

THE TRANSACTIONAL DEVELOPMENTAL MODEL: PART TWO

Stan V. McDaniel

Introduction

Following the discussion and comparison of the models of development found in Part One, the purpose here is to analyze correlated developmental concepts which occur in texts roughly described as “esoteric” in a very wide sense, taking in aspects of mythology, occultism, mysticism and eastern religio-philosophical thought. These deal with systems of symbols which occur repeatedly in such texts and related spiritual or meditative practices.

This effort does not depend on *justification* of the empirical or non-empirical content of such texts. The form of the material is taken as data. It constitutes a shift of attention away from content to form. I have found that because of traditional attitudes toward these materials, this shift of attention is difficult for many to “keep in sight” as the discussion proceeds; and even, in many cases, simply difficult to accept or understand.

Despite the removal of focus from content, there are aspects of the content that provide illumination of the metaphorical expressions discussed in Part One. The procedure here is to go beyond the stage of having an imprecise notion of similarities between the esoteric materials and the developmental models of Part One, and instead reach an understanding of what the comparisons are and what possible inferences may be made from such comparisons, with the focus still remaining on the form rather than the content.

In the inspection of the systems of Quine, Dewey-Bentley (DB) and Aristotle in Part One, three common traits were noted: (1) assertion of continuity between concrete and abstract elements by positing a series of stages which link them developmentally. This trait we call *sequence*; (2) Assertion of hierarchy among the stages, accompanied by a claim of greater complexity and abstraction. This trait we call *hierarchy*; (3) Assertion of a complementary relation among the stages such that all are simultaneously existing functions of a single organized system. This is termed *complementarity*.

In order to bring out those aspects of esoteric systems which may exhibit such traits, intelligent interpretation of a sort of religious imagery common in these systems is required, following procedures similar to those used in approaching literary imagery. In most cases the imagery is simple and its interpretation obvious. To keep the amount of material within bounds and still be reasonably complete there will be just five characteristic areas. The focus of attention is not the empirical validity of the contents of the systems, but is rather the *logical structure* of the systems. In particular, special attention will be paid to whatever hints may be present regarding the dynamic factor driving development in these systems.

1. Threefold Patterns

A simple way of dividing a whole process empirically is to distinguish *beginning*, *middle* and *end*. Or in the case of a “vertical” or hierarchical structure *bottom*, *middle* and *top*. Again, given any two points, objects, or events, the relation between them may be identified as a “third thing.” Threefold patterns like these, which also exhibit the traits of sequence, hierarchy and complementarity, are found universally among esoteric systems. In these cases, the general pattern is hierarchical division between physical or less abstract phenomena and mental or more abstract, with an intermediate factor. A few are listed in the table below (Fig. 1).¹

3	Mind	Spirit	Mind	Heaven	Heaven	Spirit	Mental	Mental
2	Heart	Soul	Speech	Man	Interspace of Air	Energy	Astral	Emotional
1	Body	Body	Body	Earth	Earth	Matter	Physical	Physical

Figure 1. Threefold Hierarchies

As we shall see there is much more to many of these threefold structures, as represented in various doctrines, than it might seem at first glance. However such more subtle complications will emerge as the discussion continues. Like the sequences of Part One, the bottom row corresponds to the stage of non-life or physical nature, the top row to the stage of abstract ideas, intuition or non-physical being, and the middle row to an intermediate stage. The idea of “body” or the “physical” is meant in most cases to cover the lower life-functions of reproduction and nutrition but also one may find “Earth” as a kind of fundament in contrast to “Heaven” (i.e. lowest - highest, physical-spiritual).

There is a kind of generic character to these schemes although they are drawn from different systems. Comparison is most interesting in the case of the central row. Here we see an echo of the old idea that the soul is “breath” as suggested by the juxtaposition in the column of “soul,” “speech” and “interspace of air.” More suggestive than this perhaps is the association of the heart and emotion with the central regions of the serial schemes of Part One. The central region of *characterization* in the Dewey-Bentley system takes in the bulk of common nouns, that is, the sorts of things which are the direct objects of practical and emotional attention.

For Quine the central area of “divided reference” covers most of our “talk of ordinary things,” and it is among these that we find objects of love, hate, fear and desire (see Fig. 1 in Part One). Dewey, in *Experience and Nature*, calls this the region in which are located the bulk of things of use and enjoyment. This central region contains not only “the planted field, the sowed seeds, the reaped harvests, the changes of night and day, spring and autumn, wet and dry, heat and cold, that are observed, feared, longed for...” but also “the one who plants and reaps, who works and rejoices, hopes, fears, plans...who is downcast or triumphant.”²

In making this point Dewey himself utilizes a threefold pattern. He distinguishes “primary, ultimate,” and “reflective” experience. In primary experience, perceptual materials are not yet subject to the ordering which communicative contexts supply. This is understood in a relative way: the experience is “primary” relative to some possible ordering. At the other end of the series is reflective experience, in which objects take on abstract properties unique to their role in some system of controlled inquiry. But these properties are capable of being *returned* to enhance the meanings present in everyday life, resulting in “ultimate” experience. The meaning of *returned* here is difficult to detail, but it is clear that it marks one aspect of a dynamic interchange among the three types of experience such that they are not compartmentalized but affect one another in some specific ways. This idea of “return” will surface again in section 2.

Quine does not deal directly with the role that matters of value and emotion may have in the determination of the particular forms which the “objective pull” actually takes. It is obvious that normally objects are “posited” in contexts of use and enjoyment. It is just these contexts which determine what stimulations are ordered and how they are ordered, through behavior, into “objects.” This is why Dewey says that “aesthetic and moral experience reveals traits of real things as truly as does intellectual experience...”³ The image of the “heart” is reasonably compared with the central stages of the developmental schemes of Part One, and it can provide, perhaps, a perspective regarding those stages which have a valid claim to recognition.

Another interesting feature which the comparison of the table with Fig. 1 in Part One suggests is the use of the term “spirit” to mark the highest level (where we have a question mark in that Figure). “Mind” or “mental” correspond with the idea of increasing abstraction, but “spirit” complicates the picture. There is

perhaps a simple sense in which spirituality is more abstract than sensuality, and this sense is sufficient as far as the analogue between the systems goes. Later on this factor may require additional attention.

In some of the threefold patterns in esoteric doctrines emphasis is upon serial connection rather than hierarchy. In nearly all instances unity and harmony among them is stressed as a goal. In this way the basic elements of sequence, hierarchy, and complementarity are present. A typical image, for example, is given in a text on meditation. Two identical jars are pictured, each having a decorative shape which emphasizes its division into three sections: base, central cavity, and pouring mouth. The three levels are then said to represent the physical, emotional, and mental sections of one's "personal constitution." In one of the jars there are a number of small holes around the bottom of the central cavity. Water is shown pouring into the jars from above. This is said to be an influx of "life force."

In the case of the jar with the holes, the water just barely maintains its level at the base of the jar (representing the physical), and it is never in equilibrium, but continually changing as it flows down from above. The second jar, without holes, represents the spiritually advanced individual. In this case, by means of meditation, he or she gradually closes up the holes and the water "fills up the vessel constantly higher and higher" as the increasing life force within does "creative work up to the level which [the water] has reached...until the vessel is full."⁴

Here we find representations of all three characteristics. The temporal order in which the water must fill the jar, bottom to top, establishes the *sequence* moving from concrete to abstract. The vertical axis of the jar, placing the physical "below" and the mental "above," creates *hierarchy*. The source of the life-giving waters, presumably the Divine Spirit, is higher still, hinting at a possible fourth level. And the jar itself, in its overall function as water-carrier, has a unity in which the base, the central cavity, and the mouth are inseparable. The image of the defective jar with the holes in it shows that damage to one area affects the function of the whole. Thus we have *complementarity*.

These properties of a threefold division are also encountered in the image of a giant tree which embraces the heavens at one end and the depths of the Earth at the other. The great ash tree of Norse mythology, Yggdrasil, is an instance of this. At its roots lies the cosmic serpent, symbolic of materiality and the lower life-forms. At its peak rests the World Eagle, a symbol of Spirit, the Heavens and the Sun. In the mid-region among the branches roam four stags, indicative among other things of the four directions of the Earth's surface upon which mankind dwells.⁵ The idea of *climbing* such a tree as a spiritual exercise is present in a Siberian shamanic image:

"...There is a certain tree where the souls of the shamans are reared...on the boughs of this tree are nests in which the souls lie and are attended. The higher the nest in the tree, the stronger will be the shaman who is raised in it, the more he will know, and the farther he will see...The soul of the shaman climbs up this tree to God when he shamanizes. The tree grows during the rite and invisibly reaches the summit of heaven."⁶

The organic connection between root, trunk, and foliage of the tree serves as an image of functional complementarity among the levels of the hierarchy. Complementarity is also suggested by the "four stags" in the tree representing the four directions east, west, north, south, which form the four equal divisions of the compass or a circular figure. Sequential development is illustrated by the act of climbing. It is also implicit in the idea of the flow of sap and nutrients and the direction of growth. The initial threefold hierarchy of Earth, mid-region and heaven is augmented by the idea of a series of "nests" which provide increasing "spiritual strength" in direct proportion to their height. The nests, although at different levels in the sequence, are similar structures indicating a connection of form or "pattern" among them.

An explicit diagrammatic representation of complementarity among the aspects of a tripartite division appears in a Rosicrucian text. In this version, "mind" is given the status of a center point, around which the

three aspects of body, soul and spirit are placed as mutually supportive functions. Each of the three aspects is manifest on different levels. The text accompanying the diagram reads “Man is a threefold spirit, possessing a mind by means of which he governs a threefold body, which...he transmutes into a threefold soul, upon which he nourishes himself from impotence to omnipotence.” (Fig. 2) ⁷

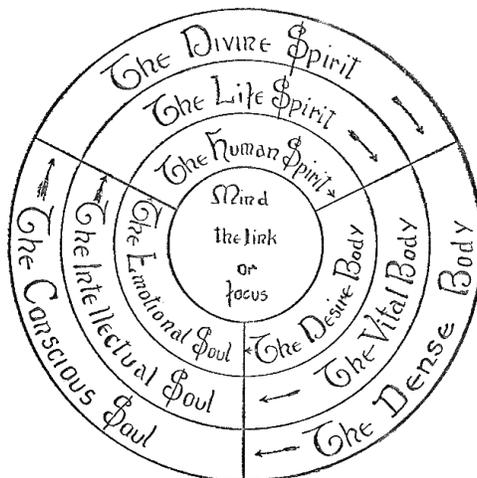


Figure 2. Rosicrucian Image

In this diagram we discover a greater complexity of structure with respect to threefold patterns. “Mind” turns out to be the active factor which unifies Spirit with Body to “extract” Soul. What we have is a threefold group Spirit, Body, Soul, with the added factor that each group is itself divided into three. Added to this complication is the presence of the arrows in the diagram, indicating a dynamic relationship. More will be essayed on this topic under the heading of Dynamic Networks, below, but in anticipation it will be helpful to understand a bit more about the complex organization of this image. By placing these factors equally in the circle the notion of complementarity is satisfied, and by continuing the arrows entirely around the circle a certain kind of looping or feedback structure is implied.

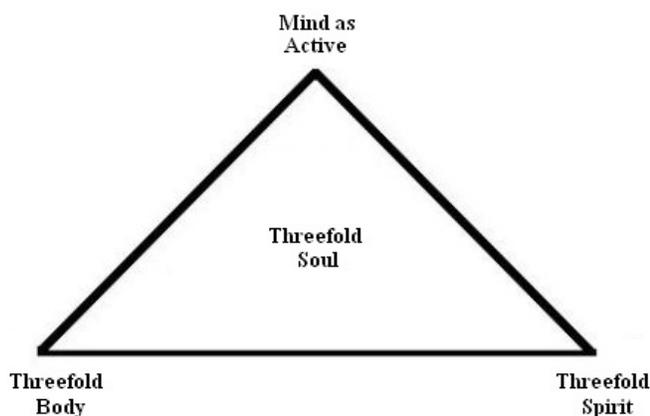


Figure 3. Rosicrucian Triangle

factor is located in the center of the triangle. More will be said about this concept in the section on Dynamic Networks below.⁹

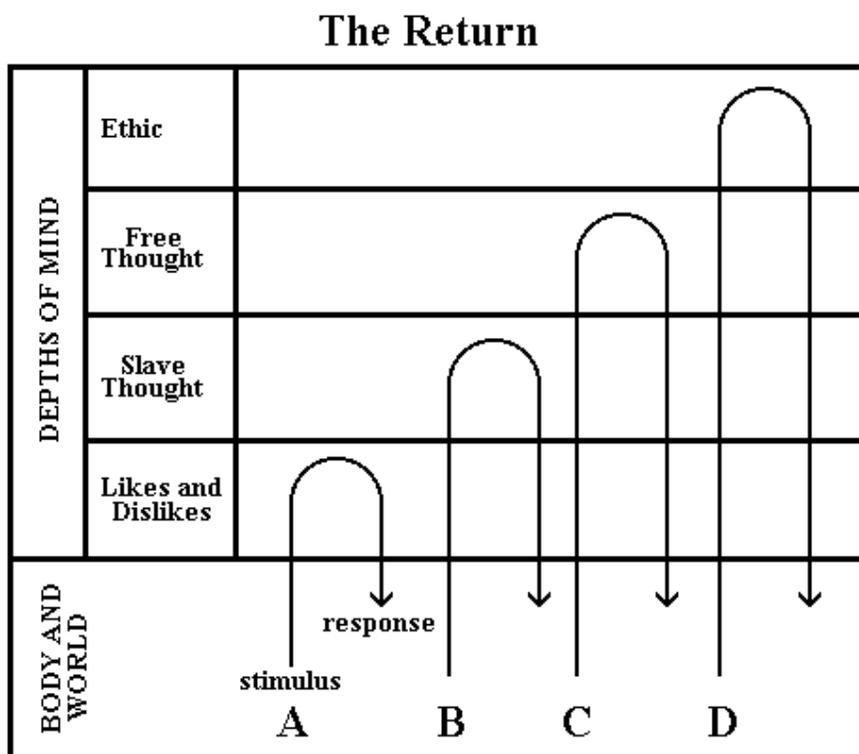
The combined traits of sequence, hierarchy, complementarity, and whatever dynamic factor is called upon to unify these, are incommensurable as far as *diagrammatic* representation goes. Diagrams like Fig. 2 attempt to convey simultaneously multiple relationships among the contents. Figure 3 is an analysis of the materials of Fig. 2 as a *triangle of synthesis* corresponding to the relationships expressed in the Rosicrucian text.⁸

This move introduces an interpretation of the dynamic factor (represented by the arrows in Fig. 2) as a process of synthesis, or reconciliation of opposites resulting in a “fourth factor” or productive result. Traditionally in this context of symbolism the fourth

2. Interpenetrating Bodies

In the Hindu scripture the Bhagavad-Gita, the hero Arjuna experiences a moment of profound spiritual disturbance which stems from consideration of his role in a coming battle. His reaction is describe in three ways, following the customary sequence. First his physical symptoms are detailed, then his sentimental and emotional ones, and last his sense of principle or duty which goes beyond personal concerns.¹⁰ This threefold description of what is ultimately a single powerful experience forms a literary anticipation of the elaborate doctrine of the three *gunas*, or “qualities,” which will be discussed here and in section 3 following.

The description of Arjuna’s experience contains the idea that an incoming stimulation may produce reactions on different levels at once. Arjuna does not have reactions of physical, emotional, and mental in sequence, but simultaneously as aspects of a single experience. In Ernest Wood’s work on meditation, from which came the example of the two jars, there is a system of four different modes of reacting to a single incoming stimulus. We may react, Wood says, on four levels, from “animal” reaction to “God-like” or philosophical reaction. He supplies a very interesting diagram to illustrate this process (Fig. 4).



Stimulus-response at different levels showing the action of “The Return.” (Based on Ernest Wood, *Concentration* page 52)

Figure 4

In this figure the arrows represent incoming impressions and the subsequent outer response. At stage A the reaction is a result of considerations applying only to immediate subjective “animal” needs. In case B the response is similar but gets away from immediacies due to the operation of memory and imagination. Here the experience is connected with more distant spatiotemporal considerations. In case C, theory and principle come into play, but of a strictly empirical sort. Finally the reaction becomes more truly objective with case D, “a knowledge and motive above selfishness” based on “intellectual love.” Wood then hints at a yet higher stage

of direct or “spiritual intuition.” The title of the figure, *The Return*, is not Wood’s but is introduced for reasons to be brought out subsequently.

What we see in Wood’s scheme is a more formal representation of the idea behind Arjuna’s experience. The warrior’s three reactions were unified, that is, they agreed with one another. They are ordered in terms of the highest level, just as the looping arrow for case D in the Wood diagram requires. Moral repulsion becomes physical nausea. The incoming arrows indicate sequential interpenetration of stages. Presumably in order for the arrow to complete its course, the materials of a given stage must open up to the higher stages, subordinate themselves as it were, and “receive” the ordering. The circulating arrows in Fig. 2 appear to indicate a similar “looping” or feedback process.

A version of this pattern occurs in Ouspensky’s descriptions of the teachings of Gurdjieff. Here we find a series of four “bodies” compared to the series of physical, astral, mental and causal bodies found in Theosophy as well as carnal, natural, spiritual and divine bodies of esoteric Christianity. Gurdjieff’s four “bodies” are physical body, feelings, mind, and consciousness.¹¹ Gurdjieff is said to have taught that these bodies are all present only in a “fully developed” man; that they “interpenetrate” one another; and that each one is controlling over the ones preceding it after the development has reached its level (a condition reminiscent of Aristotle’s comment that each stage “potentially contains” its predecessor). In a lengthy alchemical metaphor Gurdjieff is said to have indicated that these “bodies” are developed only in sequence. Complementarity and hierarchy are illustrated by means of a diagram (Fig. 5).

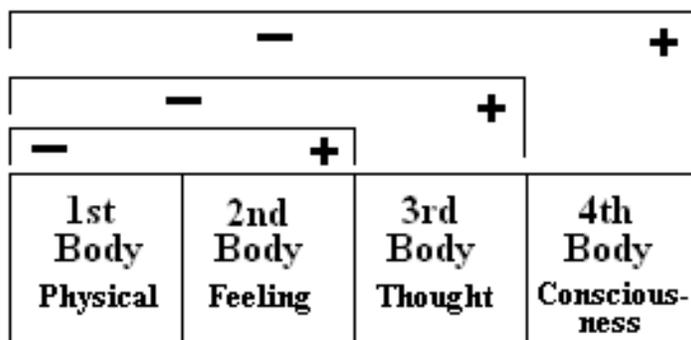


Figure 5. Gurdjieff System of “Bodies”

In this figure the brackets indicate the extent of the development and the unification of increasing numbers of “bodies.” The highest level reached is active (+) and the previous stages are passive (-), that is, lower bodies are incorporated into the whole in consideration of the highest level reached. The brackets of course have a role similar to that of the looping arrows in Fig. 4.

Gurdjieff seems to have had a very elaborate conception of the way in which incoming materials are transformed, and the way in which they do work relative to the levels reached. All incoming material is referred to as “food.” There are three kinds of food: solid food, which usually affects only the physical level; air, which affects the emotional level directly, and sensory impressions, which affect the intellectual levels. With specialized training, the theory goes, energy obtained at a lower level (e.g. from solid food) may be partly diverted for higher uses.

However picturesque this view may seem, in its conception of analogous processes of assimilation-transformation at each level it closely matches the view already noted in the discussion of Aristotle in Part One. Ancient Hinduism also pays a good deal of attention to food in ways suggestive of a similar concept. The

Prasña Upanishad for example associates food and reproduction: “Food is in truth the Lord of Creation. From food seed is produced and from this beings are born...They in turn become creators and produce a pair.”

The idea behind these intake-transformation-output schemes seems to be (a) each function orders incoming material in accord with a rule, which serves more and more objective and/or moral ends as higher points on the scale are reached; (b) the increase in objectivity is directly related to the “subordination” of previous stages to the higher ones; and (c) the dominance of a higher function does not interfere with the operation of the ones below it but on the contrary perfects and heightens their essential nature. The “domination” of the higher functions amounts to the same thing as the perfection of complementarity. In this view hierarchy and complementarity are two aspects of the same process.

Within the framework of the cultural socio-genetic system – language in the broad sense – personalized actions and reactions become capable of referring in their meaning to distant and objective possibilities. This recalls Dewey’s view that the results of reflective experience can be “returned” to become a part of ordinary experience. The reaction to the green color in the test tube, as in Quine’s example in Part One, “there was copper in it,” is a case of an incoming impression producing a reaction which, through the “arch” of the interanimation of sentences within a specific theoretical network, goes far beyond the requirements of immediate sensory satisfaction and interest.

But the scientist as scientist, engrossed in his or her work and intent upon the apparatus, may experience a sense of unity among his direct sensory impressions and the meanings which are experienced as a result of the place which those impressions have in the arch of theory. The “arch” here is a metaphor of the means by which the “return” is affected. In other words, the arched arrows of Fig. 3 (This is why the figure is labeled “The Return.”). The possibility of such a “return” is strictly analogous to the possibility of an alignment of “lower bodies” under the “control” of higher ones *in such a way as to perfect and enhance them all*. It is simply an expression of the general idea of transactional continuity. The key to such possibility lies in the idea that the formal essence of the stages is ultimately the same, e.g. “nutrition” in an extended sense or “adaptation” at all levels, as discussed in Part One..

Turning from Wood, Ouspensky, and Gurdjieff to Tibetan mystical doctrine, we find in a text by Lama Anagarika Govinda a diagram intended to show how a similar series of “bodies” are said to “interpenetrate” one another. In this case the series of “bodies” is: physical, pranic (“breath”), thought, consciousness, and inspirational. Again we move in an avowed sequence (here the sequence of spiritual development) from concrete form to abstract thought. Govinda’s diagram even gives a series of brackets matching those in the Gurdjieff diagram.¹² In this case the notion of “interpenetration of bodies” is given a physicalistic image in that each “body” is represented by increasingly finer stippled shading as the sequence progresses, such that the different shadings appear to merge into one another.

We see in Govinda’s figure a representation of the idea that each function and group of functions is governed by the same rule. This is achieved diagrammatically by placing the origin of the series at the center of a circle, where the sequence is represented by a cone-shaped segment of the circle extending outward to the rim where the finest texture (representing the stage of inspiration) appears. The doctrine it illustrates is referred to as the doctrine of the “five sheaths.”

3. Chakric Systems

The three reactions of Arjuna discussed above anticipate the doctrine of the three *gunas* or qualities which form a large part of the Bhagavad-Gita. These are called *tamas*, *rajas*, *sattva*. They are characterized by means of many different images. *Tamas* is associated with inertia and resistance, *rajas* with desire and restless passion, *sattva* with intellectual and moral harmony. They correspond to body as resistant, the heart as desirous and devotional, and the mind as unifying. *Tamas* is darkness, *rajas* is fire, and *sattva* is light. They are symbolized by colors: dark blue or black, red, and light yellow or white.

The gunas are asserted to be present in all of nature, but are especially associated with human temperament. Every individual is a combination of all three, and one or another is usually dominant. The one in whom tamas dominates is ignorant, sleepy, lazy, negligent, and so on. Even the diet of the three types differs. But each kind of individual may reach toward salvation within his own limits. There are correspondingly three yogas, or practices: The yoga of works, of devotion, and of knowledge. A truly unified person engages in all three yogas as a single discipline. Thus the doctrine of the gunas is a kind of psychological theory of types.

In the very ancient Jain religious view there is a similar system. Sixfold rather than threefold, it is more directly associated with an evolutionary metaphysics. The Jains posit a “life-monad” or Jiva, which is a person’s spiritual essence. In an ordinary man this Jiva is contaminated in a literal sense with “karmic matter.” When the Jiva is not contaminated it is perfectly colorless. Contaminated, it takes on color depending on the degree of contamination. As might be expected, at the lowest level it is black, at the highest white.

As in the case of the gunas, each stage is associated with psychological traits. The black Jiva is typically merciless, cruel, raw, and so on to the white which is dispassionate and impartial. It is common for such threefold, or sixfold, patterns to be associated with parts of the body. The lowest is associated with the abdomen or whole lower body, the emotional to the chest, and the mental to the head. In the Jain system, each level is also associated with a part of the human form in connection with a sequence of evolutionary development.

The human form in this case is not that of the individual, but of the “cosmic man,” who is the Jain anthropomorphization of the universe. This great man includes all of creation as the parts of his organism. Even the smallest atom of his being is caught up in the search for spiritual salvation. There is nothing, in other words, that is not eventually part of the evolutionary tide. The body of the cosmic man is the platform upon which all moral striving is displayed.

As the Jiva divests itself of karmic matter it moves automatically upward through the body of the cosmic man, like the Siberian shaman climbing the cosmic tree. The cosmic man is divided into three main portions, infernal, earthly, and celestial, just as the tree has roots underground, crown in heaven, and trunk and branches in the mid-regions. The infernal regions, or hells, of the cosmic man ascend through the feet, legs, thighs, and pelvic cavity. The earthly regions are at the level of the waist. The celestial realms continue on up through the chest, shoulders, neck and head. At the very top of the head, the “crown of the dome inside the hollow of the skull,” is the place of supreme isolation or kaivalya. This is the ultimate goal of the evolving Jiva. Here it becomes pure and colorless.¹³

The evolutionary path of the Jiva, then, passes through a series of stages. Each stage is associated with a part of the human form such that the higher the stage, the nearer the crown of the head. This organic metaphor is not carried all the way in Jainism, since as the Jiva rises it does not retain the lower functions in some purified form but leaves them behind entirely. Not long after achieving the supreme goal, the Jiva leaves the body of flesh forever. In this case we have a capitulation to a dualistic body/spirit metaphysics.

The primitive imagery of the Jain view is very common in myth and mystic vision. Zimmer shows its resemblance to the teachings of the European mystic Swedenborg. In the Rig-Veda, too, an associating of the ascending order of social castes with a bodily sequence is to be found: “The Brahman was his mouth, of both his arms was the Rajanya made. His thighs became the Vaisya, from his feet the sudra was produced.” The series of castes is analogous to spirit, intellect, emotion and body respectively. The scheme is reminiscent of Plato’s analogy between the classes of society and the three parts of the soul.

Astrology too has a system in which a series of personality types – represented by the astrological signs – are associated with an ascending order in the body. Pisces is the sign associated with the feet; Scorpio at the genitals, Leo at the heart, and Aries at the head with the remainder distributed along strategic places in between. And we find the same series of astrological signs distributed around the circumference of a circle (the astrological chart representing the plane of the ecliptic), providing a hint of the idea of complementarity.

But it is in the *chakra* system of eastern yoga that this aspect of esoteric theory reaches its greatest sophistication. This system posits a number of “psychic centers” each associated with a part of the human anatomy. “Chakra” means “wheel,” and the psychic centers are sometimes said to have a rotating motion or a funnel-like shape. However the motion and shape of the chakras is only visible to someone with second sight. Six chakras are normally listed, with a seventh center being of such a higher order that it is not quite understood as part of the series of six. The chakras are not understood to be physical entities. They are part of the pranic body, or “vital body” as it is sometimes called. They are however *associated* with areas of the human body, and even perhaps located in or around each area of the body, since under second sight the seer may “see” their presence in those areas. In relation to the body the sequence starts with the lowest or muladhara chakra at the base of the spine and ascends to the Ajna chakra between the eyebrows. The seventh or sahasrara-padma chakra is associated with the “crown of the head” which in the Jain system would be the point at which the Jiva leaves the body.

In the Tibetan system of chakras the upper two are combined as one (brow and crown) while the lower two are also combined (base of spine and abdomen). This gives a fivefold series. A Rosicrucian text shows a similar system of “vortices” located in the “Desire Body.” These are at the knees, spleen, liver, throat, brow and crown. Theosophists also place the second chakra at the spleen. The function of the physiological counterpart, while suggesting the psychological function of the associated chakra, is not identical with it.

For convenience we follow the Tibetan grouping. The five chakras occupy three “zones,” those of “reproduction and nutrition,” “realization on the human plane,” and “cosmic or universal plane.” This highest zone contains the centers of “conscious cognition, formulation and discrimination.” as well as the capacity for “spontaneous spiritual awareness of the infinite.”¹⁴

Again we have a pattern analogous to the serial patterns of Part One. The nutritive and reproductive are lumped together as a single function, just as with Aristotle. The intellectual and spiritual functions are at the other end of the series and the “heart” occupies the center. It is on the basis of correlations between the different systems such as these that disciples often claim proof of their validity, on the grounds that they must all be “speaking of the same thing.” But the focus here is the close similarity (or essential identity) of the formal structure of such systems regardless of the differing contents. The question of metaphysical or physical validity is not here relevant.

4. Evolutionary Dynamics

The chakras or psychic centers are activated by a psychic force called the “Serpent Power” and personified as the goddess Kundalini. This power is the driving force behind evolutionary development. Wood says that the purpose of worship is not merely to cultivate piety but also to stimulate the action of Kundalini, whose principle has “operated through the course of biological evolution...the evolving organisms have never formulated or designed a living organ for themselves, but they have aspired to live...in various environments, and Kundalini has done the rest.”¹⁵

For the mystic, biological evolution is simply the return thrust of the creative act by which the manifest world of space and time “descended” from the Divine. The same force which initially went out or down (involution) now goes in or up (evolution), in a curious analogue to the curving arrows of Fig. 3 and the “return” concept discussed previously.

Kundalini, then, is the underlying dynamic of evolutionary growth, considered from both a spiritual and a biological point of view. In the ordinary human being, according to the chakra-kundalini doctrine, the power of Kundalini “rests” in the place of the root chakra at the base of the spine (like the world serpent in the Norse legend.) Spiritual efforts (yoga) will “arouse” this force. Then it traces a path up the spiritual counterpart of the spinal column, a central nerve called the sushumna. It passes successively through the chakras, awakening each one in turn and “priming” it for a further transformation to come.

On its path upward the Kundalini must overcome obstacles. These obstacles are psychic “knots” which must be “untied,” like real knots strung along the length of a rope, in reverse order from that in which they were tied. This image of the sequential “untying of the knots” is said to be very ancient and is attributed to the Buddha himself. There is then a logical priority of sequence. And as the knots are untied, the chakras are serially activated in a certain way. The chakras are like a string of lotus-flowers:

“As [the Kundalini] proceeds from the [root] center she passes through one chakra after another; and as she does so the flower which was previously facing downwards turns and faces upwards.”¹⁶

The psychological fact to which this “turning upwards” refers is a renunciation of the usual unrelated occupations of the centers in favor of a unified control from “above.” When the flower of the root-chakra, for instance, is “turned downward” it responds mechanically to outside stimulation without regard for the harmony or disharmony of the whole organism. But in “turning upward” it prepares to function in harmony with the requirements of the higher centers.

When the Kundalini reaches its goal at the crown center, like the ascending Jiva in the body of the cosmic man, a transformation takes place: “golden drops” of spiritual “food” are released from the crown center and these descend to the upturned chakras like rays of sunshine on flowers, feeding them spiritual food and ensuring that thereafter they will be inclined to act only “in response...to the higher motives.”¹⁷ The evolutionary process and its resultant ordering are to be brought about by spiritual practices with the ultimate aim being the unification of the poles of the series, e.g. the root chakra is unified with the crown chakra. Bringing the two “ends” of the psyche together in this way may be symbolized as the creation of a circle, such as the *ouroboros* or serpent with its tail in its mouth. The rotating arrows of Fig. 2 offer a similar image. Govinda asserts: “The body itself becomes a mandala (circular figure) during meditation...the meditator must imagine himself in the center of the mandala.”¹⁸ This speaks to full functional complementarity.

We have then in these images of the “knots,” and the lotus-flowers and the “golden drops” all of the key traits of the developmental systems of Part One: A sequential development governed by a set of logical priorities, hierarchical ordering, and complementarity. The logic of the relationships among the contents holds quite firm regardless of the number of stages or of the metaphorical imagery used to express it.

A more explicit connection of the mandala with the evolutionary process is the great mandala of the five meditation buddhas (Dhyani-Buddhas) in Tibetan Buddhism. This is a highly sophisticated compound symbolic device used to assist concentration. One of the five resides in the center of this mandala, together with his spiritual mate or *shakti*. The remaining four, each with *shakti*, are distributed around the rim. Each buddha corresponds with one of the five psychic centers or chakras. Appropriately Vairocana, the buddha corresponding to the highest center and representing the unifying force and ordering principle of the whole, is in the central position (corresponding to the location of “Mind,” which is also the unifying force, in Fig. 2).

There is another system in the Tibetan array called the system of the five aggregates of consciousness or *skandhas*, which is also correlated with the mandala of the Dhyani-Buddhas. These five are called “the individual’s active and reactive functions of consciousness” and are placed in a sequence of increasing “subtlety, de-materialization, mobility and spiritualization.”¹⁹ In the systems of Part One this sequence corresponds to the sequence of increasing abstraction.

The *skandhas*, in this order, are: corporeality, feelings, perceptions, volitions and consciousness. The latter orders all the rest and is called “full awareness.” They are said to represent “five phases of every complete process of consciousness.” and are so related that they “cannot be regarded as separate ‘parts’ but only as different aspects of an indivisible process.”²⁰ This is a remarkable statement. Since the *skandhas* are, as we shall see, related as series to the chakras, the suggestion is that in some sense the development of functions in an evolutionary sense is also recapitulated, as it were, in *each single act of present consciousness*. In the serial

developmental systems analyzed in Part one, we found that the temporal relation between the stages of development is understood such that “no prior stage is ‘left behind’ but is carried right along with the developing series.” The notion that every single act of consciousness involves all stages of development, as in Govinda’s assertion about the skandhas, is illuminating and consistent with that requirement. In effect it is an assertion of complementarity of functions.

Each skandha, like the chakras, is associated with one of the five buddhas. In the center, as to be expected, we find the highest skandha of “full awareness” while the sequence around the rim follows the customary one: corporeality, feeling, perception and volition. The ascent of the Siberian shaman up the cosmic tree toward heaven, passing the series of “nests” of increasing “spiritual power,” is a simple parallel to the journey of the Kundalini upward through the chakras. The spinal column may be thought of as a sort of “tree” with its roots in the earth and its crown in heaven. In the Tibetan tradition the spinal column is analogous to the sacred mountain Meru, located at the axis of the world. The idea of a world-axis is also commonly associated in myth with the great mythological trees such as Yggdrasil and the World-Ash. The shaft of Yggdrasil was the “pivot of the revolving heavens,” that is, the center of a mandala. There is a typical mythological link between the shaman’s tree of nests and the Buddhist’s column of chakras arranged along the spine.

The universality of this image is shown by its presence also in the system of the Hebrew Kaballa. One of the central ideas in this system is the “Tree of Life,” a tree-like geometrical arrangement having a central channel and two outer channels, like the Indian sushumna flanked by a pair of complementary “nerves” called the ida and pingala. The Tree of Life has its base in the “world of objects” and its crown in the world of “spiritual emanations.’ Upon this tree, like chakras or nests, are the ten “lights” called the Sephiroth (Heb. *radiant*).

As might be expected each Sephira has its own functional characteristic, and the entire group of ten is supposed to describe a general description of any organically complete being (complementarity). Meditative practice is metaphorically described as “traveling” along paths among the Sephiroth. A typical ‘route’ moves from the concrete form of an individual thing to its relation to forms in general, and thence to an understanding of beauty and harmony, finally arriving at “the world of absolute ideas.” The Sephira Tiphereth, in the center of the tree, is associated with beauty and harmony and resembles the heart chakra in many respects.²¹

In these systems of the path of evolutionary transformation along a complementary sequence of functions, the triangle of synthesis, or unification of opposites by a dynamic process, is a constant image. The ida and pingala, the outer channels of the Tree of Life, and the embracing Buddha-Shakti figures of the Dhyani-Buddhas all provide the same symbolic idea.

4. Cosmic Planes

In many esoteric systems there are posited a series of regions, “planes,” “worlds,” or levels of the cosmos. Often each plane is correlated with a different “body” so that there is a corresponding series of “bodies.” Like the “bodies,” the planes are said to interpenetrate and to exist simultaneously even though they are also arranged according to an evolutionary sequence.

A Rosicrucian scheme lists seven cosmic planes, each containing seven worlds. The seven worlds of the cosmic plane humanity inhabits are the Physical World, the Desire World, the Thought World, the Life Spirit world, the Divine Spirit world, the Virgin Spirit World, and the World of God. The Physical World itself is divided into higher and lower parts: the chemical realm and the etheric realm. The chemical realm consists of solids, liquids, and gases. The etheric realm begins with those chemical reactions that serve as a medium for “assimilation and excretion.” This is called the realm of the “chemical ethers.” These four together correspond to the ancient series earth, water, air and fire, the latter being assigned here to the nutritive process, just as Aristotle associated nutrition with “warmth.”

Above the chemical ether, but still in the etheric realm, is the life ether or “medium for propagation.” Then comes the “light ether” or medium of sense-perception, and finally the “reflecting ether” which is the “medium of memory of nature.” These all follow Aristotle’s scheme quite closely.²²

At this point the Desire World begins. It is a very curious realm that appears to range from something like Aristotle’s appetitive soul at the low end to a mysterious “soul-force” at the other. Most interesting is the statement that the forces of the desire world provide the incentive for movement, experience, and moral growth without which “evolution would be impossible.” This suggests that the desire world is connected with the organizing factors relative to which a form of life exhibits e.g. “significant indirection,” meaningful choice, or adaptation. Ecologically such teleological organizing factors are not “located” entirely within the organism but are a function of the form of life as a population in an ecosystem. The Rosicrucian scheme is suggestive of the same idea in its thesis that in lower animals the desire body is external to the individual members of the species, residing instead in a “group-spirit.”

Above the desire world is the world of thought, again divided into two regions, the lower being the region of “concrete thought” and the higher that of “abstract thought.” Between these two realms is the crucial “fourth region” of the thought world, called “Mind,” which is understood as the changeover point between matter and spirit. This region is analogous to the borderline in the DB system between specification and symbol, where abstraction has increased to the point that DB no longer apply the title “name” beyond it. The correlations between this Rosicrucian framework and that of DB are shown in Fig. 6 on the following page. With respect to this and similar diagrams, the correlations do not constitute a claim of identical content but only of the logical organization of factors.

These “worlds” are not exactly functions, but they have a status which is rather like the objects of functions. For each world, there is a corresponding body. If we take the bodies as functions, then the worlds may be thought of as the range of possible objects of each function. This would be analogous to Aristotle’s scheme of correlating the faculties with the objects of those faculties, as discussed in section 3 of Part One.

There is also a type of mandala connected with the system of worlds, in the form of a cyclical movement “through” them. Spirit “descends” into matter and then “rises” to the higher planes again in a continuous cycle. This again is indicated by the circulating arrows in Fig. 2. In the Rosicrucian scheme the cosmic cycle is thought of as the action of a great intelligence, or God, which initiates and perpetuates the cycle as an expression of its own evolutionary growth. The different “worlds” are roughly analogous to chakras in such a being.

The various “planes” are functional components of the cycle, much in the way that the populations of an ecosystem are functional components of the biogeochemical cycle: all the components exist simultaneously yet the energy flow proceeds “through” them sequentially. It is interesting that in a sense the populations of an ecosystem do “interpenetrate” one another. Birds, for example (heterotrophs), rest among the branches of the trees (autotrophs). Mice (heterotrophs) scramble amid the grasses (autotrophs). If these populations were separated the system would collapse.

The suggested resemblances between the logic of functions in the esoteric systems and that of the ecosystem may not be an idle or accidental matter. The concept of an ecosystem in biology is relatively new and admittedly requires a field-oriented or explanatory framework based on dynamic functional relationships. Recognizable elements of the developmental logic here attributed to esoteric and philosophical systems have also emerged in recent decades in efforts by biologists holding to an “organismic” theory of embryonic development.²³

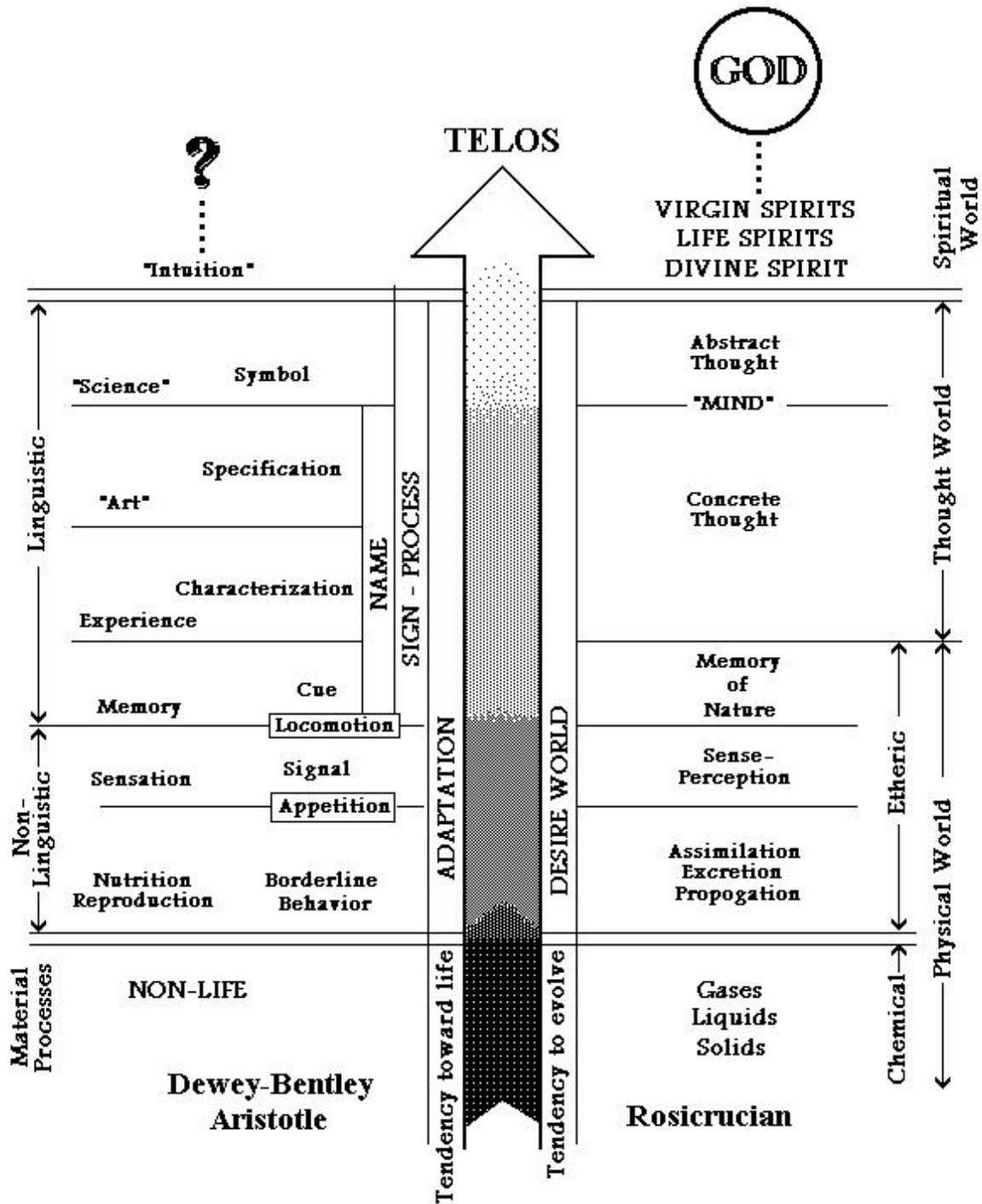


Figure 6. Comparison of DB, Aristotle, and Rosicrucian Systems
 "TELOS" = Organizing factor of development

5. Dynamic Networks

In some esoteric writings we encounter the image of a chain of triangles. The triangles in these chains represent repeated linked instances of a certain process. One instance of the process gives rise to another, and then another, and so on. The process itself is usually described in very general terms. An “active force” encounters a “passive force” and the tension between these two is resolved by a mediating or “neutralizing force.” The overall result is then understood to be a fourth factor, which can become an active force in turn, giving rise to the next link in the chain. The favored number of triangles for these chains is three or seven, i.e., the number of threefold patterns or of seven chakras.

A series of three triangles, for example, exhibits nine points which represent the action of nine forces, and the tenth point in the center of the last triangle represents the summation of the entire cycle. Seven triangles plus a summation-point at the end yield twenty-two points. The numbers 10 and 22 are for this reason thought of as symbolic of a kind of completion of development.

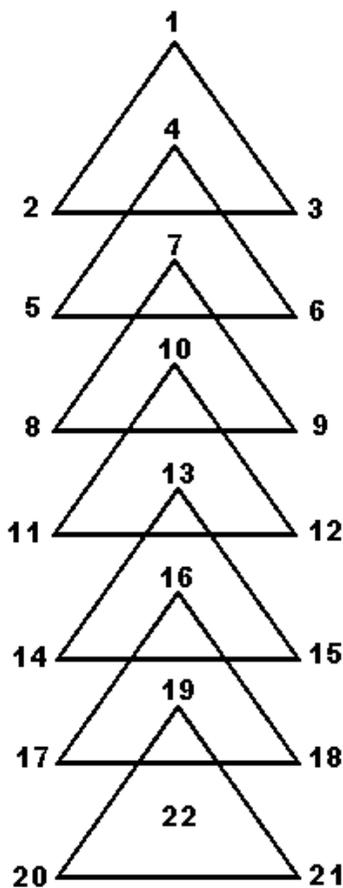


Figure 7.
Cycle of 22

Such compound structures are then understood to link together, eventually forming networks of cycles within cycles. A cycle of 22 may be represented by the 22 letters of the Hebrew alphabet, or alternatively the 22 cards of the Major Arcana of the esoteric Tarot deck. In this latter case the 22nd card as the resultant is said to effect the “transition” between this initial cycle and a more complex cycle symbolized by the remaining 56 cards (Minor Arcana).²⁴

The 78 cards of the Tarot deck are therefore supposed to represent two dynamic networks linked by the 22nd card. These in turn are symbolic of some larger formal structure of dynamically interlinked processes. It need hardly be pointed out here that the imagery involved is extremely suggestive of Quine’s concept of “transitivity of conditioning” and the “interanimation of sentences.” The correlative concept in DB was “clustering” and “overlapping” of cues. We shall take a further look at this possible connection in a moment.

Since the initiating image of these dynamic networks is normally that of a triangle, what we have in effect is an expansion of the meaning of threefold patterns. The three points of the triangle represent the first, second and third of the interacting “forces” and some element (for example, an eye) placed in the center stands for the resultant fourth “force.”²⁵ (Figure 3 above is an example of the triangular form.)

Because the dynamic factor is actually a configuration of four forces, another image frequently encountered representing the same dynamic is a cross. In this case the tip of each arm of the cross represents one of the four “forces.” Because of the fourfold nature of the process it is sometimes called the “law” of the tetrad, or the *Tetragrammaton*.

Papus analyzes the cycle of 22 into four subcycles. The first three are each made up of two triangles and their central point. The center point of each of these “septenaries” is the initiating point of the following one, so that the three septenaries form a linked series. The final cycle is a single triangle which performs as its center point the significant resultant, or the number 22. As before this last is the transition to the more elaborate network of the 56 Minor Arcana.²⁶ Figure 8 illustrates Papus’ concept. In this cycle of 22, he includes the cross, indicating a dynamic relationship not only within the septenaries but among them as well. As a result the diagram has the form of a mandala similar to the mandalas of the Dhyani-Buddhas discussed earlier. Under this representation, the final triangle bearing the resultant number 22 is to be seen as

a product of a higher level dynamic relation among the three septenaries, not just a further element of a linear sequence as in Fig. 7.

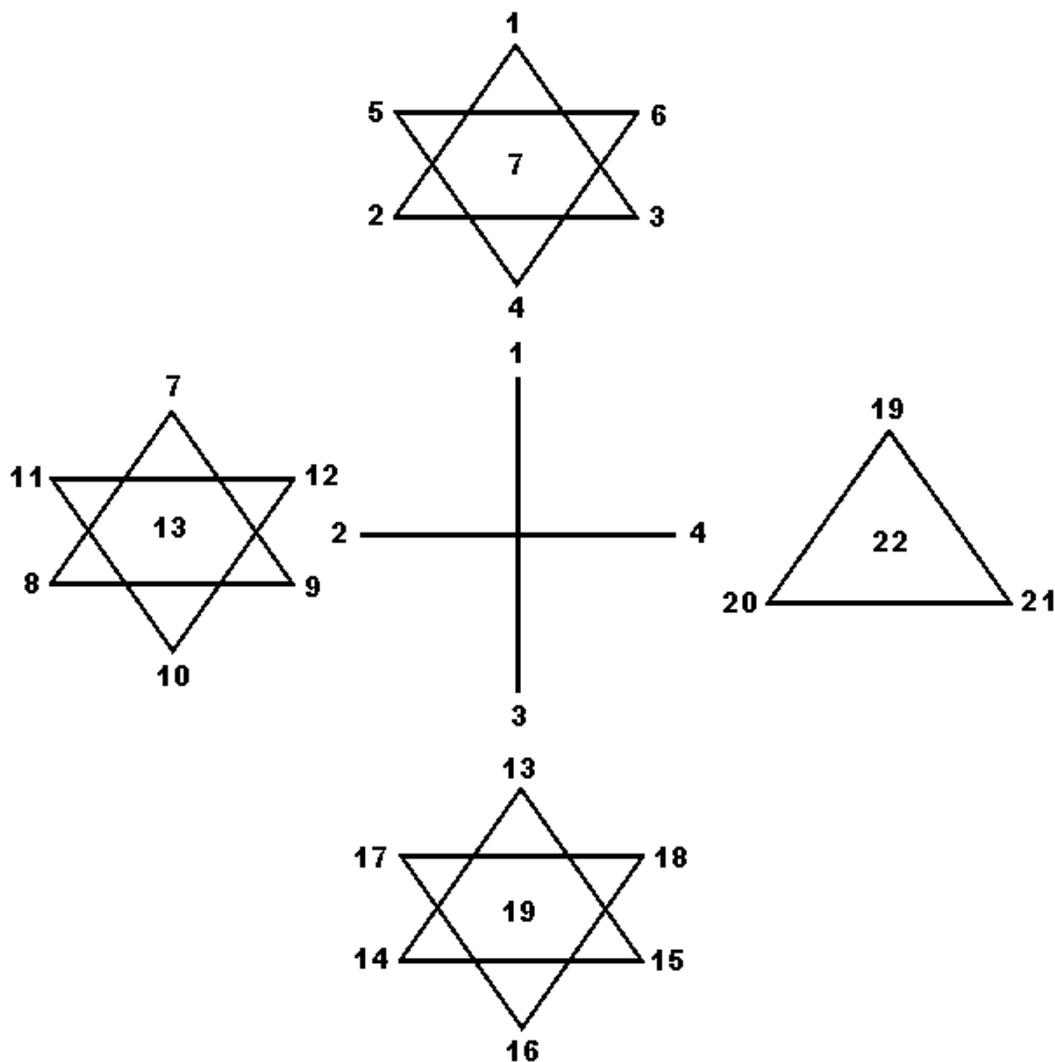


Figure 8. Dynamic Network (after Papus, *The Tarot of the Bohemians*)

The Minor Arcana of 56 cards are next arranged in a similar mandala-pattern which is, in effect, a mandala made up of smaller mandalas. In this case the four units of the greater mandala are the four suits of the deck, associated with the four elements of earth, water, fire and air, just as the four Dhyani-Buddhas in the Tibetan mandala are also associated with the elements.

As these various linkages proceed there are supposed to be corresponding changes of level. The series of seven triangles in the cycle of 22 (Fig. 7) are said, for example, to represent in descending order seven planes, the highest being “the Divine Life” and the lowest “the physical realm.” Thus the cycle is a sequentially and hierarchically linked series of stages between physical and spiritual existence. The notion appears to be that the more complex mandala of 56 is the manifest world to which the mandala of 22 stands as archetype. This relationship is apparently also meant to be suggested by the relationship between the four court cards and the ten numbered cards in each suit, the four court cards standing as archetypes to the more complex cycle of ten that follows.

What is important in these curious images, from a *formal* point of view, is the emphasis upon both unity and continuity of process among and across all levels. Continuity is signified by the various linkages and transitions, and unity is typically asserted as in this statement by Sadhu, “This Law works on every plane of existence...Each triangle...represents the same unique idea but on a different plane.” What we have here is continuity asserted in terms of *analogy of pattern*, the pattern being specifically that of the dynamic triangle or cross representing three interacting forces and their resultant.

There is a closely allied image in the Gurdjieff-Ouspensky system, where a “Law of Three” and a “Law of Seven” generate a series of “worlds” which descend the “Ray of Creation” and originate in the “Absolute.” This “Absolute” has three forces within it, which act to produce “the first series of worlds in the Ray” (i.e. the first plane). Then in accord with the logic just outlined, “in each of these newly created worlds there also existed three forces which repeated the process of interacting on each other” and generating thereby the remainder of the lower worlds.²⁷

A Rosicrucian diagram illustrates this idea. At the top we have a triune structure, a triangle, called “the Supreme Being” whose three aspects are Power (active), The Word (passive) and Motion (neutralizing). Emanating from this Deity and forming the First Cosmic Plane are seven entities called “The Seven Great Logoi.” Each of them have triangular form and each generates seven further units to create the Second Cosmic Plane. Then in turn each of the units on this plane repeat the process until the Seventh Plane is reached.

This Seventh Plane is that of humanity, corresponding to the right-hand side of our Fig. 6 above. The generating Deity of this plane is “God” and is once again triune. Thus what we have in this highly complex dynamic network is a constant alternation of the 3/7 rule. An interesting aspect of this repetitive network is that the seventh plane holds “other solar systems” than our own, and the threefold “God” of humanity is that of our solar system only. Thus the involutory-evolutionary system under this “God” would appear to refer to that of life on Earth and possibly on other planets of the solar system, which while related in the larger network to other planets and thence other planes, is still insular to the specifically solar milieu.

All of these systems appear to be incomplete, if indeed there is any basis on which to make a judgment. They exhibit internal inconsistencies, and the authors typically change the rules about for unexplained, and therefore apparently arbitrary, reasons. They are also very little associated with understandable empirical content, so that they appear to be frustratingly empty of meaning. On the other hand, because of their complexity and despite inconsistencies the impression of a kind of “scientific” organizing of materials, and also because of another factor which is a kind of numinosity or attractiveness for the inner intuition, they produce in many followers a conviction of truth, or of hidden knowledge.

Indeed the authors of many of these texts do not always deny that there is a problem in expressing the underlying logic. Heindel, for example, says “The realities possess from four to seven dimensions, and the diagrams of two dimensions by which it is endeavored to represent them are thus so much further removed from the possibility of correctly portraying them. We must constantly bear in mind that these worlds interpenetrate.” Unfortunately in most cases this sort of *caveat* serves not to clarify the nature of the underlying logic of the system but instead to give the disciple an impression of deeply hidden realities that require adherence to the system’s practices in order to reach attainment of knowledge. Instead of looking for “hidden dimensions” one might at least consider that a two-dimensional diagram is meant to represent a development over time (i.e. four dimensions in the ordinary sense).

Since these networks of cycles are concerned with the serial generation of a system of planes or levels, and since they are said to “interpenetrate” etc., the same analogies pointed out in section 4 apply here. In the terms of Part One, “interpenetrate” would have two meanings: first, the continuance of a given function throughout development over time, and second, complementarity of functions. In effect, “interpenetrate” is an expression of both temporal continuity and simultaneous unity. Unlike “interpenetrate” these concepts are not metaphorical but instead may easily be understood in the context of the development and functioning of organic life.

One feature of these dynamic networks that is of special interest is the idea that a single process operates at all levels as a kind of process-unit, and that the successive “planes” are built up of networks of such units interlinked with one another and also reflecting the general rule of the unit within every instance of a cycle or subcycle, from microcosm to macrocosm.

What this indicates is that the role played by the law of the Tetragrammaton in these esoteric systems is *analogous* to the central dynamic of the process of evolutionary development as it is understood in transactional systems like those discussed in Part One. The discussion there of the “extended sense of nutrition” applies in this case.

The esoteric system attempts to explain the nature of the relation between “planes” of being in terms of the linkage of similar process-units represented by e.g. triangles or crosses of synthesis. This is analogous to the attempts made by the authors discussed in Part One to explain the logical character of the relation between the stages of a developmental process in terms of a single mechanism. In that context we pointed out how a reductionistic perspective cannot be maintained. In particular, we found all three authors co-opting abstraction and moving “backward” along the developmental sequence to attribute incipient abstraction as already present in the earliest stages. This move was forced on those authors by their mutual desire to maintain continuity of development and the inadequacy of any simplistic “mechanism” to accomplish that goal. Usually the logical character of the relation between the stages has been described by metaphors, such as “take a fresh stand” (Aristotle), “foreshadow” (Dewey) and “wedge” (Quine).

The central dynamic of the developmental sequence was “nutrition” in the extended sense for Aristotle; for Dewey and Bentley it is “Sign-Process;” for Quine it is reinforced stimulus-response enriched by “transitivity of conditioning.” Other titles were “significant indirection,” “conservative innovation,” “maintenance of form,” and so on. In the system of DB the metaphor of “clustering” or “overlap” of cues is analogous to the linking of triangles in the esoteric networks. In Quine’s scheme the analogue is obvious as it appears in the “interanimation of sentences” forming the “verbal network” of the “arch of theory.” All of these appeals to a system of interlinked cases of the same dynamic process are couched in metaphor.

In the esoteric systems, universally the law of the Tetragrammaton, or the triangle of synthesis, is held to be the mechanism of evolution, not only establishing continuity of sequential development but also functional complementarity at any stage of the developing hierarchy. On careful analysis it turns out that the triangle of synthesis plays the same role for the transactional systems of Part One.

In the case of “nutrition” as the Aristotelian process-unit, the chief unifying factor is the assimilation-transformation dynamic, reconciling “like” and “unlike.” This is accomplished through the mediating third factor of the appropriate faculty of the soul. At the lowest level “warmth” produced by nutrition reconciles “unlike” with “like” in the process of digestion. Similarly at each level of the sequential hierarchy. The common factor is that at each level or stage, the metaphor of “takes a stand” holds.

In Dewey’s *Logic: The Theory of Inquiry*, a very deliberate attempt is made to show that there is a “pattern” common to biological and intellectual operations, and all stages between. This “pattern” serves as a basis for asserting developmental continuity between them and is considered by Dewey as expressing what he terms a “Principle of Continuity.” The opposites are the “settled” and “unsettled” situations, which of course are relative to organic life and which speak to the inherent teleological character of organic life. On this biological level the mediating active principle is “search and exploration.”

At the intermediate level, clearly of a threefold pattern, they are “primary experience” and “brute fact,” reconciled by “common sense inquiry.” Finally, at the highest level “determinate” and “indeterminate” situations are reconciled by “scientific inquiry.” Thus the threefold pattern of the developmental series is constituted by organic balance, enriched experience and judgment. The logical structure of the comparison is that both utilize triangles of synthesis. Additionally in this case the contents, although not identical, have a striking similarity of meaning. (See Fig. 9) ²⁸

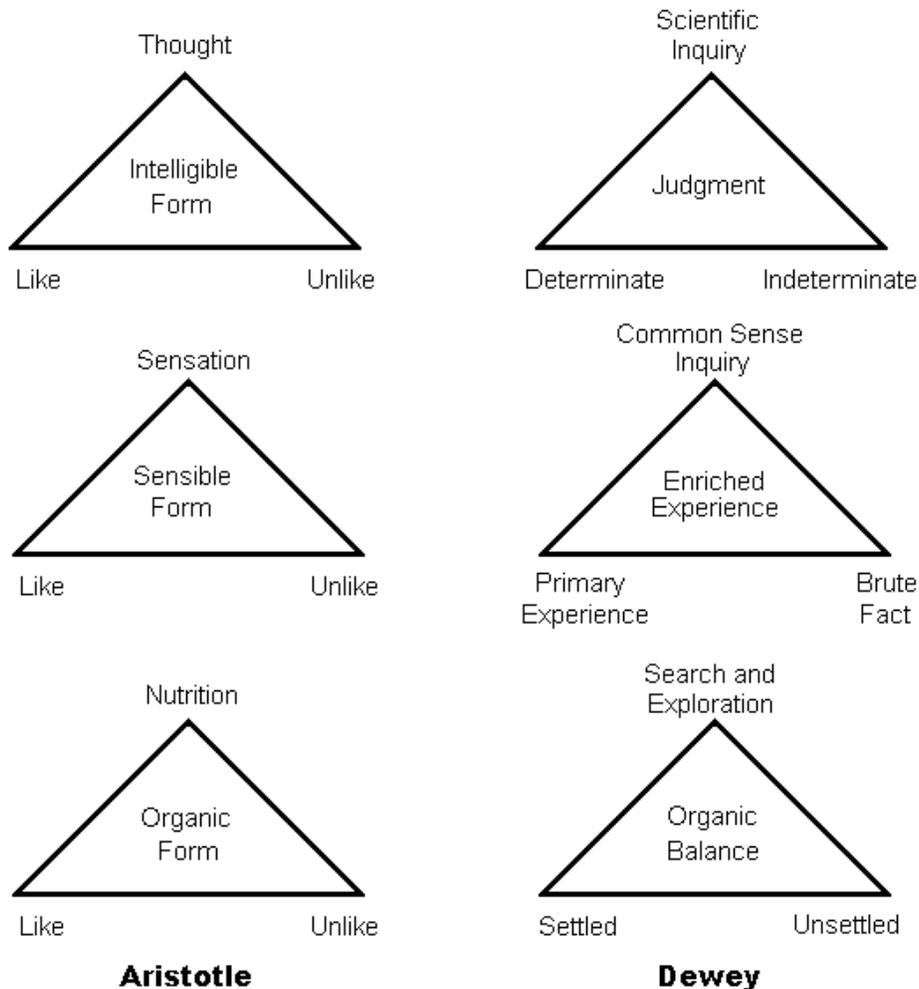


Figure 9
Synthesis Triangles of
Aristotle and Dewey

According to Dewey, in the living organism the basic pattern becomes “serial or sequential,” especially as the organism develops “distance-receptors” and thereafter “recollection.” At this point “goals or consequences that are even more remote in time and space are set up, and the intervening process of search becomes more seriated in temporal span and in connecting links than in the case of the simple presence of distance-stimuli.” (Clearly the framework here is strictly analogous to Quine’s concept of the expansion of the modulus due to transitivity of conditioning.)

Seriation in this case means that the result of the old instance of the process becomes the initiating condition of the new. Dewey says “What the organism learns during this process produces new powers that make new demands upon the environment [and] as special problems are resolved, new ones tend to emerge.” When seriation involves goals “at a distance” this implies intermediate goals linked to one another through a means-ends relation to the more “distant” aim. This recalls the Buddhist image of the sequential “untying of

the knots.” When we have untied the first, then we may untie the second. Thus the culmination of one effort becomes the initial point of the next. Here we have a distinct analogy to the esoteric idea of the fourth or “resultant” force (the eye in the center of the triangle) becoming the first or active force (the apex of the following triangle). The process is analogous to the “chains” of triangles as seen in Figs. 7 and 8.

Looking again at the central triangle on the Dewey side of Fig. 9, the element titled “brute fact” is meant by Dewey to represent something “unknown” that intrudes upon “primary experience” and requires reconciliation; that is, it becomes “known” through activities of inquiry and thus yields an enriched experience. The process is what Dewey calls the *return* of things of reflective experience back into primary experience. Earlier it was pointed out how this is analogous to Quine’s “arch of theory” and to the arched arrows of the Ernest Wood diagram (Fig. 4). These “return” images, including many others such as Gurdjieff’s (Fig. 5) and the circulating arrows of Fig. 2, embrace the idea of an accumulation of meaning through actions of synthesis.

From a psychological point of view the Deweyan triangles represent a process of construction and reconstruction of experience; in other words, learning. It is a process an instance of which is to be found in Quine’s attempted reductionistic description of how a child “comes then” to “appreciate” a range of stimulations (i.e. Dewey’s “brute fact”) as an “integrated spatiotemporal thing” (i.e. a new factor in the experienced environment). This “coming then to appreciate” is Quine’s way of pointing at the process itself, which is then taken as the “wedge” which establishes continuity between the levels of development. The common denominator learning is analogous in the esoteric material to the Tetragrammaton as the common denominator of all “planes” of being.

In Quine’s system the “mechanism” of reinforced stimulus-response provides the obvious triad of stimulus, organism, and response. In the case of transitivity of conditioning there are more factors involved. Let us recall the pattern cited by Quine and formalized at the beginning of Part One, which we gave the title of *significant indirection*. Given two organisms *a* and *b*, and a description of reinforced stimulus-response, a response *r*’ is linguistic just in case that there is a stimulus *s* such that (Fig. 10),

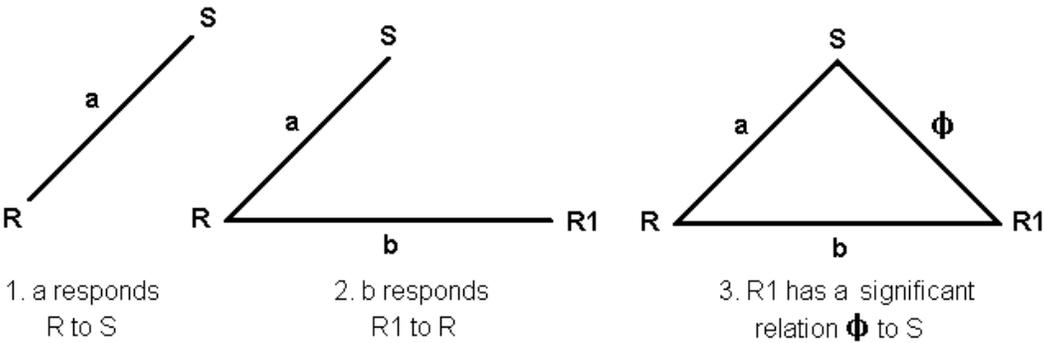


Figure 10

In Quine’s example, the father *a* responds “mama” (R) to the stimulus of seeing the mother, whereupon the baby *b* responds by turning toward the mother (R1). This response may become a further stimulus S1 which also bears the relation Φ to S. As long as the specific meaning is maintained all the subsequent responses up to some Rn will be related to the initial stimulus through Φ (Figure 11).

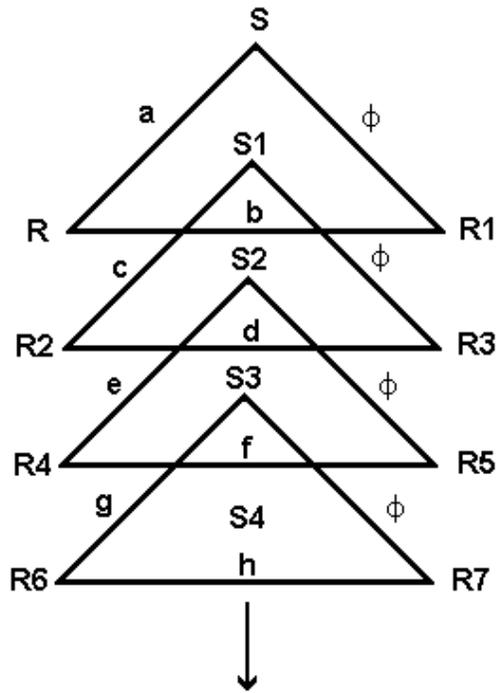


Figure 11. Interanimation of Sentences

This suggests Fig. 12, which generalizes the previous figure. S, S1....Sn are a specific range of stimuli relative to a concept. The terms a, b, c...n are a population of organisms. And R, R1...Rn are a matrix of dispositions or habits of behavior. Φ now becomes a sign for the concept itself, and “concept” is understood transactionally as the resultant of the other three factors.

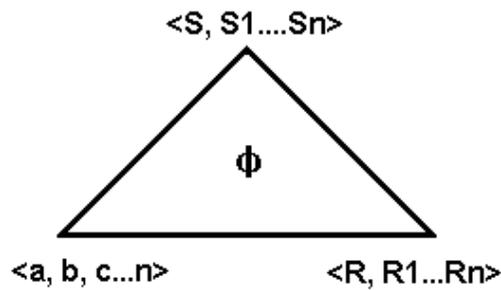


Figure 12. Transitivity of Conditioning

The chief interest of this translation of Quine’s proposed explanation of the development of conceptual capability, and eventually abstract reasoning, is that it gives the impression that the most abstract mental capacities may be *reduced* to a simple stimulus-response “mechanism.” However in Part One it was pointed out that Quine, and Dewey as well, found it necessary to “backtrack” by admitting some primitive degree of abstraction even in the earliest stages of development. As a result the stimulus-response mechanism is either

inadequate to account for the development of abstraction, or “reinforced stimulus-response” is something more than a simple mechanical process. Aristotle made the same move when he said that even at earlier stages “the first universal is present in the soul.” What we concluded there was that in all three systems, there is some capability present and operating dynamically to initiate and continue the process of development beyond any simple mechanistic behavior.

The critical point, with respect to Quine’s theory, turned out to be in the process he called “transitivity of conditioning,” which in Fig. 10 is the line from S to R1, having the specific relation to ϕ which constitutes “significant indirection.” This move is necessarily so subtle that it is glossed over by Quine as simply a trivial change in the character of the reinforcement, and by Dewey-Bentley as a “slight shift in the stresses of the situation.” Neither theory, if taken as an effort toward a reductionistic explanation, can account for the occurrence of such a profound change within which all of meaning and subsequently culture, mind, and perhaps spirituality, rests.

But within Dewey’s view in particular, a somewhat different picture lies beneath the surface. In Dewey’s case the factor that brings together opposites is *action*, that is to say some kind of activity in the world that has necessarily a teleological component. Thus the “unsettled” situation is reconciled with the “settled” situation by means of *activities* of “search and exploration.” It is in fact this kind of activity that establishes the potential for inquiry and resolution at later stages of development. That is why Dewey says that such activity “foreshadows” the “pattern” of more complex developmental stages.

But such an activity, aimed as it were at the resolution of an unsettled situation at the biological stage of adaptation, is necessarily telic in character. We note that in the esoteric systems it is an unexplained but definitely asserted capability for *synthesis* that is placed at the origin of the developmental dynamic. In behavior, as contrasted with bare mechanical billiard-ball response, we find a distinctive continuity of action. Quine is forced to introduce this telic quality by speaking of the “objective pull.”

Quine imagines that this is a simplistic affair reducible to stimulus-response by the actions of the adults in reinforcing the culturally important factors. But he does not resolve the question of where the adults got all this in the first place. He has to work “backward” again and assert that the child must possess a “pre-linguistic quality space” in order for development to occur at all.²⁹ It is precisely at this point that the esoteric idea of synthesis as the governing dynamic enters in.

For Quine this is only discussed in terms of a child’s development of language. But for Dewey it has to be extended to biological development, that is, evolution. One conclusion that may emerge from these considerations is that the biological phenomenon of stimulus-response is not itself a kind of mechanical billiard-ball sort of action-reaction but instead is already a manifestation of inherent teleology, that is to say, of synthesis.

In Part One (endnote 3) it was pointed out that Quine actually is wrestling with the same problem as that occupying Kant in the *Critique of Pure Reason*, namely the creation of concepts from a manifold of sensory impressions. Where Quine attempts to account for the development of concepts by appealing to the “mechanism” of reinforced stimulus-response, Kant evokes a faculty of mind referred to as synthesis. Between these two extremes there is a third possibility, which is essentially the one opted for by Dewey.

Further research on the underlying formal structures in the various systems discussed above results in a generalized model of development, which is presented in summary in a separate paper.³⁰

ENDNOTES

1. These triples are drawn from texts such as these: Bhagavan Das, *The Essential Unity of All Religions*, Quest Books, 1932; Evans-Wentz, W. Y. (Ed.) *The Tibetan Book of the Dead*, Oxford University Press 1968; Sadhu, Mouni, *The Tarot*, George Allen & Unwin, 1968; Wood, Ernest, *Concentration*, Quest Books, 1967; The I; *The Rig Veda*, etc.
2. Dewey, John, *Experience and Nature*, Dover Books 1958, pp. 3-8.
3. Ibid., p. 19.
4. Wood, Ernest, op. cit., p. 97.
5. Campbell, Joseph, *Primitive Mythology*, Viking Press, 1964, p. 120. In J.R.R. Tolkien's *The Hobbit*, the travelers are forced to climb higher and higher in fir-trees to escape the vicious goblins below. At the crucial moment, they are rescued by the great eagles of the Misty Mountains, who snatch them from the tops of the trees and carry them to safety. It is the winged capability of the eagles, allowing them to transcend the level of the trees, that associates them with the Spirit. This is a common element in alchemical imagery.
6. Ibid., pp. 256-57.
7. Heindel, Max, *Rosicrucian Cosmo-Conception*, Rosicrucian Fellowship, 1929, p. 95. Cf. also Mayananda, *The Tarot for Today*, Zeus Press, 1963, p. 19.
8. See the discussion of Kant's scheme in the paper "Models of Development in Esoteric and Western Thought" located at www.stanmcdaniel.com/pubs/development/development.html.
9. Ibid., discussion of "triangles of synthesis."
10. *Bhagavad-Gita*, Mentor paper edition, pp. 46-47.
11. Ouspensky, P. D., *In Search of the Miraculous*, Harcourt Brace & World, 1949, p. 41.
12. Govinda, Anagarika, *Foundations of Tibetan Mysticism*, Samuel Weiser, N. Y., 1974, p. 149.,
13. Zimmer, H., *Philosophies of India*, Princeton U. Press, 1951, p. 259.
14. Govinda, op. cit., pp. 173-175.
15. Wood, Ernest, *Yoga*, Penguin Books, 1959, p. 147.
16. Wood, op. cit., p. 165.
17. Ibid., p. 165.
18. Govinda, op. cit., p. 181.
19. Ibid. pp. 184, 121, 70.
20. Ibid., p. 71.
21. Sadhu, op. cit., pp. 195, 203.
22. Heindel, op. cit., p. 54.

23. Cf. my paper “Entities Beyond Necessity: A Review of Rupert Sheldrake’s *A New Science of Life*,” in an upcoming issue of the *Journal of Scientific Exploration*.
24. Sadhu, op. cit., p. 17.
25. Cf. Sadhu, op. cit.; Mayananda, op. cit., and Papus, *The Tarot of the Bohemians*, Arcanum Books , 1958.
26. Papus, op. cit.
27. Walker, Kenneth, *A Study of Gurdjieff’s Teaching*, Awards Books A468N, 1969, p. 104.
28. Dewey’s actual term for the enriched context of experience attained by modifying “primary experience” is “ultimate experience” but he does not mean “ultimate” in some terminal sense but rather as the ultimate result of *enriching* “primary experience.”
29. Quine’s phrase “pre-linguistic quality space” is essentially a “rug word,” allowing him to sweep any issues beneath it. To put it bluntly, it is either opaque, meaningless, or a vague metaphor.
30. “Models of Development in Esoteric and Western Thought: a Brief Summary,” located at <http://www.stanmcdaniel.com/pubs/development/development.html> .