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FIELD, FORMON, SUPERSPACE, AND INCEPTIVE CYBORG: A PARAPHYSICAL THEORY OF NONCAUSAL PHENOMENA

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Definite length and definite time do not exist in empty space; instead they exist only between two masses. Ergo, one mass cannot change except with respect to some other mass. A frame or coordinate system is operationally defined as if there were a mass at the center of the coordinate system and a mass at the end of each radial length. If the operation that defines (creates) the frame is identically repeated in so defining or creating the frame, then the coordinate system is linear; if the defining operation is varied, the coordinate system is nonlinear. Since

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the coordinate system in which phenomena are observed is connected to the observer, then the observer's mass is an integral part of every observation.

Perception of physical change is a physical, differentiating process performed by a mass, which in that sense is referred to as a perceptron; that which perceives or detects. In one perceptron, its length-defining (operational space defining) operation and its mass-defining operation can interfere or react one with the other. This interaction is the fundamental generating mechanism of force itself, and all forces are so generated. Forces and fields are therefore effects and not causes. For one perceptron, the spaces of all its perceived masses (in its universe) pass through it and interact with it. Thus an object exists in an interactive space flux from all other objects in the observer perceptron's universe. The shadowing in this flux between two objects generates gravitational force, and this is shown, as well as the generation of centrifugal force on an orbital body. The accepted refutation of the mass shadowing explanation of gravitational force is itself refuted. Newton's second law of motion is a statement of the fundamental generating mechanism of force.

The perceptron's length-defining (operational space defining) operation is subject to turbulence in the microscopic region. At the Planck distance, 1.6×10^{-35} meters, the turbulence is so powerful that the fabric of spacetime (four dimensional) is torn in multiply connected space, superspace, predominates. At this level there is no before, no after, no next. The energy density of the Planck scale universe is on the order of 10^{95} grams per cubic centimeter. Thus it is mass which is tenuously thin and not space itself, mass being merely a gossamer pattern on the carpet of multiply-connected bubbles of superspace. All similar patterns are thus directly connected (i.e., they are one) through superspace. Through resonance, a form can be directly projected beyond three dimensional space and beyond time; by being directly projected through superspace it bypasses length and time, and similar forms will resonate "in tune" by sympathetic resonance. A purely resonant form is called a formon; the purity of the formon rather than power gain is the key to induction of formon resonance through superspace. The damplifier is any formon device, such as a crystal, of sufficient fidelity to be used in this manner. The gain of a high fidelity damplifier is of no consequence to its operation.

A living system and an amplifier/damplifier are capable of forming a cyborg for controlled operation. The living system is capable of inception (minute telekinesis) into a damplifier to induce resonance, which may then induct directly through superspace to induce noncausal phenomena such as ESP, firewalking, telekinesis, acupuncture, antigravity (levitation), power generation, healing, etc. Construction of a space amplifier is described and the Hieronymus devices shown to be inceptive space amplifier cyborgs.

Certain ancient societies may well have possessed noncausal science and used inceptive cyborg damplifiers of great power.

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FIELD, FORMON, SUPERSPACE, AND INCEPTIVE CYBORG:

A PARAPHYSICAL THEORY OF NONCAUSAL PHENOMENA

December 1974

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PREFACE

Foreign researchers have long since accepted the reality of paranormal phenomena and progressed to a concentration on the energetics involved. The Soviet physicist Victor Adamenko's development of the biometer and tobiscope, Czechoslovakian parapsychologist R. Pavlita's development of psychotronic generators, and Soviet physicist N.A. Kozyrev's experiments with the properties of time itself are examples of the bold and impressive experimental and theoretical advances being made by foreign researchers in the energetics and bioenergetics of noncausal phenomena.

However, Western parapsychologists have continued to experiment and accumulate data to substantiate the existence of noncausal phenomena, with but few attempts to develop a theoretical basis for explanation. Western theoretical formulations essentially attempt to impress psychic phenomena into the mold of our present physics paradigm. But psychic phenomena by definition involve noncausal macroscopic elements in contradiction to our present physics, which is causal macroscopically and noncausal microscopically. Because of this fundamental gulf between causal macroscopic physical phenomena and noncausal macroscopic psychic phenomena, the Western physicist is prone to condemn and ridicule paraphysics because it will not fit his developed paradigm. The Western theoretical parapsychologist, acutely sensitive to the stinging rebukes by his scientific peers, is highly constrained to search for a formulation that will force paraphysics into the present physics proscription and bestow acceptance and respectability on parapsychology. But all such well-meaning efforts are foredoomed to failure while the present rigid theoretical barrier between causal and noncausal phenomena is maintained by physics. Indeed the same dichotomy exists in physics itself; where the quantum dilemma of how a causal macroscopic world can be comprised of a noncausal microscopic world has yet to be solved after over 40 years of intense effort.

If one rigorously checks the foundations of physics, philosophy, and mathematics, one finds that these disciplines themselves are founded upon totally undefined conceptual axioms. Though it may surprise the causal reader, no one has yet succeeded in formulating precise and unequivocal definitions of the most fundamental elements such as mass, length, point, surface, time, space, charge, being, and change itself. And although physics has exerted great effort to exclude metaphysics and totally objectivize itself, Einstein's observer, observed event, and process of observation (physical perception) remain as stubbornly metaphysical as ever. Metaphysics has not been destroyed by physics,

it has merely been more cleverly hidden. Mathematics has ignored the a priori involvement of the process of perception and treated its perceived objects (which are outputted by the process of perception) as exclusively and independently existing. Thus mathematics, which ironically is merely the game of perception, is totally unable to define or clearly perceive its own basis. Ontology, in failing to precisely reckon with the fact that perception of change is fundamentally a purely differentiating process, has been unable to precisely define its own problem, that of the nature of being, since being is totally undifferentiated (that is in fact its total "definition").

In searching for a way to break the deadlock in which physics, mathematics, and philosophy are all entangled, the present author was struck by the singular fact that the process of physical perception was the key to all three locks. Consequently, over several years a painful effort to formulate a basic theory of the fundamental perception process has been underway. Although the results are still quite crude, results have indeed been obtained.

Based on the characteristics of the rough theory of perception that has been formulated to date, it seems possible to encompass theories of both causal and noncausal phenomena without contradiction. The present paper represents an initial attempt to sketch out a brief theory of noncausal phenomena, and is deliberately intended to provoke a wide discussion of the present inhibitive physics paradigm. Hopefully from such critique and discussion a new paradigm can be derived which will provide the parapsychologist a firm theoretical basis on which to proceed, and which will alleviate the disputation of the physicist by accommodating and enriching the present physics within its borders.

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ABSTRACT

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Perception of physical change is a physical, differentiating process performed by a mass, which in that sense is referred to as a perceptron; that which perceives or detects. In one perceptron, its length-defining (operational space-defining) operation and its mass-defining operation can interfere or react one with the other. This interaction is the fundamental generating mechanism of force iself, and all forces are so generated. Forces and fields are therefore effects and not causes. For one perceptron, the spaces of all its perceived masses (in its universe) pass through it and interact with it. Thus, an object exists in an interactive space flux from all other objects in the observer perceptron's universe. The shadowing of this flux between two objects generates gravitational force, and this is shown, as well as the generation of centrifugal force on an orbital body. The accepted refutation of the mass shadowing explanation of gravitational force is itself refuted. Newton's second law of motion is a statement of the fundamental generating mechanism of force.

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AUTO-BIOGRAPHY

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He received a Bachelor of Science degree in mathematics, from what is now Northeast Louisiana University, in 1953, and a Master of Science in nuclear engineering from Georgia Institute of Technology in 1971. He is a graduate of the Guided Missile Staff Officer's Course at Fort Bliss, Texas, and of the U.S. Army Command and General Staff College at Fort Leavenworth, Kansas.

One of his major hobbies is parapsychology, particularly in advocating a paraphysical approach to the problem of deriving a basis of explanation of psychic phenomena. His papers in this field are Quiton/Perceptron Physics: A Theory of Existence, Perception, and Physical Phenomena (AD 763210, March 1973); The One Human Problem and Its Solution: A Hypothesis and a Challenge (to be published in a forthcoming issue of Fields Within Fields...Within Fields), and a collection of papers to be published which include "A Simple Solution to the Age-Old Philosophical Problem of Change," "Restatement of the Heisenberg Uncertainty Principle for the Condition of Superposition," "A Conceptual Derivation of Einstein's Postulates of Special Relativity," "Unusual Energy Devices and Strange Propulsion Systems," and "The True Nature of Randomness: A Resolution of How a Causal Macroscopic World can be Derived From a Purely Statistical Microscopic World."

Lieutenant Colonel Bearden is a guitarist and professional songwriter affiliated with Broadcast Music, Incorporated. He holds a black belt (Shodan) in Aikido and has studied Judo and Karate. He has written and privately published a book on martial arts principles, Yoseikan Aikido.

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FIELD, FORMON, SUPERSPACE, AND INCEPTIVE CYBORG: A PARAPHYSICAL THEORY OF NONCAUSAL PHENOMENA

INTRODUCTION

Today a substantial number of researchers are involved in seeking an understanding for noncausal phenomena[1] and some manner of repeatably accomplishing these phenomena under controlled laboratory conditions. A great number of "causative agents" have been, and are being, invoked to explain these phenomena.[2] To the despair of the serious experimenters, the phenomena and the performers who can accomplish them are quite erratic and elusive; a remarkable success at one instance often fails miserably when a second attempt is made under "good experimental" conditions.

At the same time physicists are wrestling with the problem of causality versus statistics as the ultimate nature of the universe. All of these problems, of course, are merely subsets of the age-old philosophical problem of change, which has not been solved to date.

The author believes that he may have found a fundamental crack in the solid wall of the problem of change, and that through this small crack the first steps to the solution can dimly be seen. A first paper has been published showing the ramifications of the approach in proposing a solution for all the problems that man causes man.[3,4] The purpose of this paper is to begin a theory of noncausal phenomena in the hope that it will prove of some benefit to the psychic researcher, and perhaps interest the conventional physicist who is occupied with the foundations of physics and the relationship of physics to the non-physics world.

INTERVALS, MASSES AND OBSERVATION

From special relativity, there is no such thing as a "length" (i.e., a ΔL) or a "time" (i.e., a Δt) in empty space.[5] Instead, there exists a ΔL and a Δt only between two masses. Ergo, one mass cannot "change" except with respect to some other mass, since for a mass to "change" it must involve ΔL and Δt.

In fact, a single mass cannot even objectively exist without the presence of other masses. To show this, we reason as follows: first, suppose that a single mass can exist alone, without the presence of any other mass. Removal of all other masses immediately removes all ΔL's and Δt's as well, since at least two masses are required for their existence. Removal of the Δt's alone is sufficient to destroy any capability to observe the remaining mass, since observation requires a Δt to occur. I.e., the absence of any Δt is sufficient to remove all observation. In like manner, the absence of any available ΔL also negates the observation of the mass. E.g., in general relativity one regards mass as a "kink" or "curvature" or "distortion" in space itself---more accurately, in an operationally defined space (usually in a Cartesian reference system constituting an inertial reference frame). Elimination of all ΔL's of necessity eliminates the operationally defined space, and that eliminates the mass "kink" in the space as well.[6]

Another way of reasoning to the same conclusion is as follows: first, a "mass" is a perceived thing. But a "perceived thing" must have a beginning and an end to it, and that is certainly quite operational. I.e., to perceive (or observe) a thing, one has to perceive a beginning to it and an end of it. So a "perceived thing" or an "observed thing" is quite operational. Specifically, it requires the operation of observation or perception to be an observed or perceived thing. But all observers (perceivers) have mass. All the gedanken (thought experiments) ever conceived have not succeeded in creating or demonstrating a single real observer who had no mass. A "massless observer" is metaphysical, not physical. So when a perceived mass is assumed and then all other masses are eliminated, of necessity all the external observers are eliminated as well. Therefore, the "perceived mass" is eliminated as well, since all external perceivers have been eliminated.

The point is, we cannot introduce an observer without introducing his mass. And treating "external" systems as quite apart from the observer's mass, distorts the actual systems then described. That is, "subject" and "object" are operationally separated only by the operation of perception,[7] and ignoring the perception (detection) operation biases experimental results. Merely because it is inevitably treated in this fashion does not imply that it is not done.[8]

Quantum physicists have long realized that the observational apparatus itself is an inherent part of the outcome of any measurement.[9] I.e., they fully realize that experimental results and the experimental apparatus are inextricably connected.[10] Yet the inescapable conclusion is not made to include the single most fundamental part of every observation:

the observer's mass must itself "change" in any observer's physical detection of change. The singular fact that the observer's mass (and his or its mass-changes) are completely ignored in almost every scientific experiment and scientific analysis should overwhelmingly compel one to try to include it in his analysis of "observational reality." That is, if one really wishes to know what "observed reality" is, then one should analyze the process of observation itself, for it is that process and that process alone which is "screening" or producing "observed reality."[11] Figure 1 shows the relationships between ultimate reality, physical perception, and metaphysical observation.

THE STUPID OBSERVER

Essentially we will take a "stupid observer" approach as follows: suppose there is a very stupid observer who is carrying a poisonous snake in a sack, but knows nothing whatever of snakebite. One day he puts his hand into the sack, and detachedly observes the snake lunge up against him. Shortly thereafter he notices some extremely painful sensations and indeed becomes quite ill for awhile. However, being rather stupid, he does not associate his illness with the snake. Consequently, when he recovers, he continues to carry the snake in the sack. Eventually he again puts his hand in the sack, observes the snake lunge against him, and promptly experiences unpleasantness and pain, and becomes ill again. But he is scientific, so he trades sacked poisonous snakes with other stupid observers he meets, thrusts his hand in these other sacks, and observes the same unpleasant phenomena each time. He concludes that only a snake and a sack have been present before his symptoms developed, and of the two, only the snake operated (changed, moved) so he throws away the sack to separate it from his experiment, places his hand near the snake, sees the snake lunge against him, and once again develops the same unpleasant symptoms. Being scientific, he repeats the experiment several times with repeatable results. Knowing nothing of fangs and poison, the observer concludes that he develops these symptoms when, and only when, a snake has first lunged against him, and that it is therefore the snake's lunging against him that is causing his problem. He then has a quite workable and demonstrable theory of what causes snakebite poisoning, even though he has not yet realized the part that the snake's fangs and poison play in the phenomenon. The point is, when one can reduce a situation to "that occurs if and only if this first occurs," then the "this" is the cause of the "that," or at least the "this" contains the cause of "that." By definition, such precise time ordering is all that "causality" implies. Of course, if one wishes to determine the primary or "most fundamental" cause, then the necessary condition is "that occurs if and only if this first occurs; furthermore, nothing else clearly occurs in between."

So with this process in mind, one should closely examine the concept of the "field."

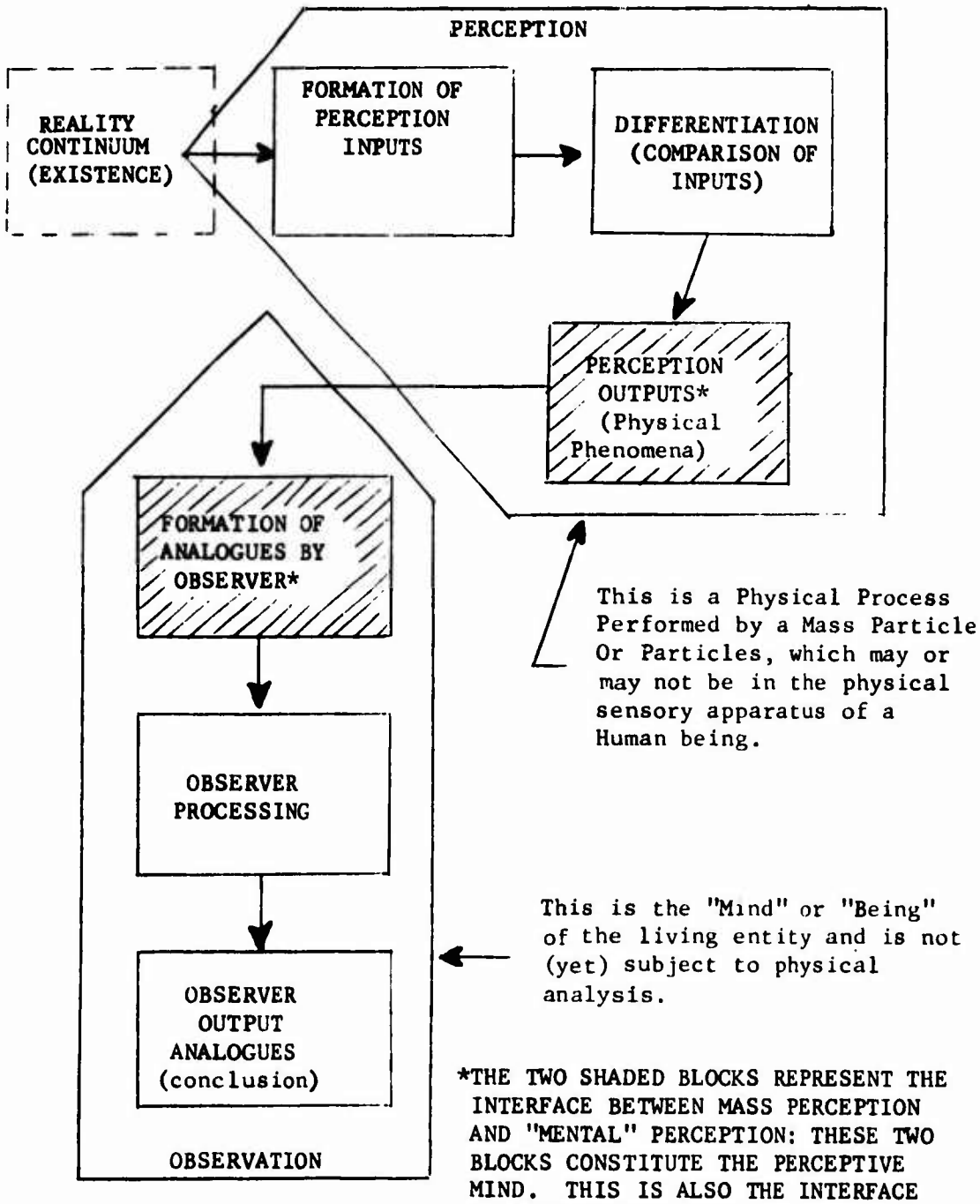

Figure 1. The relationships of reality, perception, and observation.

THE "FIELD" CONCEPT

Now the field concept is indeed strange! It is really a "when one does this, one gets that" kind of thing. E.g., if one takes one charged particle, and then positions another charged particle at a distance from it, a force is experienced between the two particles. That is, the two particles develop a most mysterious urge to move. They want to run together, or they want to flee apart, depending upon whether the charges are unlike or alike (see Figure 2). If the first particle is fixed as a reference so that it is immovable, one can observe the second "test" particle move, either to approach or recede. By careful measurement a descriptive relationship can be derived between the particle separation distance and the intensity of the test particle's urge to move. Since movement is involved, this description is vectorial, having both magnitude and direction, Eventually, after many of these vectors are drawn and many experiments conducted, the whole "wish to move" idea becomes quite easy to visualize (see Figure 3). At that point it becomes convenient to refer to the entire set of force vectors as a "field" and begin to think in terms of "it is the field that causes the test particle to move."[12] Notice that the field concept was first developed to describe what happens (i.e., to describe the effect) but now one has progressed to thinking of it as the cause.

At this point a quite fundamental conceptual error has been made that negates any further understanding of what is actually happening between the two test particles. The field is a description of the force effect one gets when one brings in the test particle, it is not the cause of what happens. The truth is, no one has the foggiest notion of why the test particle moves, nor of what causes the set of force vectors to develop. And by erroneously describing the force effect itself as the cause, any further progress toward finding a more fundamental cause is prevented. That is, whenever one unwittingly transposes an effect into a cause, one has "closed causality upon its tail" and formed a circular, "self-induced" system which excludes any more fundamental cause. Since the field has been defined as "what happens when the test particle goes in," it certainly cannot be "what causes what happens when the test particle goes in."

Now let us suppose that what is happening when the test particle moves is not really so mysterious if one is exceedingly careful to examine what is involved. Specifically, suppose one puts on "stupid observer" glasses and starts to examine what is present and changing in this experiment with the two particles.

One notices immediately that all that is present seems to be the two particles and "empty space." Our fellow observers have already defined the "field" concept and are quite happy in stating that this mysterious "field" is the causative agent. Consequently they are off theorizing and modeling in a grand manner, creating and mathematizing all sorts of theoretical "fields" as "causes" for all action-at-a-distance phenomena.

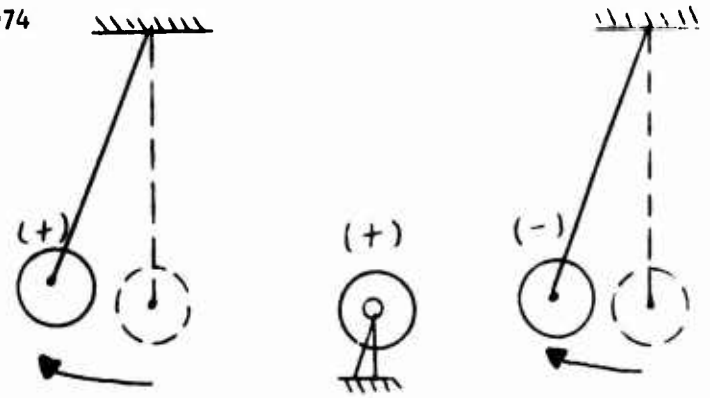

Figure 2. Unlike charges attract, like charges repel.

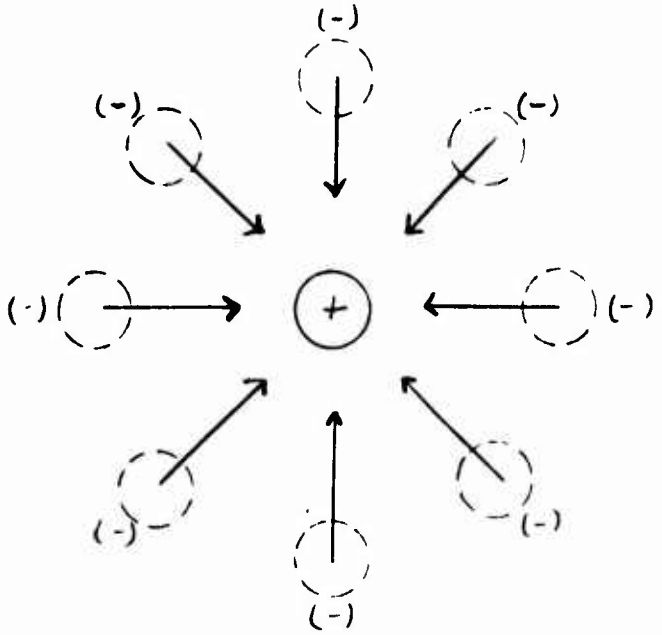

Figure 3. Patterns of movement direction (unlike test charge)

However, one has already realized that the field is merely a description of the effect and so it can't really be the cause. So one continues his "stupid observer" examination, hoping to discover a more active agent; specifically one that causes the "field" of force vectors. That means one must discover a causative (generating) mechanism for force itself. In doing so, one starts looking everywhere and thinking very carefully to see what else could possibly be involved. Specifically, one starts to pay rather close attention to "space" and "spaces."

OPERATIONAL SPACE, SPACE FLUX, AND FORCE

The first thing to be noticed is that the "space" usually thought of in a very simple manner really isn't simple at all. That is, by "space" one usually means the "absence of mass." But then any particular mass, being separated from other masses, must be considered to have a "space" of its own. I.e., the "absence of other masses" from a particular mass constitutes that mass' "space." If this relationship is destroyed the separateness of the particular mass is destroyed. Thus, with relation to our two charged particles, every other mass in the universe must have a "space" centered upon it and "connected" to it. And almost all of those other masses are moving with respect to the two experimental particles. Most of the other masses are in fact accelerating, and they contain a very large number of "charged particles" as well. (Since one has observed that any charged particle at any distance away from the test particle seems to be affected, one suspects that he must pay close attention to all those distant, accelerating charged particles and their "spaces"). Each of our two charged particles is thus centered in a "space flux" from all directions. In fact, this "space flux" is actually a "spatial length flux" where each length that is changing is the operational length between each of our particles and each other particle in the universe. But before one can examine this "length flux" in detail, a few other concepts must first be developed.

First, there is no separation without relation, and there exists no relation without separation. That is, whenever one thing is separated from a second thing, then a "relation" between the two exists (that relation is the separation between them). And, vice versa, whenever a relation exists between one thing and a second thing, then a "separation" exists between them (that separation is the relation between them). We can express this idea by

$$\text{relation} \Longleftrightarrow \text{separation} \qquad (1)$$

where the double-ended arrow means "if and only if." We can now make the same sort of statement about operation and separation; i.e., there is no operation without separation, and there is no separation without operation. Therefore,

$$\text{operation} \Longleftrightarrow \text{separation} \qquad (2)$$

Statements (1) and (2) can be combined into one statement

$$\text{operation} \Longleftrightarrow \text{separation} \Longleftrightarrow \text{relation} \qquad (3)$$

The perception of physical change is a physical process accomplished by a mass and only by a mass. Viewed as a physical "gadget" which detects change (by itself changing), a change-perceiving mass will be referred to as a perceptron (i.e., that which perceives or detects).

We note that there is a difference between "space," in the sense of absence of mass per se, and "a particular space" (a Cartesian[13] space, for example). In a particular space frame, a definite length is considered to have been established for each and every space point in that frame. I.e., a definite ΔL from the origin to each point has been established as has a definite ΔL between each pair of space points in the "frame." Such a definite length between points is rigorously operational by statement (3); i.e., such a length is defined by an operation. Specifically, it is assumed as if defined by the operation of a mass perceptron (or an understood mass perceptron) at the origin of the frame, and as if there were a very small particle of mass at each point (i.e., at the end of each length interval) in the space frame. Such a frame is linear if the identical type of perceptron operation has defined the length to each point.[14] If the type of defining operation varies, then the frame so defined is nonlinear; i.e., the space is said to be curved or distorted.

In one perceptron, its length-defining operation and its mass-defining operation can interfere or react one with the other. This type of interference or interaction can be thought of as the direct interaction of frame space (length) with mass, and as the fundamental generating mechanism of force. All forces are so generated. That is, force can be defined as the interference interaction between a perceptron's length-defining and mass-defining operations.[15]

In fact, this can even be seen from the units involved in force itself. E.g., an observed mass' observed momentum p is defined as:

$$p \equiv mv \qquad (4)$$

where v is the mass' perceived velocity and m is the mass' perceived mass. Since v is defined as:

$$v \equiv \Delta L / \Delta t \qquad (5)$$

then from a units standpoint

$$p = mv = m \frac{\Delta L}{\Delta t} = \frac{ML}{T} = \frac{ML}{T} \qquad (6)$$

where the last change, the removal of the T from being associated only with L, is necessary to free one's mind from its automatic bias in that respect. Now the ML term can be regarded as the length-spread of a mass; i.e., in terms of one kilogram being "spread" over a meter of length. Let us call the fundamental unit of the length-spread of mass a chug. Momentum is then chugs per second, or chug rate; i.e.

$$p = C/T \tag{7}$$

Where C is chugs. Now force is defined as the time rate of change of momentum, or

$$F = \frac{d}{dt}(mv) \tag{8}$$

and in terms of units this is

$$F = C/T^2 = ML/T^2 = \frac{ML}{TT} \tag{9}$$

That is, force is simply the time rate of change of chug rate, or the acceleration of chug. Now, if a is a constant such that

$$0 \leq a \leq 2 \tag{10}$$

then

$$F = \frac{M}{T}\frac{L}{T} = \left[M/T^2\right]\left[L/T^{(2-a)}\right] \tag{11}$$

where, after one recovers from the initial shock of seeing a time dimension expressed in fractional exponents, the rightmost side shows that either the mass term or the length term has to be interfered with, or both have to be interfered with, to generate force. (We are accenting the usual assumption that T^2 can only be broken into (T·T) simply because it is a "dimension." In fact a "dimension" is rather undefined, as is a dimensional product such as "time squared"). The interference force-generating mechanism can be seen by choosing various values of a and substituting each value into equation (11). If one persists in being uneasy about fractional exponents on dimensions, one may simply choose the values zero, one and two for substitution.

So using "stupid observer" glasses, one observes that whenever one gets a force (dimensionally), there has to be an interference (change) in the chug rate, and such a change in the chug rate involves an interference between a perceptron's defining operations for length and mass. Infact, although we have chosen the example of "charged particle" fields, one

could just as easily choose any other macroscopic "field" effect--i.e., the magnetic field or the gravitational field. For the nuclear force field one has to be a little more sophisticated; one must realize that the "interference" in a perceptron's defining operations is "smooth" for the macroscopic scale, but becomes turbulent in the extreme microscopic scale (i.e., for extremely short distances and/or extremely short times). For example, this turbulence becomes appreciable in the realm of 10^{-15} meters; this is the realm of nuclear force and a turbulent departure from the "square of the distance" force law of gravitation, electrical, and magnetic forces. But the turbulence is even more remarkable by far when the Planck distance, 1.6×10^{-35} meters, is approached. At that scale, the turbulence is so powerful that the fabric of spacetime (four dimensions) itself is torn, and instead the strange realm of superspace is entered. In superspace, there is no uniquely determined place in a uniquely determined space and time in which an "event" has occurred, occurs, or will occur. Thus, there is no before, no after, no next.[16] Multiply connected spaces and multiply connected times predominate overwhelmingly.[17] Multiple connectivity means that many here's and there's are connected directly together without any interval separating them; many "now's" and "then's" (past) and "when's" (future) are also connected directly together without any time interval separating them. The ultimate zero'th time and space; i.e., the ultimate universe, is beyond space and time and is both none and all simultaneously. The energy density of the Planck length scale universe, expressed as mass per unit volume, is on the fantastic order of 10^{95} grams per cubic centimeter.[18] So indeed the "vacuum void" is quite lively! And indeed there is sufficient energy in "nothing", in purest "empty space," from which to create entire worlds many times over.

These multiple connections (in superspace at the Planck length level) are called bubbles. Thus, a "particle of mass" is just a gossamer-thin change in the "carpet of bubbles," that forms a sustained pattern. Considering the vast difference between the energy densities of space and mass, it is mass that is tenuously and etherically thin, not space. Since the bubbles are so ultimately lively (dynamic) (operational), one may consider mass, pattern, and form to be the tiniest of tiny modulation upon the dynamic fabric of superspace. And at this point one should notice and retain until later in our discussion, that if resonance can be induced upon a bubble-pattern or form impressed on superspace, strange and remarkable phenomena should emerge. It should be possible to transfer energy back and forth in "time," for example, and back and forth between distant space-points or spacetime points without any length or time lapse in between. Phenomena induced by such resonance (amplification/induction) will appear noncausal in nature to the macroscopic observer.

The paraphysics of noncausal phenomena should be constructable eventually from quantum geometrodynamics,[19,20,21] which is the present form of the Clifford-Einstein space theory of matter. Thus quantum geometrodynamics would indeed seem to be a time bomb ticking away at the heart of conventional physics.[22]

But let us return to our discussion of forces and fields. Since the process or mechanism which generated the force of all macroscopic force fields is the same, then the mathematical form of all the forces should be precisely the same. Further, this form should be derivable by sheer geometry, by consideration of form and length, and so indeed it is. In fact, the geometrical form for gravitation was derived in about 1750 or so. But in those days, and even today, physicists persisted in associating a tenuous mass with the "ether" and considering the ether as a sort of fixed, permanent, extremely thin fluid or ocean filling all space. The main problem is that the scientist has always had a great reluctance to consider absolutely nothing (empty space) as being able to affect or influence something (material, mass, "hard" or "solid" matter, perceived thing). Instead, he usually seems compelled to assume that only a "thing" can affect a "thing." When he meets a fundamental, action-at-a-distance effect without any apparent material cause, he simply names the effect a "field," proclaims the field as the cause, and careens along into the mathematical jungles of the field idea. Since many scientists have been materialists and logical positivists at core and many still are, science has not adequately grappled with the relationship between thing and no-thing; i.e., between unperceived space and perceived matter. Most thinkers still persist in considering mass movement as occurring in or through space, not the space moving in or through mass. But since empty space is actually so completely more dense than matter, then according to quantum geometrodynamics it must be space that is the dense ship plowing through ethereal matter. And most persons never realize that a "space" or "space frame of reference" is a space that has been operationally defined. But avoiding this fundamental mistake, we are now in a position to show the geometrical field force derivation and to refute the argument that has called it "invalid" for over two centuries. For propriety, we will use as an example the gravitational force field, since the original derivation of the mass shadowing concept was to explain gravitational force.

First, a perceptron's operationally defined, linear, three-dimensional, "Cartesian coordinate system" frame space will be called a q-space. A perceptron's q-space is filled with streams and streams of other q-spaces moving with its perceived moving objects (other perceived perceptrons) from all over its universe. Thus there exists a "space flux" at any point in its q-space; and this flux may be taken as isotropic to the first approximation since, because of the vast interstellar distances between most of the masses, the flux gradient in the relatively local neighborhood

of any perceiver q-space point is essentially zero. The space flux for two perceived masses in the perceptron's q-space can be represented as shown in figure 4. Since most of the masses in the distant universe of the perceptron are accelerating with respect to the perceptron and its q-space, then the flux represented in the figure is the accelerated space flux from those masses. I.e., each line is a vectorial length or direction, and represents an accelerated flux line vector. Each flux line is generating a force against each particle of mass through which it passes (we show this at equation 13). Thus a flux pressure p_1 is exerted on M_1 and a flux pressure P_2 is exerted on mass M_2. In any one flux stream line in the shadowed zone between M_1 and M_2, the pressure against either of the two bodies is reduced in proportion to the amount of flux affected by the other body. The total reduction of flux pressure in the shadowed zone is therefore proportional to the product of the two masses M_1 and M_2, considering the effects to be mutually independent. From purely geometrical considerations, a shielding factor is also present due to the solid angle that is shadowed about any point in either mass. This effect is proportional to $1/R^2$, where R is the separation distance between mass centers, by usual solid angle considerations. Putting these two factors together, the attraction of mass should therefore be proportional to M_1M_2/R^2, or

$$F = k \frac{M_1M_2}{R^2} \qquad (12)$$

where k is a constant of proportionality to be determined by experiment. This equation is the expression for Newton's universal law of gravitational force, and this force is driving the two masses together. From our viewpoint, it is no accident at all that electric, magnetic, and gravitational field forces all obey the same precise type of "inverse square of the distance" law; rather, it is clearly required since these forces are generated by precisely the same type of mechanism. The only thing that varies is the constant of proportionality, and that depends upon the strength of the reaction involved, which itself depends upon the type of spatial flux, which depends upon the type of matter (electrical, magnetic, or null). Since the strength of the electrical field is on the order of 10^{42} times as strong as the strength of the gravitational field (i.e., for two electrons), then it can be seen that the constant varies tremendously.

But now let us address the critics of the "mass shadowing" gravitational model. A constant velocity space flow through a constant mass generates no drag force, by equation (8); but an accelerated space flow through a constant mass does generate a drag force. This accounts for the error long made in considering the mass shadowing explanation of gravitational attraction to suffer from a serious defect of an implied retardation force due to velocity through an ether flux.[23] We will choose a common example of an orbital body around a mass. Let us simplify the example

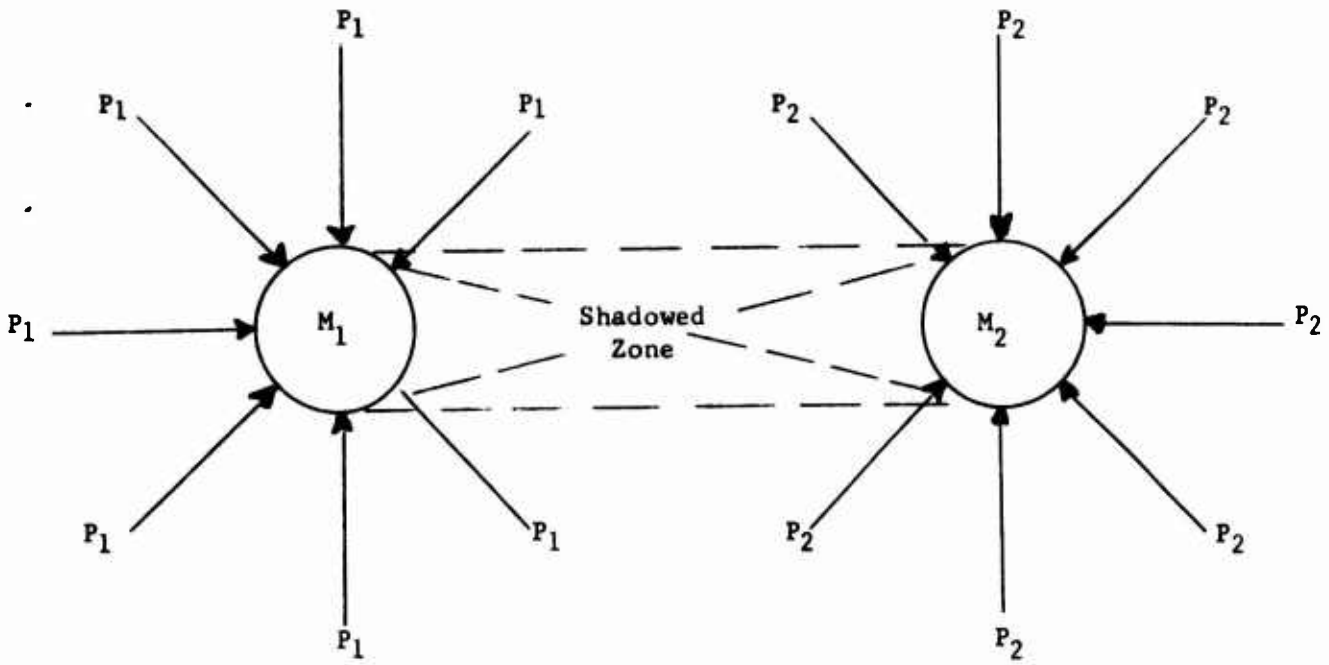

Figure 4. Gravitational attraction of masses.

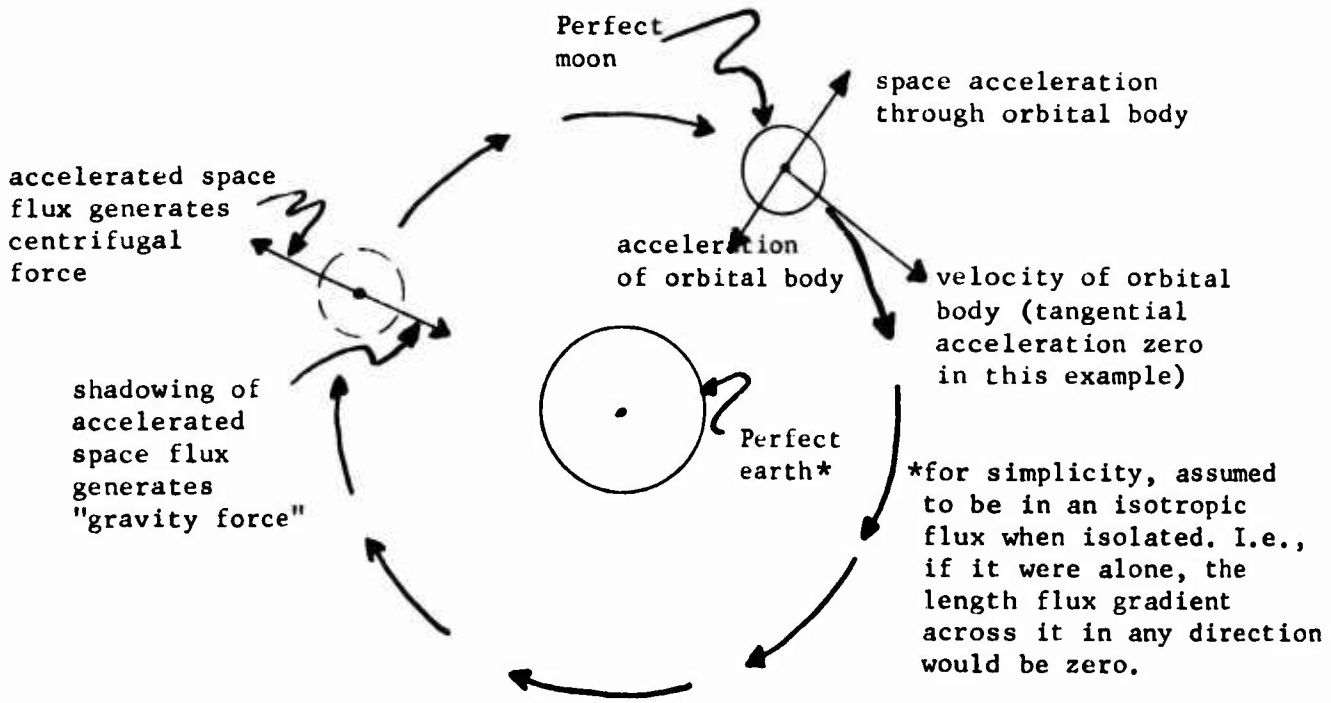

Figure 4a. Forces generated on a body in circular orbit.

by choosing the orbital body in a perfect circular orbit, say a perfect moon moving in a perfect circle around a perfect earth, as shown in figure 4a.

In figure 4a, the tangential acceleration of space through the orbital body is zero since the speed is constant. The radial acceleration of space through the orbiting body is outward and constant. Therefore, this radially outward acceleration of flux length generates a force on the orbiting body in the outward direction; this is the centrifugal force which is generated. At the same time, the altered flux in the shadowed zone between the two bodies generates the gravitational force which is driving the two bodies together. A balance is achieved when the amount of flux accelerating outward through the orbiting body is precisely equal to the amount of flux subtracted from the mass-shadowed zone. At such a balanced condition, the orbit will be sustained forever in the absence of any externally induced changes. In the absence of such a balanced flux condition, the orbital body will move closer or farther, depending on whether the "mass shadowing" force is stronger or weaker than the centrifugal force. This is observed in actual orbits which are usually elliptical, not circular.

Thus everything "fits" and, with our stupid observer glasses on, we reach the conclusion that indeed we have found our "snakebite theory" to work with.

But let us make a slight excursion to show that space flux and mass indeed interact. To begin with, we first examine Newton's second law, nonrelativistic form. This is merely

$$F = ma \tag{13}$$

Generally this is taken to mean that it requires a force to accelerate a mass through space (specifically, through the static observer's space, or the perceptron q-space). Or, viewed another way, whenever a mass accelerates through an observer's space frame of reference, a force is acting on that mass. (Force is usually regarded as the most elementary causative agent. But just to state that "a field generates a force" is to state that a force itself is the effect of some cause). Now Newton's second law can also be written

$$F = am \tag{14}$$

where we intend something serious and are not merely playing with the order of symbols. Newton's second law also actually states that force is

generated by the interaction between mass and an accelerated space. It in fact contains two statements: (i) acceleration existing between an operationally defined space and an operationally defined mass causes an operationally defined interaction between the two, and (ii) this interaction is what is defined as a force. The relativistic form of Newton's second law is

$$F = ma + (dm/dt)v \tag{15}$$

Equation 15, in the second term on the right, states that velocity existing between an operationally defined space and an operationally defined mass change rate also causes an interaction which generates force.

Thus, according to Newton's second law, relativistic form, there are two fundamental force generating mechanisms, but they both involve an interaction between mass definition and space definition by the same perceptron; or simply put, they both involve an interaction between space and mass.

In passing, one should note that another force generating mechanism may well be given by

$$F = \ddot{m}L = \frac{d^2m}{dt^2} L \tag{16}$$

where L is a specific distance over which we have a nonlinear change (i.e., an acceleration) in chug rate. This effect would probably be many orders of magnitude below measurement capability in most cases, but for extremely fast changes it might become significant, particularly if turbulence has been induced in the other two force generating mechanisms so that this third mechanism becomes itself "forced" or engorged (i.e., if space flux is forcibly "spilled" from one or both of the other two mechanisms into this one). This would be similar to inducing turbulence in the time involved in the smallest possible quantum of action change

$$\Delta E \Delta T = h/(4\pi) \tag{17}$$

where h is Planck's constant.[24] Here again is perhaps a fruitful area to look for an explanation of what causes "nuclear force."[25] But since this was just an excursion, we will return to the mainstream of our discussion.

The main point is that space interacts with mass under certain conditions, that is all one need understand from Newton's second law. The possibilities inherent in the simple fact that mass and space can interact with each other are enormous.

QUITON SPACE CURRENTS AND SPACE CURRENT AMPLIFICATION

As an example of what can be done, we examine an ordinary vacuum tube (triode). In the triode, a few electrons are moved on a grid to control a large flow of electrons from a source (cathode) to a collector (plate). The plate then collects a large flow of electrons which are switched or modulated in consonance with the changes in the grid electron current, i.e., the "form" or "pattern" of change in plate electron flow is identical to the form or pattern of the much smaller grid electron flow. In that sense the triode is simply a pattern transmitter/amplifier.[26]

Now each single electron contains its own "space" or "reference frame." And not only do the electrons move through the apparatus, their individual q-spaces also move through the apparatus. Now let us visualize an electron space as composed of a great number of tiny "pieces of space" (q-space quanta) which we will term quitons. I.e., a quiton is just a tiny "piece" of space or nothingness or absence itself.[27]

Now let us suppose for a moment that we could find a way to strip away all the electrons, but leave all their individual q-spaces in the device. We could then introduce a few "control spaces" (quiton ensembles) onto the grid as a quiton current signal, and these could be used to control or "gate" a much larger quiton current flow from the cathode to the plate. Thus the tube would become a "space current amplifier," or a quiton current amplifier.

FORM, RESONANCE, DIMENSIONS, AND BEING

Further, let us look more closely at the idea of a form or pattern in space. Let us consider a "fixed" or "static" form. Immediately we are struck by the remarkable fact that the form must have a most peculiar nature; it cannot be "static" because space itself is dynamic, not static.[28] That is, a form built out of a dynamic media may appear to be "static" only if "standing wave" type superposition of changes in the dynamic base media is occurring. We are talking about form in the purest abstract sense, in the manner of G. Spencer Brown[29]: we are not at all referring to a "physical" structure. At any rate, we can now discriminate some principles of form;[30] (i) a fleeting, non-repetitive change in a space (i.e., in one or more flux lines in the space flux through a "point" in normal, Cartesian space) produces only a faint, changing pattern (i.e., a fleeting "ripple" or wave) and cannot produce a static form (standing wave); (ii) absolutely random changes in space flux (quiton current flow) through a point produce absolutely random, fleeting form elements, and no fixed form is created, (iii) constrained random flux changes (i.e., random changes within a certain distribution form) will additively reproduce a

form of perfect similarity to the constraining distribution form; (iv) the repetitive components of mixed (repetitive and nonrepetitive) changes in space flux superimpose[31] (add repetitively) to produce a static form (this is simply partial constructive interference), but this form must be sustained by flux change repetition unless a "tuned cavity" or "tuned receiver" is provided; (v) imposition of type four changes into or onto a synchronously tuned (either basal or harmonic) receiver results in resonant amplification of the "standing wave" form produced in the receiver. This form is self sustained upon the removal of the input space flux change. [NOTE: This entire discussion considers only first derivative changes in quiton space current flux; additional effects and considerations are involved when second derivative change components are considered.] Note that the "tuned receiver" can be itself a form, and is not necessarily a physical object. These form laws apply to all physical and nonphysical phenomena; i.e., for both causal and statistical phenomena, and are specifically involved in noncausal phenomena, especially those noncausal phenomena produced by, or in conjunction with, living systems. To partially indicate the extent of application, let us call a type-four form a formal and a type-five form a formon. Note that any form is itself a tuned receiver for its own resonant "frequency" or "complex frequency pattern"; this in fact allows the form to exist---i.e., if it could not sustain (reproduce) itself, it would have to be changing, always, at an incredible rate, and would not be static. Therefore any form is automatically a self-formon, and is automatically a formon receiver for the repetitive portion of an appropriate type-four flux change or for a "similiar" type-five flux change. Note further that a formon or a formal can be produced in other than a space which is "fixed" or "static" to one particular viewpoint. E.g., a formal or a formon can be produced in a space moving with constant velocity relative to a "fixed observer" (which invokes a type of special relativity) or in a space accelerated with respect to a fixed observer (which invokes a type of general relativity). Either the "constant velocity space" or the "accelerated space" can be complex; i.e., it can have an imaginary component at right angles to the ordinary 3-d space. With a multiply-connected space, there can be n-dimensional spaces, in which formals and formons can be produced. Since time is merely a type of dimension[32] and the same things can be done to it in a "spacetime" as is thought of as being done to length in a "space," then the phenomena of form, particularly formals and formons, can be seen to be extremely complicated. "Resonance" is therefore a very much more complex phenomenon than usually realized. Of necessity this paper can only touch on it lightly with a very rough sketch.

As an example, we look briefly at a type of "c-resonance" phenomena. If we look upon mass as a "resistance to acceleration," then we can consider the amount of mass to be merely the amount of that resistance to acceleration. When a mass particle increases its velocity, its mass

increases; i.e., it becomes more difficult to accelerate in its 3-dimensional direction of movement (i.e., in 3-d space). As its velocity approaches the speed of light, its ability to be accelerated in 3-d approaches zero. That is, its ability to conduct acceleration approaches zero. Thus, we may consider this limiting velocity, c, the speed of light in vacuo, as a 3-d "acceleration wall." However, this wall does not necessarily extend into the "imaginary" 4th dimension. In fact, we can imagine a 3-d object gradually turning into the 4-d direction (exactly as a 2-d plane can be rotated into the 3d direction, in ordinary 3-d space). Photos of high speed objects actually show this rotation effect. Thus c, the speed of light, can in one sense be regarded as the "threshold of entry" into the 4th "imaginary" dimension. In this sense a "photon" or "photon-like object" now exists in our 3-d space, but it has just become a sort of "mass-like object" in another 3-d world, totally at right angles to our normal 3-d world. And if we vectorially "add on" a continuation of the same process in the complex dimensioned 3-d world, we can force the 3-d object in that world to rotate back to an object-like, mass-like particle in the ordinary 3-d world again. If we consider velocity or apparent velocity per se in our ordinary 3-d world, in the DeBroglie wave velocity sense, for example, then we are not bound to the speed of light limitation which applies to masses. At the speed of c^2 we notice a remarkable coincidence: the photonic type object moving at c in our ordinary 3-d space, with its complex 3-d component moving at c in the complex 3-d world, becomes a photonic object in the complex 3-d world and a mass-like object in our 3-d world. Since this is the "behavior exhibited by light" in its extended, most general sense, the "180-degree rotation" we have described is actually a straight line in a multiply connected space. Therefore the velocities do not "add vectorially" in the Pythagorean "square root of the sum of the squares" manner; rather, they multiply directly. Therefore c^2 represents a resonant velocity point wherein what we think of as a "mass" (specifically this formal) becomes purely resonant and is accordingly a formon and quite self sustaining. And if we break up the formon and destroy it, we simply split the formon in two, getting a photonic (or a mass-like, depending on the manner of splitting) object in our normal 3-d world and a mass-like (or a photonic, again depending on the manner of splitting) object in the complex 3-d world.

When splitting "multiple structure" formons into component structure formons (i.e., such as separating white light into its components or molecules into atoms or atoms into particles, one can get multiples of photonic or mass-like objects, or mixtures; in either plane. If we totally "break up" a mass formon, we expect to get a non-mass formon(s) of energy equal to mc^2 ; i.e., the "resonance momentum" is simply integrated through another "velocity dimension" and turns into energy. Specifically an ordinary "3-d" mass is integrated through a velocity dimension twice, and that is precisely why $E = mc^2$; i.e., why a mass represents, in one sense, a "trapped energy" [rotated resonance energy is more apt] in the amount of

$E = mc^2$. Correspondingly, the "energy" of a photon in our ordinary 3-d space represents its "mass" in the complex 3-d space. Obviously the two are interchangeable in the proper process; i.e., we can "rotate" 3-d mass in our space (which is a photonic object in the complex 3-d space) through 90° in the complex direction, and we will now have a photonic object(s) in our normal 3-d space and a mass-like object in the complex 3-d space. This is precisely what happens when (from our 3-d view) a positron and an electron meet and annihilate one another, producing a pair of photons in the process. The opposite "3-d switching" process can also happen, and that is what happens when we bang together two photons of sufficient energy and get "pair production"; i.e., one positron and one electron. [The fundamental masses should be examined from the formon velocity resonance viewpoint for possible clues or explanations of why the peculiar mass quantities and ratios exist; hopefully some new data would emerge, but this author has not yet had time to examine this aspect of the concept.] We should find very interesting "velocity resonances" and formons along chains of (i) $c,c^2,c^3,\ldots,c^n,\ldots$ (ii) $c,c^3,c^5,\ldots c^{2n-1},\ldots$ (iii) $c^2,c^4,c^6,\ldots,c^{2n},\ldots$ etc. the series formed by reciprocals of the terms in each series also would be interesting to investigate. DeBroglie wave resonances should be extremely important because they are unbounded by 3-d space. The last point in passing is that all formons are boundary connected to all basic and harmonic frequency resonant formons; i.e., this is the principle of "similarity" in that all similar forms are connected through resonant frequency points, such resonant points being their formon boundaries. This is equivalent to the statement that all similar formons are identical in the proper infinitely connected space. Thus, one formon is in contact with every other similar formon, and this contact is direct and immediate (i.e., it is lengthless and timeless). For example, let a normal 3-d mass start to move, move, and then stop. Just as it begins to move, its DeBroglie waves have infinite velocity. Then as it acquires velocity, its DeBroglie wave velocity has become finite, but is always greater than c, the velocity of light. Then as it stops again, its DeBroglie waves again have infinite velocity. So during its start-move-stop in a particular 3-d space, the 3-d mass's DeBroglie waves have pulsed every other three dimensional object in the 3-d world twice. Not only that, but the initial and final pulse each was everywhere in this 3-d world at the same instant. Obviously the only way such movement can be done is through other than normal 3-d space. And if the maximum velocity attained by the start-move-stop mass was v_f, then the minimum velocity reached by the DeBroglie waves was

$$u_{min} = c^2/v_f \tag{18}$$

where u_{min} represents the minimum velocity of the DeBroglie waves. Further, the DeBroglie wave pulse passed through all resonances of frequencies f_r where

$$f_r \mathbin{/\!/} u_{min} \tag{19}$$

For all resonances of

$$f_r > u_{min} \qquad (20)$$

the DeBroglie waves passed through twice, once going down in velocity and once increasing in velocity. If one notes that these resonant bands are dimensions (i.e., they represent continued rotations of 90, 180, 270, 360, 450 degrees and so on, then one notes that the DeBroglie waves were actually pulsing the higher dimensions above a certain threshold dimension. I.e., a band of higher dimensions from, say, n-d to ∞-d was pulsed. All formals and formons were so pulsed. Also note that the time manner of pulsing is highly complicated; i.e., all formals and formons were pulsed immediately, then at the next resonance time, then the next, etc. This is how superposition, i.e., the fact that DeBroglie waves superimpose, is sustained in a formon; i.e., that is how a formon self-sustains its resonance (with time) once pulsed. That is also why the world is absolutely relative; i.e., why changes in one part of the 3-d world affect all other parts, and in fact the n-d world itself is so relative. Thus, one may logically regard the entire universe as existing within himself; i.e., in considering multiple resonance through all the harmonic frequencies that comprise the n-d spaces, one realizes that a fundamental particle is a perceptron which itself changes to perceive change. Thus the change of "anything else" is actually an internal change to it, and its change is its perception of change. I.e., a formon consists only of its own resonances. Since all masses are comprised of fundamental particles, and since all observers have mass, it is these changes in the fundamental particles comprising the mass of the observer which constitute both his changes and his perceptions of external changes. I.e., the two are identical. And that is indeed why he peculiarly perceives his own body (his mass) as being separate from his "conscious mind" or "being" In reality the "separation of mind and body" is a myth. The being (call it soul, psyche, mind, spirit, or whatever you wish) is simply undivided (being is undifferentiated; that is its total definition) and so it permeates all dimensions and all multiple connections. Thus being is simply "everywhere" and nowhere" at one and the same time and at no time at all. However, all that being perceives (normally) is simply changes in its mass formons. Thus indeed the "being" in a man is part of all being, i.e., of all oneness. But it is a being because it is attached to a formon,[33] i.e., perception of physical change is what creates physical change (physical phenomena are self creative and relative because causality is closed-upon-its-tail) and also what creates the illusion of a being (it is a oneness opening a peephole through which it looks at other peepholes relative to it, AND at the same time (phenomenal time) it does the same thing through each of the other peepholes). The phenomenological world is like a game of flashing electric lights which is playing itself; the lights play and affect each other, but they are not the electricity causing the game, although the electrical changes in each are impressed by resonant formons. Or, to use Julius Stulman's delightful phrase, the

game is "fields within fields...within fields." But now let us return to amplifiers and gadgets and see if we can find something to make some unusual ones work.

PSIONIC DEVICES, INCEPTION, AND INCEPTIVE CYBORG SYSTEMS

Let us reiterate what we have said about space current amplifiers. By stripping spaces away (from photons, electrons etc) and introducing the stripped ensembles of space quitons onto the grid of a triode, we could produce a space current amplifier. If we then interact the amplified quiton current with mass, we can produce a force, as we also found previously. Thus we should be able to build such gadgets as force field generators, particle accelerators, antigravity devices, etc. However, we still have one major handicap left to overcome. That is, separation of an electron's operationally defined space from the operation that defines it (i.e., from the electron) is itself an operation and thus requires an interacting (causative) agent. Fortunately one such causative agent is near at hand.

The fact is, a living system can exert an incredibly tiny influence on perceptron operation.[34] E.g., the rate of perceptron operation that defines (creates) one kilogram of mass is 17.053×10^{50} operations per second. In "dead" or "inert" matter, these perceptron operations are entirely mechanical (causal). However, each pair of operations may be visualized as a creative operation which creates all the Δt's and ΔL's from which all energies, masses, forces, momenta, etc in the entire universe seen by that perceptron are created. At the completion of each operation, the perceptron's entire universe is continually splitting into branches, stupendous numbers of them, each of which is real, and all of which are real.[36,37,38] Figures 5,6,7, & 8 outline this process. "We do not feel the process of splitting because we are not permitted to feel it by laws of quantum mechanics."[39] " This concept is so very strange that it has not been universally accepted, even as a basis for further research and investigation."[40]

At the end of one operation, the branch ahead (figure 7) may be regarded as the "next possibility" available to the perceptron.[41] Each limb of the branch is real. The perceptron splits into many perceptrons and takes all branches on the next operation, as indeed does the "consciousness" of a being attached to it. However, only one "track" or path (we shall call one such path a lineception) is available looking backwards from one perceptron cessation point. Since a consciousness is only conscious of that which has already happened, then a consciousness itself is separated into lineception strands by its attachment to the phenomenological world. I.e., consciousness can only perceive phenomenological reality as if it has been a pointer moving along a lineception path prior

Figure 5. Lineception (one connected to one).

Figure 6. Lineflection (one connected to one).

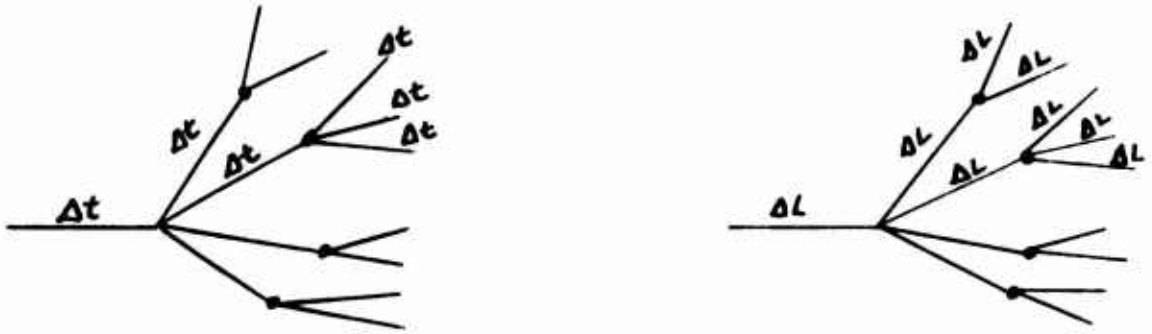

Figure 7. Multiception (one connected to many).

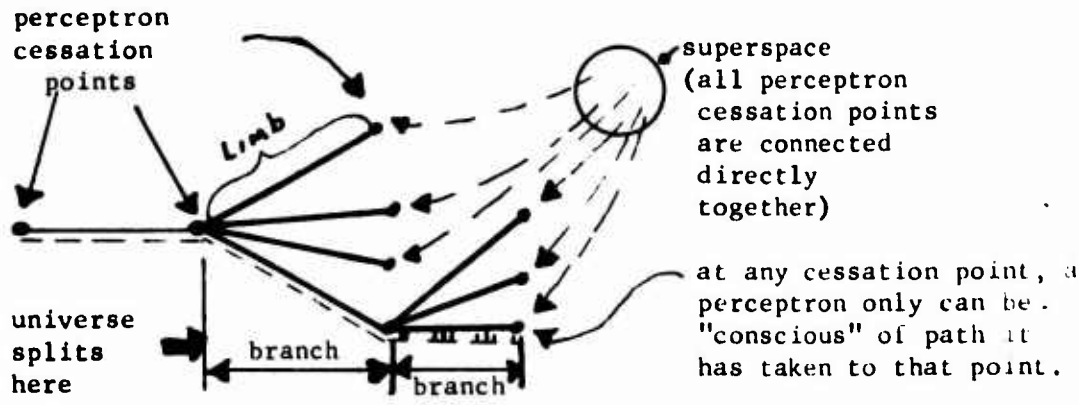

Figure 8. Splitting of the "perceived universe."

to "now." Constrained by this type of "view," the past to a consciousness appears absolutely certain and fixed (i.e., it appears to have happened only one way), while the future looks very uncertain, particularly the more distant future. All that a single perceptron consciousness has, at one perceptron cessation point, with which to "predict" the future is its causal patterms from its past; i.e., from its "backward lineception" (which we call lineflection, from the idea of a "line reflection"). Thus it clumsily tries to predict the future by projecting past patterns such as "trends," "intent," "motivation," etc. Now of course this can be extremely accurate for causal phenomena only; e.g., one can predict the orbits of the planets, the change of seasons, the rotation of the stars, the return of comets, and the like with great accuracy. The same process, applied to human systems (which are causal system carriers modulated by noncausal signals) is apt to fail quite miserably.[42] It is somewhat ironic that the scientist, particularly the physicist, does not usually realize that the entire thrust of his effort is merely to predict the future, or to be able to. Further, in rigorously confining his investigations to "laboratory tests under controlled conditions" and insisting that an experiment be universally and 100 percent repeatable 100 percent of the times it is accurately tried, he has absolutely constrained his investigations to causal phenomena only. And in fact, the best he can do with noncausal phenomena (statistical phenomena) is to look for the causal form impressed upon it as a modulus. It is therefore this impressed modulus that he seeks to understand, not the basic "phenomena" themselves. This dilemma is met directly in quantum mechanics, for example, and the "impressed form" is what is most generally sought and accepted. Fortunately a few physicists are still struggling to penetrate beyond this conceptual limitation, and hopefully in the future they will succeed.

But we wandered from the splitting of the perceptron and its universe at each operation, after we had seen that the singularity of the strand of lineflection is responsible for the past seeming fixed and immutable while, due to the multiceptions ahead, the future seems cloudy and unsure from a perceptron's view at any one perceptron cessation point. Also we notice that at the end of one operation, Δt and ΔL cease; i.e., time and space disappear, and all cessation points are identically "colocated" and are "one" (more precisely, they are "oneness").[43] This is the geometrodynamic multiple connectivity of "bubbles" in picocosmic space (superspace) to which we previously referred. Thus a perceptron is continually reconnected and disconnected from all pasts, presents, and futures, including all "possible" ones, at an extremely high switching rate.

To even begin to comprehend (realize) these statements, we must first realize that the nature of a physical object is exceedingly complex and not at all the simple thing which we are taught or conditioned to as young children. A physical object is not an a priori concept of our minds, as

is well known from Piaget's experiments.[44] As D'Espagnat states, a consistent description of the world as a collection of infinite physical objects of finite complexity with specific attributes is not possible, even if the attributes of an object are only approximately determined, and even if the objects and systems of objects are permitted to interact through complex, long range forces that decrease with increased distance.[45] It is quite naive to hold the dogmatic a priori conviction that consciousness is less real than physical objects, or that it is merely a property exhibited by certain physical objects only.[46] E.P., Wigner has explicitly assumed that consciousness reacts on the rest of the universe.[47] Argument against this assumption can be reduced to the weak objection that it is unpleasant to imagine consciousness having a large effect on physical reality.[48] Wigner, however, has proposed a kind of solipsism that would overcome even this objection.[49] The life of a living system is being which is attached to (operationally interactive upon) the living system's otherwise inert (causal) matter. I.e, to exhibit behavior, (a noncausal modulation of the perceptron's causal operation), a living system's "life" or "being" must induce some changes to (interact with) its purely causal matter. This interaction by life-being will be called inception. Inception is the effect of being's generation of a tiny space current which generates tiny forces and force effects on matter. Since these tiny forces are noncausal inputs, they may be regarded as small, noncausal modulations on the carrier (of the perceptron's normal, causal operation). I.e., inception is the micro-microscopic threshold modulation of causality by the being "portion" of a living system. The effect is at so low a threshold level as to be individually immeasureable; however, large ensembles of perceptron operations contain enough inceptions so that the effect (deviation from strict causality) is readily noticeable and measureable macroscopically. Also, when inception ceases (i.e., when the organism "dies"), it is quite noticeable and measureable that its behavior ceases, and that strict, non-modulated causality is resumed by the material body. All living systems exhibit such inceptive behavior when living, and such loss of inceptive behavior when not living; this is a universal and demonstrable fact.[50]

But now back to the handicap in building a quiton current amplifier--we must invoke the living system's process of inception if we are to be successful at stripping away spaces (quiton ensembles) from photons and from electrons in our first device, the triode. That is, the presence of a living being is absolutely essential to the desired process. Inception can be invoked in a physical apparatus when the physical apparatus and the observer-user form an inceptive cyborg system, and it is the functioning of the overall cyborg system which is incepted. Further, since all the

perceptron cessation points ahead in multiception, and all the cessation points behind in a lineception are actually "one" or "oneness," then inception is not limited in time nor space since it has access to superspace itself. Further still, although its inception is an exceedingly small effect-threshold, nonetheless inception, particularly by more "causally distribution function constrained" inceptive cyborgs, can become a very powerful effect when accurately tuned formons are incepted through superspace into a particular resonant formon having identical similarity.

With these things in mind, let us turn to a device which will strip quiton ensembles and amplify them for us - realizing that it is the device/observer cyborg system which we are describing. This device is the Hieronymus machine.[51] Crudely, one form of the Hieronymus device looks like figure 9.

What happens in the device is as follows: Photons (plus their photon spaces) bounce off the source element or are emitted from it. These photons and their spaces are refracted through the glass prism and impinge on a copper rod antenna, which is connected to an RF amplifier, tuned to some convenient frequency (say 545 kc, for example). Now the photons can't go through the electronic circuitry, but the photon spaces (quitons) can. So the photon spaces (quitons) are stripped away from the photons (by inception from the observer portion of the cyborg system) and are introduced directly onto the grid of the triode amplifier. Voila! The amplifier now becomes a quiton current (space current) amplifier, and the amplified quiton current goes into the output coil. A human nervous system in the vicinity of the coil (fingertips on the plastic plate, for example) is also an electrical system, and the quiton space current can travel through its electrical circuitry and affect it. E.g., the galvanic skin response can be invoked, although there are no electrons coming from the appartus (this fact can be established by connecting a sensitive ammeter, or even an electroscope, across the triode output and observing no response). Different persons get differing sensations - as if the fingers were vibrating, as if the fingers were in thick syrup, etc -- but they get sensations only when the tunable antenna is at the precise angle of refraction for that element. The angles can be precalibrated against known elemental sources and then the device can be used to identify elements in unknown samples.

Because inception is necessary, an observer who is strongly and deeply resentful or fearful (even though this is only unconscious) of such "dark reasoning" or of such unknown, "magic" effects may unconsciously block the inception process and thus the operation. The negative ESP effect is well-known in ESP testing such as card guessing, etc. This is caused by incepting in an opposing manner. Thus some persons do not obtain results even by themselves, and the presence of some persons may even block other operators from obtaining results. I.e., all persons present are cyborged into the system. Thus a Hieronymus device together with the operator/observer is indeed an inceptive cyborg space current amplifier, and it is the amplified quiton space current which flows into and through the human nervous system and

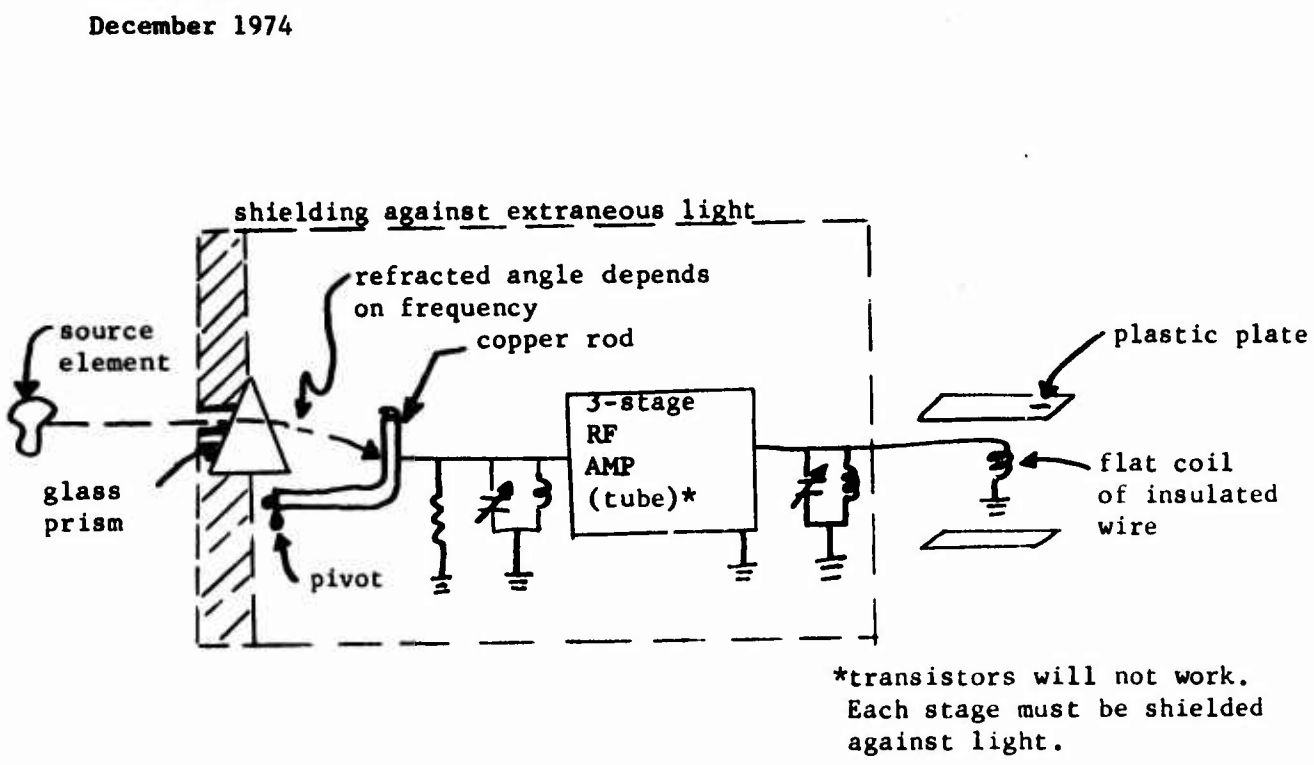

Figure 9. Typical Hieronymus detector.

affects it. In fact the human system is perhaps the best available example of an extremely complex cyborg device. That is, the classic mindbody argument in philosophy is either quite naive, or at best is not well posed, since mind and body are cyborged. There is a great error involved in trying to reduce the world to "either-or" reasoning; this type of logic itself is naive and very incomplete. Such (classic) logic has in fact already been vastly improved by G. Spencer Brown, who has extended Boolean algebra and classical logic to include imaginary values and the laws of form.[52] Brown's logic is so powerful that, for example, everything in p. 98 - 126 of Principia Mathematica[53] can be written in one symbol in Brown's logic without formal loss,[54] which represents an increase in signal-to-noise level of more than 40,000. Since Russell himself admired Brown's work and encouraged him, one can well be sure that the gain factor of 4×10^4, having withstood Russell's examination, is quite true indeed. The point is, there is at least a third alternative to either-or, and for noncausal phenomena it is the cyborg relationship for one type of phenomena.

And as positive proof of the inceptive cyborg effect, the late John Campbell, former editor of Analog, constructed the same type of Hieronymus device, but used an India ink drawing of the amplifier circuit instead of the actual electronic componentry. This "design form" or "formon" cyborg worked perfectly well also.[55] This experiment in fact demonstrated both the inceptive cyborg effect and the formon induction effect. That is, a formon can be directly used by the cyborg as an inceptive master gate or control valve. Summarizing this statement and some of our past statements, formon inception can be directed in a manner similar to DeBroglie waves; i.e., formon inception can exceed the speed of light, it can be in several places simultaneously, and it can be directly superimposed on causality at-a-distance, instantaneously, with no "time lapse" required to travel in between, by being induced through the perceptron cessation points which are all directly one. All psionic, psychotronic, extrasensory, firewalking, paranormal, paraphysical, and other noncausal phenomena are directly explainable by formon inception and by the operation of an inceptive cyborg. The keys to effective inceptive cyborg operation (i.e., to the production of paranormal or noncausal phenomena) are (i) an uninhibited formon inceptor, and (ii) the cyborg connected to an "amplifier" or "servosystem" channel. The most usual method of amplification is formon resonance.

Thus Hieronymus was able to instantaneously monitor the Apollo 11 moon mission,[56] De La Warr was able to photograph the past[57] and to diagnose and treat illness at a distance by using a blood specimen,[58] Ted Serios is able to impress pictures on the film of a camera "mentally,"[59] John Campbell was able to operate an apparently useless device-diagram as if it were a physical device,[60] Jung raised the concept of symbols to archetypes going into the deepest depths of the unconscious,[61] Uri

Geller is able to warp and break a steel spoon with the "force of his mind;"[62] for a witchdoctor who has developed the necessary amplification factor in his own physical body's "Hieronymus-like" space current amplifiers (psychic centers), the destruction of an enemy at a distance using the proper type of formon-resonant voodoo doll is possible; Nelya Mikhailova is able to accomplish psychokinesis;[63] psychic healing can indeed be accomplished; telepathy and clairvoyance can be accomplished even in a Farraday cage; firewalking is demonstrated at diverse locations throughout the world by diverse cultures, etc. In addition, a simple Cheops-type pyramid can "heal" dullness of a razor blade for quite some time;[64] dowsing for a wide variety of substances is possible; shiatsu and acupuncture can work; the use of forms and symbols in "casting spells" may indeed have a basis that is not sheer superstition, and spells themselves may not be entirely so harmless as is scientifically supposed, <u>if</u> the spell is cast by a highly skilled practicioner; the use of groups of properly oriented persons to increase the inceptive effect is logical; the "Bermuda triangle"[65] may be a formon inductive resonator; crystal devices (which are highly accurate formon devices) are capable of diverse uses in the inceptive cyborg sense; an 11½ pound sculptured skull, crafted from a single clear quartz crystal over a period of perhaps three hundred years of painful human effort, was recovered from the ruins of an ancient Mayan city called Lubaantun in the dense Central American jungle in British Hondurus. The skull is a strange inceptive cyborg device having very unusual powers and properties;[66] the list goes on and on, across strange and diverse instruments and energies, and across almost the total spectrum of cultures and societies of humanity. But perhaps at last, within the geometrodynamic formon concept and the inceptive cyborg concept, there is a glimmer toward the development of a paraphysics which can explain the erratic noncausal phenomenalism which has so long been misunderstood by mankind. But even more hopefully, perhaps the advent of such a new paraphysics will allow the useful control of the vast possibilities and energies inherent in superspace, to the enrichment and betterment of mankind, enabling man to finally become a warm and noble human being. The goal is high and the road is both difficult and dangerous; it but awaits the hands and the hearts to do it.

DIRECTIONS IN PARAPHYSICS

Some additional comments should be made before concluding, that a "static" form (or even the static <u>absence</u> of form) must be operationally created and sustained. First, we should note the importance of forms, and we should undertake a totally new study of form and form resonance in all aspects. This is particularly true of precise forms such as crystals, geometric patterns, mandalas, pure tone forms, mixtures of formons such as pure sound tones and pure light frequencies, lenses, and geometrical solids such as pyramids, spheres, cubes, etc. In addition, a more enlightened study of ancient alchemical writings,

legends, symbols, and structures of the ancients such as the great pyramid and the Mayan temples is needed. Electromagnetism needs a thorough reexamination from the standpoint of the quiton/perceptron/superspace/inceptive cyborg/formon approach. The "pseudoscience" of astrology needs a deeper look from the viewpoint of the formon/resonance concept, as indeed does the entire field of disease and medicine. Genetics should be looked at from the viewpoint of coded formons. Although one should most certainly keep a level head, the paraphysical writings of various authors such as Edgar Cayce, T. Lobsang Rampa, Preston Harold, etc, should be examined with the view that one is looking at material that may have a very low signal-to-noise ratio in its translation into words by the author; for example, this writer is flatly astonished to find relativity quite plainly stated by Gautama Buddha, long before the advent of modern European science.[67] Psionic instruments and gadgetry should be sought incorporating formon concepts; if one diagrammetric gadget worked as built by John Campbell, then others should also. Cellular structure should be studied from the aspect of formon resonance. The formon effects of very low electrostatic and electromagnetic fields on mind, body, and environment is a particularly rich field to expand,[68] although we well may not like the pollution effects we find. The total methodology of pattern between man and his cosmos needs a most thorough examination.[69] One could go on almost indefinitely, but this sampling is perhaps sufficient to establish <u>that paraphysics, and the drastic extension of "ordinary physics," are indeed ideas whose time has come</u>.

THE DAMPLIFIER: A TOTALLY NEW CONCEPT

This writer would like to propose an entirely new scientific approach for the investigator and experimenter. This is the <u>damplifier</u>, or the exact opposite of the amplifier. Since formon resonance from even the tiniest formon can incept tremendous power through space (i.e., through superspace) onto similar formons, then what is needed is extremely accurate formons at small levels, not necessarily big, powerful, "rougher" formals at the macroscopic level. E.g., the more perfect the crystal, and the less impurities it contains, the better the resonant formon it produces, and the easier should be the inception when such a crystal is part of an inceptive cyborg system. If more perfect formons can be produced by an inceptive cyborg at a very high frequency, it may indeed be possible to tap the enormous energy inherent in the grain of empty space at the Planck length level (i.e., to tap superspace directly). Such generators could obviously solve the energy problems of man forever. Further, the damplifier concept should really be the most effective -- i.e., a perfect formon will "work" even if it is only 10^{-50} times as strong as the "noise" In fact, the <u>lower</u> the gain, the better a damplifier should work because of the reduced distortion. That, by the way, is why the second Hieronymus machine built by John Campbell worked as well as the other. The India ink drawing he made was reasonably accurate, so its formon was reasonably stable: further, its gain (and its distortion) was certainly quite low.

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ENIGMAS FROM THE PAST

The damplifier concept, if applied successfully to the mass of enigmas from the past, may offer rather startling new conclusions or possibilities in many areas. Only a very few people were educated in the past in the "science" and "parascience" of their culture. Knowledge, especially "arcane" knowledge, was regarded as the most sacred possession; both it and its acquisition were kept secret and jealously guarded. Therefore, if ancient people did discover the secret of the formon and the damplifier, only an extreme few would have known the secret and this would have meant the easy loss of the method(s), if these few perished in the warfare, religious scourges, famines, and pestilences that ravished the earth. In this sense, e.g., one is struck by the description of Edgar Cayce of the power devices supposedly used in mythical Atlantis,[70] and equally by the Tibetian yoga statement that "the realization of the Clear Light must take place in the interval existing between the cessation of one thought and the birth of the following one."[71] [As an indication of possible levels of ancient technology, see David Bergami et al, Mathematics, Time-Life Books (Time Inc., New York, 1963), p. 22 for a picture of a complex Greek computer over 2,000 years old.]

AN HYPOTHESIS FOR THE PRESENT: TAP SUPERSPACE ENERGY

To turn from the acient world to the new, e.g., there may be one possible method of "tapping" the enormous energy in microscopic space (superspace), by only a short "shifting" of present thinking in one area of physical experimentation. Although Fermi's theory of the weak interaction is remarkably successful in describing both beta decay and the results of interactions between low energy neutrinos and other particles, the present view[72] is that the theory is most assuredly wrong because it is not finite. The rationale involves the interaction between a neutrino and an electron, as follows: As a neutrino's energy is increased its wavelength is shortened; therefore, its cross section (the probability of its interaction) decreases at high energies. The Fermi theory predicts that the cross section rises to infinity as the neutrino energy increases. At sufficiently high energies these statements are in conflict, since the interaction would have to occur in a larger space than permitted by the neutrino's wavelength--in fact, more energy would result from the reaction than was put into it. But if local space itself is affected (turbolated, i.e., multiple connectivity is induced, with appropriate form resonances), then additional quiton space current could be connected to and conducted through the interaction. In such case one could indeed get more out of the interaction than was put into it. This of course would violate 3-d conservation of energy. Since conservation of energy is one of the most sacrosanct principles in physics the W boson has been theorized to try to salvage the Fermi theory of the weak interaction and yet retain the conservation of energy principle. However, if a W boson is involved, it does not really solve the problem, but merely postpones it to still higher energies.

On the other hand, for a multiply connected space, the linear (3-d) conservation of energy requires modification whenever connective resonant induction is involved as indeed does the thermodynamic law that entropy must always increase in an action, interaction, or process. An inceptive system is not bound by conservation of energy and its entropy does not necessarily increase with time; the same can be true for formon resonant inductive systems in multiply connected superspace. At least the hypothesis, that the apparent contradiction between the Fermi theory of the weak interaction and the decrease of the neutrino wavelength with increase of neutrino energy may perhaps be resolvable by induction of multiply connected space by perceptron turbulence, might be borne in mind should further experimental results along this line turn out in a surprising or unexpected manner.

CONCLUSION

In closing, it should be frankly pointed out that much of this paraphysical explanation of noncausal phenomena is hypothetical and still crudely expressed. Considerable improvement of the material and the approach should be possible, and there are many other related concepts and ideas for which there is just not sufficient time and space in this paper. E.g., the application of the theory in an attempt to explain the free energy device that T. Henry Moray reportedly built[73] to tap the inexhaustible energy of superspace would appear promising.

The appropriate manner of thinking is holistic, for the world is built like a hologram and not of totally isolated pieces. Zero, infinity, man, machine, object, space, being, and time: all is oneness and the whole is contained in each part. In the closing words of Langston Day and George De La Warr,[74] "The restraining and hindering work of the materialist, limited as it is by time and space, must wither and pass away like chaff that is sifted from the wheat." In the words of Einstein,[75] "The important thing is not to stop questioning. Curiosity has its own reason for existence. One cannot help but be in awe when one contemplates the mysteries of eternity, of life, of the marvelous structure of reality. It is enough if one tries merely to comprehend a little of this mystery each day."

There is a field to harvest and grain to thrash.

So come let us begin.

NOTES AND REFERENCES

1. Noncausal phenomena are those phenomena for which a direct cause-and-effect relationship cannot be perceived. The term encompasses extrasensory perception, telekinesis, teleportation, firewalking, acupuncture, psychic phenomena, telepathy, clairvoyance, psionic machines, dowsing, astrology, etc.

2. A few of the "causative" agents that have been invoked are demons, devils, spirits, magic, esoteric types of energy, ki, chi, prana, breath energy, orgone energy, odic force, a god's will, God's will, kundalini, ectoplasm, etc.

3. Thomas E. Bearden, Quiton/Perceptron Physics: A Theory of Existence, Perception, and Physical Phenomena (March 1973; available through the Defense Documentation Center, AD 763210).

4. Thomas E. Bearden, The One Human Problem and Its Solution: An Hypothesis and a Challenge (privately published, 1971; to be published in a forthcoming issue of Fields Within Fields... Within Fields, World Institute).

5. This is a slight extension of special relativity, but valid nonetheless. Relativity views ΔL and Δt existing only between events, which are then taken to be spacetime points. But an event, being operational, must possess a Δt and ΔL of its own; hence it can scarcely be a "point." Further, it is the observer's mass (which is ignored in special relativity) which gives the "observer" an operationally defined "space" in which to measure or observe the events in the first place. As an example of the misunderstanding on this point, we quote from Mario Bunge, Foundation of Physics, Springer Tracts in Natural Philosophy, Vol. 10 (Springer-Verlag, New York, 1967), p. 226: "RIEMANN, CLIFFORD and their modern followers have conjectured that matter is just a warping of space (or spacetime). This may well be so, but it is not what GR [general relativity] holds: this theory states only that matter and gravitation are associated. This association is as loose as the one between charged bodies and e.m. fields: in fact although whenever there is matter there is a field (because the metric deviates then from the flat form), the converse is as false in GR as in CEM [classical electromagnetism... "] Our comment is that the converse is true in both GR and CEM, because the observer's mass is there whenever there is a field; i.e., try as one may, whenever one has an "observer," and "observation," or an observing (measuring, detecting) laboratory instrument, one has the mass of that which is observing, measuring, or detecting. Both "thing" and "nothing" rigorously exist only with relation to the perceiving device that is operationally creating and sustaining them.

6. I.e., there cannot be a "disturbance" or "warp" or "curvature" or "kink" in something that does not exist. One cannot have an "operationally defined space" without operationally defined ΔL's nor an "operationally defined spacetime" without operationally defined (ΔL Δt's).

7. Bearden, Quiton/Perceptron Physics. The subject is, or is attached to, the physical apparatus which perceives, and the object is that which is perceived (outputted, separated) by the apparatus. The physical perception process is a differentiating process, and thus perceives only changes (events). Differentiation is separation. The basic separations are ΔL and Δt. The perception process in its differentiation produces ΔL and Δt, which are all that physical phenomena are composed of. Since ΔL and Δt constitute both the mass and that in which mass can change, then to perceive (create ΔL and Δt) is to change, and to change is to perceive.

8. This statement refers to the type of "logic" involved in not analyzing the perception process of the observer's mass as a fundamental part of every experiment.

9. Richard P. Feynman, Robert B. Leighton, and Matthew Sands, The Feynman Lectures on Physics (Addison Wesley, New York, 1965, third printing, 1966), p. 2-8. Since making the observation affects the phenomenon, then the observational apparatus's operation and presence is an inherent part of that which is measured.

10. Richard P. Feynman, The Character of Physical Law (M.I.T., 1965) p. 128 - 146. Two different experiments, each with the alternate slit closed, do not add to give the result of a single experiment with both slits open. Thus, the assumption that an electron either passes through one hole or the other, but not both, is not true.

11. Bearden, Quiton/Perceptron Physics, 1973.

12. For a brief but precise description of the rationale by which this is done, see Demetrius T. Paris and F. Kenneth Hurd, Basic Electromagnetic Theory (McGraw Hill, New York, 1969), p. 1-2, 33-34.

13. By "Cartesian space" we mean just an ordinary, linear, three-dimensional Cartesian coordinate system imposed on an inertial reference frame. A tiny mass particle is considered to be at the origin of the Cartesian coordinate system, and the defining operations for the coordinate lengths to all points are considered to be totally internal operations of the origin mass.

14. I.e., an operationally defined space is merely the set of all operationally defined ΔL's (and Δt's as well). Whatever operation is used to define (create) ΔL and Δt has a rate of operation, and thus, by definition, has a ratio of the ΔL and Δt so defined, which ratio is defined as velocity. If the repetitions of the defining operation are all identical, then the ratio of $\Delta L/\Delta t$ is a constant, and the space is linear, since any time multiple of $\Delta L/\Delta t$ gives a linear relationship. Thus, linear perceptron operation generates an "inertial reference frame" and "special relativity".

15. Bearden, Quiton/Perceptron Physics, p. 11 defines perceived mass in terms of perceptron operation.

16. John Archibald Wheeler, "Strange Matter," in Properties of Matter Under Unusual Conditions, Hans Mark and Sidney Fernabach ed. (Interscience Publishers, 1969), p. 373.

17. Ibid., p. 374.

18. Ibid., p. 375.

19. J. A. Wheeler, "Superspace and the Nature of Quantum Geometrodynamics," in Battelle Recontres: 1967 Lectures in Mathematics and Physics, C. DeWitt and J. A. Wheeler eds. (Benjamin, New York, 1968).

20. J. A. Wheeler, Geometrodynamics (Academic Press, 1962).

21. J. A. Wheeler, "Geometrodynamics and the Issue of the Final State," in Relativity, Groups, and Topology, C. DeWitt and B. DeWitt eds. (Gordon and Breach, New York, 1964).

22. Wheeler, Properties of Matter, p. 378.

23. E.g., see Feynman, Leighton, and Sands, The Feynman Lectures on Physics, Vol. I, p. 7-9, 7-10. The accepted refutation by drawing on an analogy of an object moving through a rain is that more "force generating particles" strike the front of the orbital object than strike the rear, hence a resultant "drag" or retardation is experienced by the orbital object, which would thus cause its orbit to decay. Of course, this refutation holds if there is only one velocity of the flux, and if the effect of one flux line were only one side of a particle. But in real space, and in our flux model, there are in fact a great many fluxes since at any instant there is a space flux line moving through the orbital body from every other particle in the universe. The distribution of the instantaneous velocities of these space flux lines varies from zero to some number very near the speed of light. Since orbital bodies

move at speeds very much less than the speed of light, then their own velocity has negligible effect on the average space flux velocity passing through them. Therefore, for speeds not near the speed of light or an appreciable fraction of it, Feynman's argument does not hold, for exactly the same reason why mass may be assumed constant in classical physics where $v \ll c$. Further, the argument does not hold at <u>any</u> velocity, because each flux line goes <u>through</u> the mass, and two reactions occur - one "in" and one "out". A difference between in and out interaction rates <u>defines acceleration</u>, not velocity. The basic force generating mechanism implies that Mach's principle is true as well, and it should be possible to construct a proof of it accordingly.

24. Planck's constant has the value 6.62559×10^{-34} joule-seconds.

25. Bearden, <u>Quiton/Perceptron Physics</u>, p. 4 states a correction to the Heisenberg uncertainty principle required by the condition of superposition, and for the application of the corrected statement to the perception of physical change.

26. We shall be interested in the "form" or "pattern," and not the current that carries it. I.e., we focus attention on the spatial form of the modulation. It is this form which is impressed onto the carrier and amplified, then stripped off on the collector plate. The point is this: A geometric form can be transmitted through a dynamic medium.

27. Since it is a "piece of generalized space," and <u>not</u> a piece of operationally defined space, the quiton is not operationally defined. Hence it has neither physical length nor time length, being simply a piece of nothing. The concept must be realized and cannot be perceptually thought; in a sense the quiton is a "piece of zero," but a very special piece in that if one collects enough quitons onto a mass, a physical change ensues; i.e., a small piece of t and a small piece of L are formed <u>in the mass of the perceiver who is perceiving the mass collector, and therein associated with the perceived mass</u>. This is the fundamental mechanism by which change itself is produced, and it explains why the perceived change is relative to the subject perceiver. This is the solution to the fundamental problem of change; more precisely, to the fundamental problem of the physical perception of change. Since it is "causally" conceived, then causality causes itself; i.e., is "closed on its tail," and perceived phenomena are relative.

28. Hence the need to "conceive of" or "realize" a "dynamic nothing" composed of "dynamic nonthings," i.e., composed of quitons. Note that "nothing" is the "absence of thing," and absence per se is not

perceivable. I.e., to realize "nothing," one must first conceive "perceived thing(s)," then conceive of an operational "removal of the perceived thing(s)," and that allows him to say "this process gives me nothing." The point is, "nothing" must be operationally established and maintained; ergo "nothing" is indeed an operational concept.

29. G. Spencer, Laws of Form (Julian Press, New York, 1972). This is one of the most remarkable works ever to come to my attention. Brown has succeeded in making a dramatic advance in logic itself, and has succeeded in formulating a true calculus of form. The reader who is deeply interested in form and pattern is most strongly urged to study Brown's work. This new logic and new calculus will inevitably be applied to both mathematics and physics, and the two are quite likely to never be the same again thereafter.

30. Mario Bunge, Foundations of Physics, p. 44. Physical laws depict (symbolically) the patterns of physical reality; i.e., they depict unchangeable structure in the midst of a world of flux. Note that a form can exist in both the real and the imaginary planes; see Brown, Laws of Form, p. 58-68.

31. Brown, loc. cit.

32. E.g., see Edwin F. Taylor and John Archibald Wheeler, Spacetime Physics (W.H. Freeman, San Francisco, 1966), passim. Also, the equations of special relativity may be manipulated to yield $L_1T_1 = L_0T_0 = L_nT_n$ which shows that the spacetime "use" in an event is an nonvariable to different observers, although L and T individually may differ to different observers. The concept of "dimension" in the final analysis is merely an analogue of a quantity that changes or is capable of change. We then represent this changeable quantity as a "dimension" in such a way as to bring in the two basic ideas in all of physics: operational and non-operational. I.e., one can "move along" the dimension (operational) or one can be "stopped at a point" on the dimension (nonoperational). All human thinking, ideas, and knowledge are based on only two "facts" - operating and not operating, moving and nonmoving, changing and nonchanging, wave and particle, yin and yang, positive and negative, etc. That is because the nature of perceptive (causal) thought is dual. A thought model created in this fashion is relative and causal, causality itself being simply "time related" or "time ordered." In the final analysis the "content" of a thought model is only its own operation and form; i.e., actually thought can only describe its own operation. Thus, the world can only be "described" in terms of thought model operation. So long as we insist on the use of only causal thought models, only the causal (relative) portion of the world can be described or even seen. Its noncausal portions will then appear as inexplicable fractures in our causal perception.

To comprehend the noncausal portion of the universe, one must create noncausal thought forms, carefully fitted to noncausal phenomena. Only through such a process can the noncausal world be grasped.

33. See Bearden, Quiton/Perceptron Physics, p. 27 for a discussion of reality, ultimate reality, being, and ultimate being.

34. Ibid., p. 30-34.

35. Ibid., p. 11-12.

36. J.A. Wheeler, Superspace and the Nature of ... (1968).

37. J.A. Wheeler, Geometrodynamics (1962).

38. J.A. Wheeler, Geometrodynamics and the Issue of ... (1964).

39. Bernard D'Espagnat, Conceptual Foundations of Quantum Mechanics, (W.A. Benjamin, Menlo Park, CA, 1971), p. 435-445.

40. Ibid., p. 468.

41. Bearden, Quiton/Perceptron Physics, p. 29-30.

42. I.e., when "scientific" or "causal" patterns are used as a basis for the prediction process. On the other hand, if proper "resonance formons" can be detected through superspace, the accurate prediction of the "future" is possible. To predict a noncausally modulated causal chain, one needs the proper "noncausal pattern of fit." Since living things incept noncausal modulations onto causal chains, wizards and shamans usually employed something life-related on which to focus thought forms, as a means of incepting the forms onto the appropriate resonant "future" forms. Such things as sheep knuckles, animal entrails, animal sacrifice, and human sacrifice were used as "resonant inducers". Let us hope that the use of tea leaves is the most violent remnant of these practices!

43. Robert Linssen, Zen: The Art of Life (Pyramid, New York, 1969), p. 104. Tibetian yoga teaches that "the realization of the Clear Light [ultimate reality] must take place in the interval existing between the cessation of one thought and the birth of the following one." Thus, the ancient Tibetians knew well that the differentiating function of perception separates allness, but that allness can be "entered" at the perceptron cessation points. The Zen Koan is intended to so confound the logical, perceptive thought model that eventually its perceptual formon "cracks" and "the" being penetrates beyond its being formon through the crack, realizing its oneness and allness.

44. J. Paiget, La Construction du Reel Chez l'Enfant, (Delachaux et Nietle, Lausanne, Geneve, 1937).

45. D'Espagnat, Conceptual Foundations, p. 464.

46. Ibid., p. 427.

47. E.P. Wigner, "Remarks on the Mind-Body Questions," in The Scientist Speculates, I.J. Good ed. (W. Heinemann Ltd., London, 1961).

48. D'Espagnat, Conceptual Foundations, p. 431.

49. E.P. Wigner, "Two Kinds of Reality," in The Monist, Vol. 48, No. 2 (April 1964).

50. Being is undifferentiated; that is its total definition; i.e., that it is "undefined" or "unformed." When being (oneness) is differentiated (separated, formed), a being results. Since this being is formed, it is attached to a being formon. This formon is comprised of resonances which communicate through superspace to all other formons without limit as to time or space. The infinite-dimensional formon being is the "overself" or "superself." Along any causal 3-d chain, sets of formons in tuned resonance are connected through superspace. This 4-d set of tuned resonances constitutes one chain of reincarnation of the 5-d overself, which has an infinity of infinities of other such reincarnation chains as parts of itself. From our 3-d view, the 4-d chain constitutes "our" chain, and the "resonances ahead" constitute "our future reincarnations." Even so, an infinity of infinities of alternate universe chains lie ahead of us due to the continual "splitting" of our chain (multiception). But along one single lineception path, at a single perceptron cessation point, the "being body" can only perceive (i.e., have perceived) its passage to that cessation point, so the entire process appears to it as a single line stretching back into its "past".

    Note that since time itself is changeable and capable of being resonated, a sixth kind of formon exists; i.e., where the formon of the change of formons along a 4-d path is resonant. Thus, from our 3-d view, a being by its "behavior" and "experience" (formon set of changes) on the 3-d plane is resonantly connected through superspace with appropriately tuned formons throughout 4-d (i.e, down causal paths ahead in time, or in multiception), and the formons of the changes to 4-d formons are also connected throughout 4-d multiception etc, on through an infinity of infinities of dimensional formon resonant connections. In our 3-d view, by its own directed (incepted) behavior (inception), the incarnated being changes multiception. At "death" of the physical carnation (3-d view), the being formon is still resonant throughout many points in multiceptions ahead. Thus, from a 3-d view (which is always

backward, or "from" backward) the being would appear to reincarnate at a "later date" in appropriate resonances, and its incepted changes during carnation would appear to our 3-d view to be changing all its "future," which to us (3-d view) is karma. From a 3-d view, the only way to "stop" all this is to break the being formon which is resonantly attached to the physical body formon. "Breaking the being formon" is variously called enlightment, being "reborn," realization, becoming one with God, becoming God, being a "Son of God" and knowing it, the Clear Light, "being in heaven," nirvana, the "end of time," the "second coming of Christ," the "Holy Spirit" or gift of same, etc, and from a 3-d view it constitutes "escape from the cycle of rebirth".

In actuality all such possible changes already exist in superspace, and one being has an "infinity to the infinity power" of roads of development that it takes. Thus, at the "end" each being has taken all possible paths through all possible dimensions, had every possible "experience," etc - which is how it becomes God, totally unlimited (formless), by experiencing and breaking all limits (forms).

Thus, reincarnation and karma are real, but in a quite different sense from the 3-d view usually taken of such matters.

51. See Thomas G. Hieronymus, U.S. Patent No. 2,482,773, September 27, 1949.

52. Brown, Laws of Form, 1972.

53. Alfred North Whitehead and Bertrand Russell, Principia Mathematica, Vol. I, 2nd ed. (Cambridge, 1927).

54. Brown, Laws of Form, p. 117.

55. Joseph J. Goodavage, "The Incredible Hieronymus Machine - Ultimate Doomsday Weapon or Savior to Mankind?", in Saga (September 1972), p. 92. Also see David M. Dressler, "Progress Report - The Hieronymus Machine Symbolic Type III," in Western Radio Amateur, Vol. 6, No. 10, February 29, 1960.

56. Louise and Galen Hieronymus, Tracking the Astronauts in Apollo "11," With Data From Apollo "8" Included, 2nd printing (Advanced Sciences Research and Development Corporation, Inc., Fort Lauderdale, FA, 1969).

57. Langston Day and George De La Warr, New Worlds Beyond the Atom, Vincent Stuart Publishers Ltd., London, 1973 edition.

58. Ibid.

59. Jule Eisenbud, M.D., The World of Ted Serios, (Pocket Books, Simon and Schuster, New York, 1968).

60. Joseph J. Goodavage, loc. cit.

61. Carl G. Jung, Man and His Symbols, ed. by Carl G. Jung and after his death by M.L. von Franz, (Aldus Books Ltd. London, 1964).

62. Psychic, (June 1973), cover photos and passim.

63. Sheila Ostrander and Lynn Schroeder, Psychic Discoveries Behind the Iron Curtain, (Prentice-Hall, 1970), passim.

64. Ibid.

65. John Wallace Spencer, Limbo of the Lost, revised and expanded (Bantam Books, 1973).

66. Bob Shiarella, "The Mysterious 'Skull of Doom'," in Argosy, Vol. 376, No. 4, April 1973.

67. E.g., see T. Lobsang Rampa, The Cave of the Ancients, (Ballantine Books, New York 1970), p. 88-96 for a description of remnants of an ancient, advanced culture; see Preston Harold and Winifred Babcock, The Single Reality, (a Harold Institute Book distributed by Dodd, Mead, and Company, New York, 1971), with an introduction and summary by Oliver L. Reiser, for one man's massive effort to describe a higher reality; for another such effort see Joseph Chilton Pearce, The Crack In the Cosmic Egg, (Pocket Books, 1973); see John Michell, The View Over Atlantis, (Ballantine Books, 1973), for some interesting forms in ancient works; see inset pictures in Erich Von Daniken, Chariots of The Gods?, (Bantam Books, 28th printing, 1973) for a 7th century BC Assyrian crystal, the remains of an ancient Egyptian electric battery, the strange markings on the Plain of Nazca in Peru and the 820-foot figure above the Bay of Pisco which points to the Plain of Nazca; see Erich Von Daniken, Gods From Outer Space, (Bantam Books, 18th printing, May 1973), p. 126-127 for fragments of a modern translation of an ancient Sanskrit text which was a handbook on construction of flying machines; see Charles Berlitz, Mysteries From Forgotten Worlds, (Dell, New York, 1st printing, June 1973), picture opposite p. 63 for an "observatory" at Chichen Itza, Yucatan, Mexico, 5th picture for an "unknown" stone structure, and back cover picture for a candidate model of an ancient Colombian flying machine; see Edgar Evans Cayce, Edgar Cayce on Atlantis, Hugh Lynn Cayce ed. (Paperback Library, Coronet Communications, New York, tenth printing, 1971), p. 88-91 for a description of the firestones and energy generator buildings of Atlantis, and a direct statement (p. 91) that in Yacatan an emblem of same is to be found; see Clifford Wilson, Crash Go the Chariots, (Lancer Books, New York 1972) for a purported refutation of Von Daniken's thesis: On p. 91-93 Wilson described an absolutely convincing case of Fiji firewalking that he himself witnessed close at

hand. The demonstrated ability of a nonscientific, "primitive" group of islanders to overcome causality is a positive verification of a noncausal phenomenon. The known deliberate control of such phenomena, by primitive people, either destroys the entire gist of Wilson's objections to Von Daniken's thesis, or merely reduces it to the more limited thesis that flying machines and noncausal phenomena devices were terrestial in origin rather than extra-terrestial. From the demonstrated inceptive paraphysics of fire-walking to a crude but effective noncausal flying machine is a matter only of the degree of the inceptive effect. The error in "modern" thinking is when one insists that the ancients could not have had flying machines because they did not have the proper (causal) science. That statement is true as it stands; however, it is not complete. The ancients could very well have had noncausal flying machines (inceptive cyborgs) and we would not be able to recognize the fact because we have no noncausal science today!
On page 93, Wilson states another incident of inceptive cyborg action which he was able to inceptually block. The pity is, Wilson's noncausal knowledge is clearly at the "black magic and devils are bad" level, and he did not understand what actually happened.
But since he is a Christian, he is faced with the necessity of retaining "powers" or "paranormal abilities" because of the "miracles" and "healing" performed by Christ. The problem inherent in this is that the dogmatic Christian is then compelled to destroy, re-condition, or change the non-Christian group working "miracles," for their knowledge and abilities are outside Christianity (i.e., they are pagan, or infidels) and beyond its control. The pinnacle of this reaction is the rack and whip, burning at the stake, condemnation to death for heresy, total integration of church and state, and indeed the dark ages all over again. Millions of persons have been murdered and whole civilizations have been changed and destroyed by such compulsion. Christianity does not stand alone before this accusing finger; almost all great religions have invoked state power and the sword to establish themselves and further their own aims. Today Communism is just such a "religion" and bent on "saving mankind" from the "devil" of capitalism. Hitler, for example, was quite sincere; to his own viewpoint, he was the saviour of the best in man, the "Aryan Race": of course the six million Jews he destroyed and the millions of others who died in WW II to contain this new militant, religious force had quite a different view of Hitler's visions. The fanatical idealist, who would "save" or "purify" mankind, confronted by the blunt reality that most men are not idealists and will not so behave, too often resorts to the use of force to compel social compliance with his idealism. The antidote, of course is to strip the state's power away from vainglorious, fanatical, idealistic groups who would use force to subjugate unbelievers. Such is the prerequisite to the "freedom of belief and worship": and is the reason for the principle of "separation of church and state," This principle

means that one may worship the devil if he so pleases, but he must not force others to worship the devil or interfere with the rights of others to peacefully worship as they please, or even not to worship at all. The same principle holds for worship of any God or gods. Dogma is by no means dead; the principle was bought in blood at a terrible price through the centuries, and it must be continually sustained if any kind of freedom at all is to exist. Every deeply religious, sincere, idealistic person who is dedicated to working for the betterment of man should first read Preston Harold and Winifred Babcock's The Single Reality, previously referenced, particularly Book One, The Palestinian Mystery Play, by Babcock. The messianic complex is a yawning trap awaiting the naive; it is a pit that must be avoided at all costs if one is to prevent his own becoming of that which he is trying to change.

68. James B. Beal, Electrostatic Fields, Electromagnetic Fields, and Ions--Mind/Body/Environment Interrelationships, 1973 (paper presented at the Symposium and Workshop on "The Effects of Low-Frequency Magnetic and Electric Fields on Biological Communication Processes"; in The 6th Annual Meeting of the Neuroelectric Society, Vol. 6, February 18-24, 1973, Snowmass-at-Aspen, Colorado).

69. See Julius Stulman, "The Methodology of Pattern," in Fields Within Fields...Within Fields, Volume 5, No. 1, (World Institute Council, New York, 1972), various authors and articles.

70. Cayce, Edgar Cayce on Atlantis, 1971, p. 88-91.

71. Robert Linssen, Zen: The Art of Life, (Pyramid, New York, 1972), p. 104.

72. The physics of this discussion, not the conjecture, is according to Barry C. Barish, "Experiments With Neutrino Beams," in Scientific American, (August 1973), p. 35.

73. T. Henry Moray, The Sea of Energy In Which the Earth Floats, 4th edition, 1960.

74. Day and De La Warr, op. cit.

75. As quoted by Ronald W. Clark, Einstein: The Life and Times, (Avon Books, New York, 1972), p. 755.