USSR, capitalist forces have run amok and launched a program of replacing social and human values with those of maximizing profits and efficiencies (e.g. downsizing) without regard to the side effects. "Winning" the cold war has been interpreted as our system of profits-uber-alles is both the right system and the best system. The failure, both economically and socially, of the Marxist-Leninist brand of socialism, has removed all other species of socialistic structures from the field. It will be well into the 21st century before workable rivals to the global capitalism, that is now taking over, will be able to emerge. Meanwhile, we will see opposition mislead into taking on the forms now manifest in Iran, Bosnia, and Russia--fundamentalism, ethnic purism, and fascism.

Downsizing, mergers, destruction of unions, ^{idolotry of technology} making technological innovation an idol, legitimizing unrestrained greed, all serve to destroy individuals and social institutions. Drugs, alcoholism, crime, are the backlash ^{by individuals} of the social destruction wrought by such unrestrained capitalistic values.

There is a growing worldwide reaction--confused, unorganized and ununified--to the social and economic destruction taking place. Islamic fundamentalists reject the technology-capitalism equation. In this country, opposition centers on such visible items as NAFTA. In the former Eastern bloc countries, rush to join the Western system has generated deep suffering and a turn toward nationalistic fascism. The counter drive toward nationalism and cultural protection is explicable in part as defence against the capitalist value system. ^{Misguided. Problem not trade but technology} ^{capitalistas}

The psychological destruction wrought by unemployment, consumerism, and nowism has robbed whole peoples of self-esteem, meaning, and vision.

NOTES FROM BILL MOYER'S VIDEO SPIRIT AND NATURE

AMERICAN INDIAN

- Everything is viewed from the point of view of kinship
 - The necessity for balance
 - The importance of thanksgiving (not = praise or worship)
 - Mother is the center of the child's universe and is therefore sacred to the child.
 - Every step is taken as a prayer
- PASS WITHOUT DISTURBING

ISLAMIC

- The cosmos is a tree
- In the West the multi-layered universe is reduced to the purely physical by science. But worse, science claims it is the only path to valid knowledge.
- One result is that the enchanted world of childhood has been destroyed. The sense of the sacred has been lost.
- We have substituted human purpose for the divine purpose, even in our religions.
- The intellect (meaning the whole) has been replaced by the sub portion called the rational, and reason has cut us off from all else. Other ways of knowing have not evolved.
- The light of the campfire in the darkness of the night symbolizes the extent of what we know to what remains beyond.
- To be fully human we must develop the divine that is within.
- Nature is a reflection of the paradise which ⁱⁿ some sense we have already known.

PROTESTANT

- Man is irresponsible. We have refused to take our proper place in the order of things.
- We must adopt a new creation theology in which we confirm that all things are inter-related.
- Our language, the words we use, shape our attitudes toward the world. If God is viewed as a King, then God is remote, and unapproachable. God has been narrowed to one set of images: a king, a father, a lord. Each has its psychological consequences on our worldview. Why not God as mother, lover, friend. These are more meaningful to us than king and lord.

- The world should be viewed as God's body rather than as his dominion. Judeo-Christian teaching has lost nature, denigrated our bodies, our sexuality, our totality, in striving to be spiritual.
- The possibility to update, indeed the right to update, lies within the Christian tradition. {[While updating is consistent with the gospels cf. the Transfiguration, it is not compatible with the dogmas of the Church]}

JUDAISM

- Judaism has been a combination of asceticism and love of learning.
- We are instructed in the Bible to be stewards, not overlords.
- Our values and norms must be voluntary, the result of our learning, not the result of legislation.
- Meaning is to be found in limits. The Sabbath is not just the day of rest, it is the day of restraint.
- It is not so useful to look for the source of our culture of excess, be it in renaissance humanism, science, our economics, as to reshape our attitudes.

BUDDHISM

- Buddhism is not human oriented, it is concerned with all sentient beings.
- We are to become responsible, and this through developing compassion and wisdom.
- Spiritual Democracy makes light of what particular religion we follow. Consequently we must seek what is primary, and that is compassion. Philosophical matters are not important. What is important is having a good heart.
- How do have a good heart? Study nature and its harmonies, be silent and hear, practice restraint. Compassion will inevitably come.

The Rabbi told the story of the Chinese Emperor who came into possession of a beautiful piece of jade. He asked the court carver to make him a mountain and a waterfall out of the jade. After several weeks the carver brought the jade back to the emperor. He had carved it into the form of some pebbles and a fish. The emperor was furious. Where was the mountain and the waterfall? The carver replied this piece of jade did not contain a mountain and a waterfall, it only had in it a few pebbles and a fish.

WHAT ARE WE CELEBRATING WHEN WE CELEBRATE CHRISTMAS?

The Christian Celebration

- The birth of the Christ Child, God as an infant, the divinity of all infants
- The Incarnation, the virgin birth *— See Ed on this*
- Mary, Madonnas, Motherhood *— My view: Innovation from outside*

The Pagan Celebration

- Winter, the winter solstice, the beauties of snow, frost, and ice
- Fire and warmth, lights in the darkness, trees whose blossoms are lights *Menorahs ~~Klismora~~*
- A New Year, time for renewal

*See Lois letter to Julie
& My comments
March 1996*

The Secular Celebration

- Children and childhood, Santa and his reindeer
- Gift exchanges, cards, greetings, parties, feasting, revelry
- Various forms of art and music

The origins of the various practices are complex and interactive. For instance, the Roman Saturnalia, was celebrated with gift exchanges and sharing, and the interchange of the position of slaves and masters.

CHRISTMAS BELONGS TO EVERYONE!

*Three cultural interpretations of the experience of the
winter solstice season: The Christian, the Pagan, The Secular*



The Celebration of Christmas

A Christmas Meditation

I The Christian Celebration: Relating the season to the Gospel stories

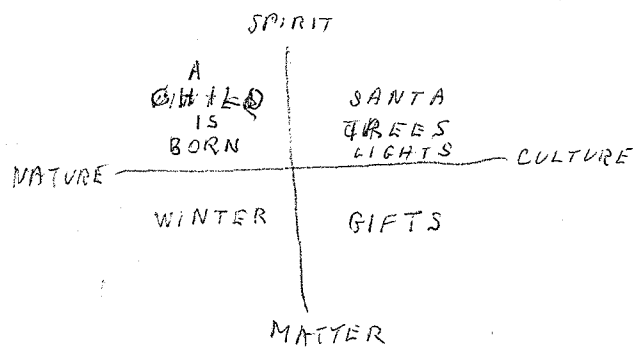
- **The Nativity** [PROCESS] The celebration of all birth, the coming of the new into the world. But especially the celebration of a particular kind of birth--Virgin Birth, whose conception is not by the past, a mere permutation of existing genes, but by a transcendent agent bringing into the world that which had not been here before. [But in Christian tradition, there is also the claim, "that which is born has always been here". In order for this claim not to contradict Virgin Birth, the implication is that the true innovation consisted of the removal of some previously limiting inhibition. But the compilers of the Gospels wanted it both ways, for there are the two claims of both Virgin Birth and of Joseph being of the lineage of David.]
And there was a star
- **The Christ Child** [PRODUCT] 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.
cf Genesis
- **The Virgin** [AGENT] 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 in its 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 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 possible with an archetype in abstract form. Indeed, humans come to understanding of essences better by means of stories than by intricate rituals, philosophical abstractions, or mathematical equations. Only when concepts can be reduced to story form does real understanding begin. The great teachers, a Jesus, a Siddhartha, could put archetypal essences into story form. And to some degree much of literature is an attempt to do the same. But we also need those who can extract the essence from the story and articulate it, a Carl Jung, a Joseph Campbell.. And to some degree preachers of sermons are attempting to do the same.

One of the paradoxes of Christian belief
is the incorporation of the story of the Star
and the Magi, but the rejection of astrology.
also The symbols of the 4 Evangelists
as zodiacal signs

A Child is born unto us

Eve, Pandora, Mary, it is always a woman
who brings true innovation into the world - whether good or bad.
It is Mary who redeems the slanders placed upon Eve & Pandora
Men only permute - recombine - what is already here. (genes)
Virgin Birth is true innovation - bringing into the world
what was not previously here.



of
The Empty
Quadrant

Christianity was the result of ego-driven men
seizing a great gift and turning it into a commodity
for the acquisition of power ~~acquiring a commodity~~.

The Second Coming is the liberation ^{and empowerment} of all who
have been imprisoned in the Church's sheep pen.

II 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 the earth covered with a white purifying blanket, the beauty of the earth enhanced by the fanciful masks of frost, ice, and snow. The paradox between the intimacy and ^{alien} otherness we feel with the crystalline world of ice and snow. And the paradox ^{at winter play} between the constraints and the empowerments it provides us. The exhilaration of the gliding world of sleighs, skis, and skates ^{a change} releasing us from the rotating repetitious 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. YULE
- The 25th of December** The Darkness is overcome, and the good news spreads that light will prevail. It is the birthday of the renewed sun. The victory is celebrated with trees of light, menorahs. 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 become one. Helios Mithras

When these seasonal archetypes are merged with the aseasnal 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.

III 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 18-- New facets to the legends have been added almost every year since. With the focus on children has come the focus on toys, and on everything miniaturized, soldiers, trains, etc. Dolls reflect the archetypes of Infant and Mother. The miniature reflects the contractive and inward focus appropriate to the season.
- **Arts and music** One of the joys of Christmas is the joy of return after 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 may call ^{Properly} 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 breached ~~the~~ 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.

Christmas belongs to everyone!

*It is no wonder, this being a special time of year
that Saturnalia, Mithra, Christianity took notice,
to be joined by late comers, Hanukkah and Kwanza.*