506.00   Knot

506.01   A knot in a spliced rope consisting successively of manila, cotton, wool, or nylon may be progressively slipped along the spliced-together rope with all the latter's material changes of thickness, color, and texture along its length. We agree that the "knot" is not really any of these locally traversed substances. They were just so many colors and tactile experiences whose pattern displacement reported something moving through as a locally recurring pattern configuration. The knot is not the rope; it is a weightless, mathematical, geometric, metaphysically conceptual, pattern integrity tied momentarily into the rope by the knot-conceiving, weightless mind of the human conceiver—knot- former.

506.02   What we call the rope itself turns out to be wave phenomena. The fibers themselves were humanly twisted into a spiral wave phenomenon. We are beginning to discover that there is not too much difference between the tactile superficiality of apprehension and the real frequency phenomena that we cannot see in the intervals between the waves. The actual fact is that the water wave and the manila wave are frequencies nontunable within the electromagnetic frequency range of the human organism's optical faculties, wherefore human cognition of the water waves is provided exclusively by the human brain's afterimage lag and the brain's successive recall apprehending of static picture frames of successively different pattern states as moving pictures.

506.10   I'll bet a monkey can't invent a knot. If they could, they would tie the whole jungle up in knots. What would the behaviorists say? Mind saw the knot; monkey did not. The monkeys hold hands, but they have not yet discovered that the handshake is two circles knotted through one another.

506.11   You cannot have a knot with less than two circles (two finite unities). The mind tells the brain to control the muscles in a knot-tying event scenario as follows: one hand grasps the rope end and describes the first circle. When the first circle is complete, the second hand holds the completed circle as the first hand continues to lead the rope end through the center of the first circle in an orbital plane different from that of the first circle. (If they were both in the same plane, they would generate a coil or a spiral and fail to knot.) The perimeter of the second circle should go through the center of the first circle. One has to capture the other in an interference pattern.

506.12   The rope with the knot in it is a physical memory pattern tracery of where your hands have led its end. The hand-led rope end and its pulled-through rope section form a visibly sustained trajectory of the conceptual patterning employed by mind in negotiating its visual realization by the brain-coordinated sensing of self or others. Like the contrails of jet planes, in the sky, the smoke trails of skywriting airplanes, or the extruded plastic threads of spiders, the roped knot represents a long-lasting memorandum of the abstract, weightless mind's weightless conceptioning in pure principle.

506.13   Each circle has 360 degrees; the two interference circles that comprise the minimum knot always involve 720 degrees of angular change in the hand-led pattern, just as the total angles of the four triangles of a tetrahedron add up to 720 degrees. The hands describe circles nonsimultaneously; the result is a progression. The knot is the same 720- degree angular value of a minimum structural system in Universe, as is the tetrahedron.

506.14   Pulling on the two ends of the knotted rope causes the knot to contract. This is a form of interference wave where the wave comes back on itself, and as a consequence of any tension in it, the knot gets tighter. This is one of the ways in which the energy-mass patterns begin to tighten up. It is self-tightening. This is the essence of "matter" as a consequence of two circles of 720 degrees tending to annihilate or lose one's self. Tetrahedron creates an insideness. Knot attempts to annihilate it. The knot is a tetrahedron or a complex of tetrahedra. Yin-Yang is a picture of a minimum tetrahedron knot interference tying. (See Sec. 505.21.)

506.15   At the end of the piece of rope, we make a metaphysical disconnect and a new set of observations is inaugurated, each consisting of finite-quanta integral ingredients such as the time quality of all finite-energy quanta.

506.20   The metabolic flow that passes through a man is not the man. He is an abstract pattern integrity that is sustained through all his physical changes and processing, a knot through which pass the swift strands of concurrent ecological cycles—recycling transformations of solar energy.

506.30   As curves—lines—cannot reenter or "join back into themselves," the circling line can only wrap around or pass over or under another "part" of its continuity self, as the knot-making sailors says it. Because of a line's inability to reenter itself, when circles are followed around and around upon themselves, the result is a coil—which is a mildly asymmetric spiral wave accumulation that may be piled upon its micro-diameter self only as long as intellect wishes to pursue such an experiential investigation.

506.40 **Yin-Yang**

506.41   Each lobe of a baseball is simply a precessed triangle of a tetrahedron. The baseball is yin-yang, not in a plane but in Universe: it is telling us that complementarities interprecess omnidirectionally and not just in a plane, as the planar yin-yang suggests.

506.42   The spherical tetrahedron can be demonstrated by placing a light inside a translucent plastic sphere. The light at the system center casts the shadow lines of the tetrahedron's four vertexes and their six interconnecting edges outwardly and symmetrically onto the plastic sphere to produce the outlines of a spherical tetrahedron. We may then inscribe four circles around each of the four vertexes of the spherical tetrahedron of such a unit radius so that each of the four circles is tangent to each of the three others. We can take a sharp-edged cutting tool and severingly trace around the perimeter of one circle to its point of tangency with the next adjacent circle, and there we can inflect the cutting tool to cut around the next tangent circle to its next point of tangency, where once more we can inflect the cutting tool's severance trace to follow around the next circle to reach the next tangent point, repeating the procedure until we finally return to the point of original cutting. Upon completion of the severance tracing we find we have cut apart the surface of the spherical tetrahedron into two similar, equiarea sections, each of which corresponds to the two similar, dumbbell-profiled, skin sections of a baseball. With these two similar half-sphere surface sections precessingly aimed toward one another in such a manner that the bulge of one section registers symmetrically with the half-circle opening on the other, we find that we can sew the edges of the sections together around a core to produce a baseball.

506.43   When you look at the baseball with the inflection point of its S-pattern stitching, located at the center of the visible hemisphere's circular profile, aimed directly at you, you will see that the baseball's surface pattern is the same inflection pattern as that of the most profound symbol of the orient: yin-yang. Long ago human minds of the orient must have discovered precession, tetrahedra, and symmetry. (See Sec. 1056.12.)

507.00   **Parity**

507.01   The rubber glove, with its red exterior and green interior, when stripped inside-outingly from off the left hand as red, now fits the right hand as green. First the left hand was conceptual and the right hand was nonconceptual—then the process of stripping off inside-outingly *created* the right hand. And then vice versa as the next strip-off occurs. Strip it off the right hand and there it is left again.

507.02   That is the way our Universe is. There are the visibles and the invisibles of the inside-outing nonsimultaneity. What we call thinkable is always outside out. What we call space is just exactly as real, but it is inside out. There is no such thing as right and left.

507.03   The always and only coexisting convex and concave demonstrates that unity is plural and at minimum two, in which only one is spontaneously accounted as obvious.

507.04   The positive (right) spiral and negative (left) spiral make one tetrahedron: 1+1=4: therefore no parity. But there is parity in the internal complementary macrocosmic tetrahedron of the sum of the angles around all the convex vertexes of the system, and an internal complementary microcosmic tetrahedron of the sum of the angles around all the concave vertexes of the system.

507.05   When physics finds experimentally that a unique energy patterning-erroneously referred to in archaic terms as a particle—is annihilated, that annihilation is only of the inside-outing rubber-glove kind. The positive becomes the negative and the positive only seems to have been annihilated. We begin to realize conceptually the finite, yet nonsensorial, outness continuum integrity that can be converted into sensorial inness by the inside-outing process, but only at the expense of losing afterimage of the previous sense-experienced conceptual fixation.

507.06   The complementary of parity is disparity and not a reflective image.

508.00   Number

508.01   Numbers are experiences. You have one experience and another experience, which, when reviewed, are composited. Numbers have unique experiential meaning. The minimum structural systems of Universe, the tetrahedron and the thinkable set, both consist of four points and their six unique interrelatednesses. Even the development of sets derives from experience. Mathematics is generalization, a third-degree generalization that is a generalization of generalizations. But generalization itself is sequitur to experience where intuition and mind discover the synergetic interbehavior that is not implicit in any single item of the empirical data of the past.

508.02   Intuition and mind apprehend that which is comprehensively between, and not of, the parts.

508.03   The mathematician talks of "pure imaginary numbers" on the false assumption that mathematics could cerebrate a priori to experience. "Lines" are definitions of experiences—of graven traceries, or of erosively deposited tracks, or of gaseous fallout along a trajectory—and the symbols for number extractions, such as X and Y, are always and only experientially conceived devices.

508.04   All number awareness is discovered through experiences, which are all special cases. Every time you write a number—every time you say, write, or read a number—you see resolvable clusters of light differentiation. And clusters are an experience. Conscious thoughts of numbers, either subjective or objective, are always special-case.

508.10   Before topology, mathematicians erroneously thought that they had attained utter abstraction or utter nonconceptuality—ergo, "pure" nonsensoriality—by employing a series of algebraic symbols substituted for calculus symbols and substituted for again by "empty-set" symbols. They overlooked the fact that even their symbols themselves were conceptual patterns and only recognizable that way. For instance, numbers or phonetic letters consist of physical ingredients and physical-experience recalls, else they would not have become employable by the deluding, experience-immersed "purists. "

508.20 $(N^2 - N) / 2$ is always a triangular number as, for instance, the number of balls in the rack on a pool table. A telephone connection is a circuit; a circuit is a circle; two people need one circuit and three people need three circles, which make a triangle. Four people need six circuits, and six circuits cluster most economically and symmetrically in a triangle. Five people need 10 private circuits, six people need 15, and seven people need 21, and so on: all are triangular numbers. (See Sec. 227, Order Underlying Randomness, and illustration 227.01.)

508.30   Successive stackings of the number of relationships of our experiences are a stacking of triangles. The number of balls in the longest row of any triangular cluster will always be the same number as the number of rows of balls in the triangle, each row always having one more than the preceding row. The number of balls in any triangle will always be

$$\frac{(R + 1)^2 - (R + 1)}{2}$$

(where R = the number of rows (or the number of balls in the longest row). (See Sec. 230, Tetrahedral Number.)
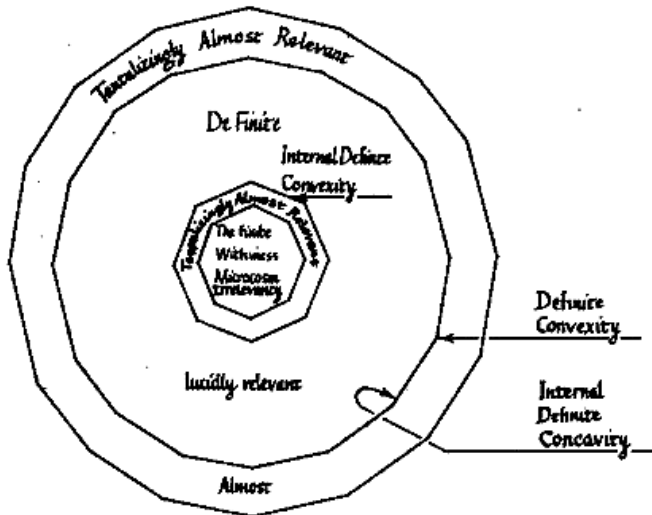
509.00   Considerable Set
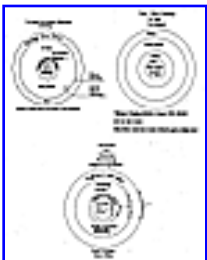
509.01   The conceptual process is never static. Thinking does not consist of the insertion of invented images into an otherwise empty vacuum-tube chamber called brain. Thinking is the self-disciplined process of preoccupied consideration of special-case sets of feedback answers selected out of the multitude of high-frequency alternating transceiver brain traffic. This traffic consists of omniexperienced and processed answers to present or past questions, formulated either by the conscious or subconscious coordinating initiative of the individual or possibly the individual's overlapping generation of group memory.

509.02   A considerable set is a locally definitive system within Universe that returns upon its considerability in all circumferential directions and therefore has an inherent withoutness and withinness; the latter two differentiable functions inherently subdivide all Universe into the two unique extremes of macro- and micro-frequencies.
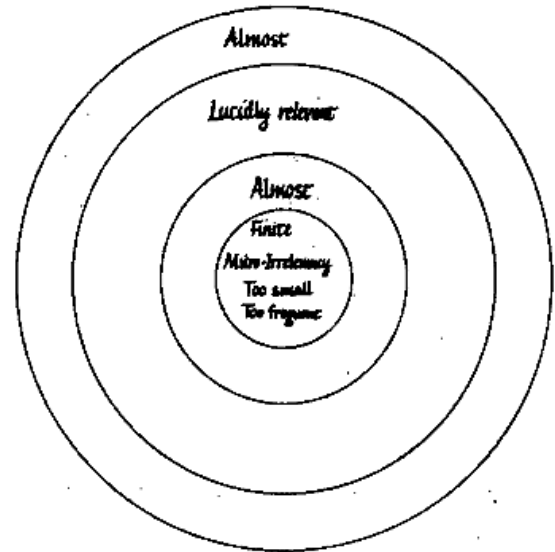
A (top left):

The Finite Outwardness—Macrocosm
Irrelevancy

Tantalizingly Almost Relevant

De Finite

Internal Definite
Convexity

Tantalizingly Almost Relevant
The Finite
Withness
Microcosm
Irrelevancy

Definite
Convexity

Internal
Definite
Concavity

lucidly relevant

Almost

Definite - Finite minus outwardness and inwardness.

B (top right):

Finite ~ Macro ~ Irrelevancy
Too Large
Too Infrequent

Almost

Lucidly relevant

Almost

Finite
Micro-Irrelevancy
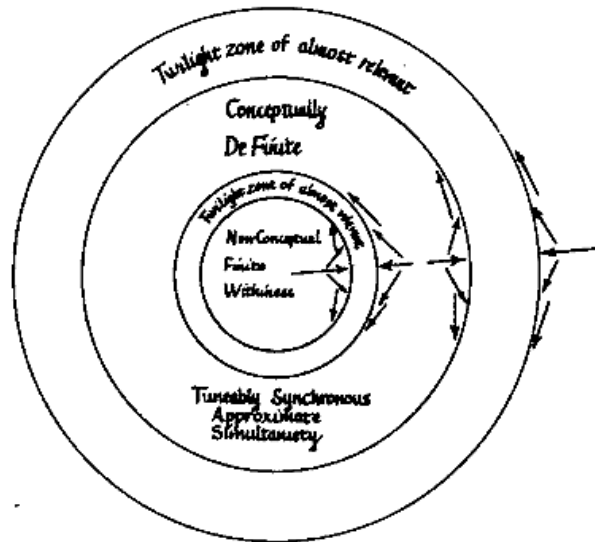Too small
Too frequent

Thinking is frequency modulation—tuning out finite irrelevancies

into two main classes.

Micro, Macro which leaves residual definated system as lucidly relevant

C (bottom):

Non Conceptual
Finite
Withoutness
Nonsimultaneity
Nonsynchronously Tuneable

Twilight zone of almost relevant

Conceptually
De Finite

Twilight zone of almost relevant

Non-Conceptual
Finite
Withness

Tuneably Synchronous
Approximate
Simultaneity

Concave - Concentrate
Convex - Diffuse

Fig. 509.01 A, B, C. Patterns of Thought.

509.03   For instance, we find that all irrelevancies fall into two main categories, or *bits*. One set embraces all the events that are irrelevant because they are too large in magnitude and too delayed in rate of reoccurrence to have any effect on the set of relationships we are considering. The other set of irrelevancies embraces all the events that are too small and too frequent to be differentially resolved at the wavelength to which we are tuned, ergo, in any discernible way to alter the interrelationship values of the set of experience relationships we are considering. Having dismissed the two classes of irrelevancies, there remains the *lucidly relevant* set to be studied.

509.04   Because of the varying depths of storage of past experiences, some answers come back swiftly, some slowly. The recollectibility rates are unpredictable. Ergo, the returning-answers traffic is heterogeneous. Many answers come to questions we have forgotten that we asked ourselves. Conceptually systematic tuning of questions and feedback answers, comparatively considered in the brain, results in temporary, tunably valved exclusion of all other incoming signals. Discrete tuning admits consideration of only those recollections that are *clearly relevant* to the omnidirectional rounding out of systematic comprehension of the special-case set of events intuitively selected for momentary focal consideration. Thinking consists, then, of a self-disciplined deferment of conscious consideration of any incoming information traffic other than that which is lucidly relevant to the experience-intuited quest for comprehension of the significance of the vividly emergent pattern under immediate priority of consideration.

509.05   Neither the set of all experiences, nor the set of all words that describe them, nor the set of all the generalized conceptual principles harvested from the total of experiences is either instantly or simultaneously reviewable. "What was that man's name?" Our answering service may take five seconds, five hours, five days, or five generations to reply. Our conscious, orderly reconsideration of our variable-lag experiences discloses subconsciously coordinated regularities of feedback rates governing the recall phenomena.

509.06   What we do when we think is to dismiss momentarily all the *irrelevant* thoughts as we would part the grass to right and left in order to find a path. Thinking is high-frequency interception and very temporary diversion to a local holding pattern outside our consideration of all the irrelevant inbound feedback—just as inbound airplanes are "stacked up" in the sky near airports by the ground control when too many come in at about the same time and may interfere with each discretely safe landing operation. Landing is a slowing operation and an exact timing operation. Having isolated a finite set of experiences—spontaneously grouped for comprehensive consideration—by dismissing the irrelevancies, we may proceed to comprehend or "land" the isolated system by applying the theory of *bits,* which breaks up finite wholes into finite parts.

509.07   We may now say that what we do in thinking, after deliberately excluding the irrelevancies and thereby inadvertently isolating the considered set, is to further subdivide Universe into four parts:

1. All of the parts of Universe that are externally irrelevant because too large and too infrequent;
2. all the events of Universe that are internally irrelevant because too small and too frequent to be resolvable and discretely differentiated out for inclusion in our interrelationship considerations;
3. all of the lucidly relevant remainder of Universe, which constitutes the considered and reconsidered set of experiences as viewed from outside the set; and
4. the lucidly relevant set as viewed from inside the set.

Part 1 is the untuned, macrocosmic, long-wavelength, low-frequency, high-energy set. Part 2 is the untuned, microcosmic, short-wavelength, high-frequency, low-energy set. Parts 3 and 4 are the tuned, plus (+) and minus (-), interface sets.

509.10   The thinking process results in varying degrees of lucidity of the arrayed residue of focal-event patterns uniquely consequent to the disciplined deferment of irrelevancies. Thinking is a putting-aside, rather than a putting-in, discipline. Thinking is FM—frequency modulation—for it results in the tuning out of irrelevancies (static) as a result of definitive resolution of the exclusively tuned-in or accepted feedback messages' pattern differentiability. And as the exploring navigator picks his channel between the look-out-detected rocks, the intellect picks its way between irrelevancies of feedback messages. Static and irrelevancies are the same.

509.11   There are two inherent twilight zones of "tantalizingly almost-relevant recollections" spontaneously fed back in contiguous frequency bands: the macro-twilight and the micro-twilight. They inherently subdivide all Universe into the two unique extremes of macro- and micro-frequencies.

509.20   So I find that *you* and *I* and the *lamppost* and its lamp are basic subdivisions of Universe. You and I and *complex* it are either all of the Universe that is *inside,* all of the Universe that is *outside,* or all the remaining Universe, which comprises a given recognizable system or set. The residual constellation to be reconsidered constitutes a local conceptual system.

509.30   You cannot program the unknowns you are looking for because they are the relationship connections and not the things. The only thing you can program is the dismissal of irrelevancies.

509.31   When we say "we think," our feedback has variable lags that may take overnight or months of time, for all we know. Because we want to understand—that is, to know the interrelationships of clusters of experiences—our first great discovery is dismissing irrelevancies, the macro-micro characteristics. Add: forgotten questions; different rates of feedback; persons' names; random questionings; the challenging set you would like to understand; our friend intuition.