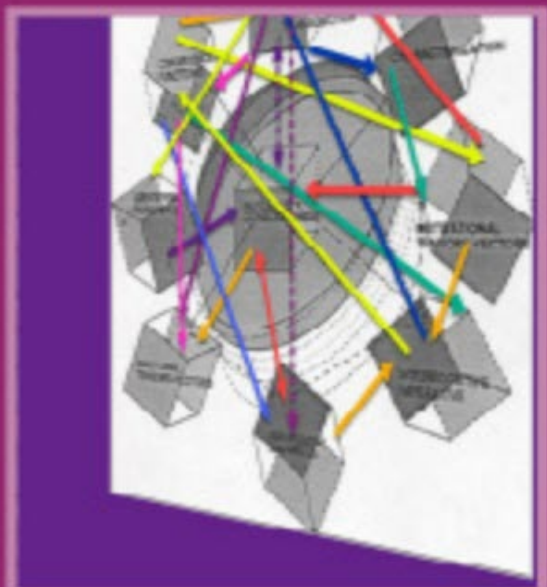
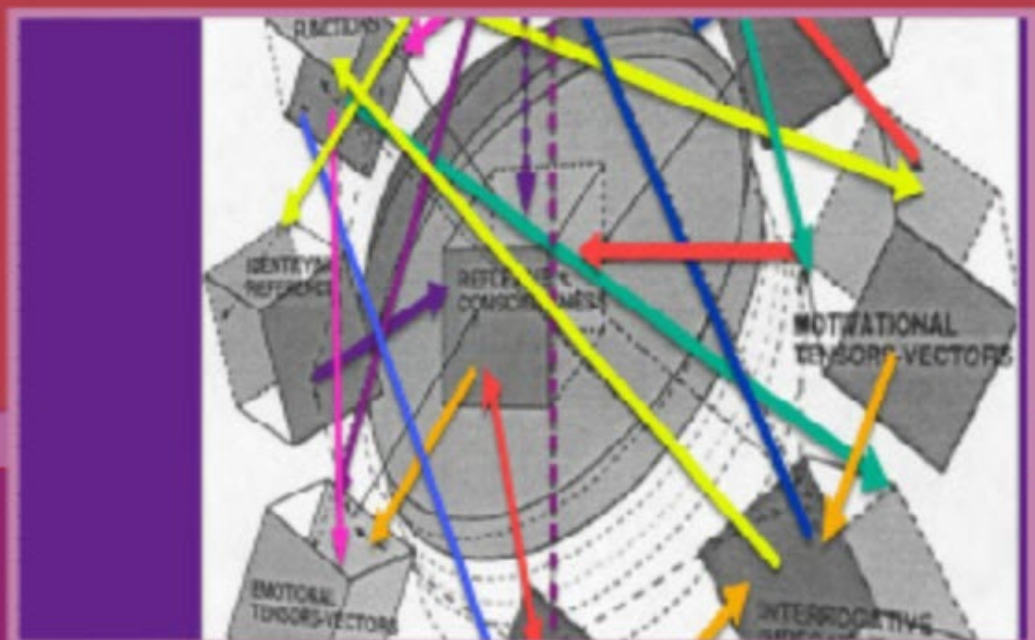
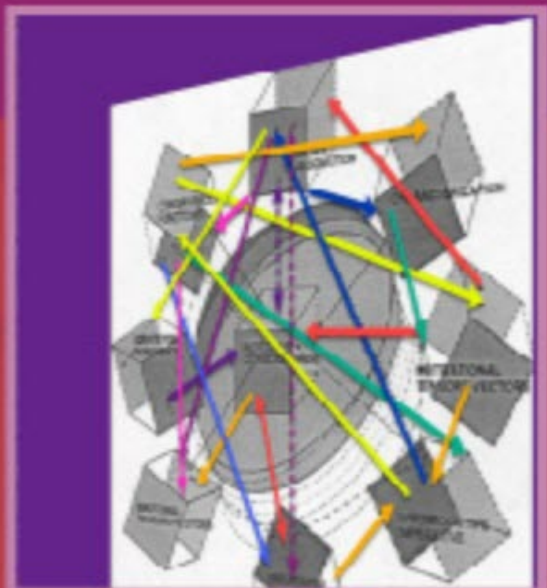


VARIETIES OF PSYCHOLOGICAL INQUIRY VOLUME I



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In memory of Robert White who displayed a seemingly boundless supply of kindness, patience and encouragement while listening to my thoughts, ideas and reflections concerning psychology -- as well as life in general -- when I was an undergraduate.

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Preface

The twenty-five essays contained in the two volumes of *Varieties of Psychological Inquiry* venture into various facets of psychology – ranging from: Freud, Jung and Sullivan, to: Piaget, Sheldrake, and beyond. While no particular theory of psychology is espoused during the pages of these two volumes, a variety of theoretical and empirical issues are explored and critically reflected upon in considerable detail during the course of the following pages.

In a sense, the direction in which the essays contained in the two volumes of *Varieties of Psychological Inquiry* point is toward epistemological horizons where what is known (possibly) merges with what is not known ... and perhaps not even imagined. Nonetheless, each of the essays seeks to take a step of determinate nature in order to help constructively shape – hopefully – an increasingly informed journey toward a constantly receding horizon of psychological possibilities.

The essays can be read in any order since they are all, to a greater or lesser extent, independent of one another. However, some of the chapters are more technical and demanding than others are.

I have attempted to simplify, as much as possible, many ideas throughout the two volumes of *Varieties of Psychological Inquiry*. Unfortunately, some ideas are somewhat inherently complex and, therefore, on occasion there is a limit to how far one can simplify issues and still retain sufficient accuracy to avoid distorting issues in problematic ways.

Despite the disparate nature of the chapters and despite the fact that I am not seeking to delineate any particular theory of psychology through the various topical explorations, nevertheless, I feel the chapters actually complement one another and collectively give expression to a nuanced set of understandings concerning psychology. Obviously, there is nothing definitive in this work, but rather what one will find are the psychological musings of a fellow sojourner along the path of life.

Some of the material is quite theoretical, if not reflectively exploratory, and seeks to journey toward experiential horizons in a manner that is somewhat different than what might be considered to

be normal psychological pursuits and, yet, does so in a way that I feel carries a variety of ramifications for psychological modes and methods that seek to engage – and, perhaps, ‘capture’ (to varying degrees) – reality in some sense of the word. Other material has a more clinical ambience to it and, perhaps as a result, might appear to be somewhat more practically and traditionally oriented.

Although arriving at answers is always nice, the character of the trip one undertakes while working toward those places of arrival can be very important as well. As with all things, while perusing the following pages, take what you find to be of value for your own journey, and leave the rest.

Chapter 1: Freud, Rapaport, and Klein on Motivation

Instinct is one of Freud's basic concepts. For him, it represents the foundational physiological unit underlying the driving force of an organism.

As such, it is usually discussed in terms of source, aim and object. Generally, however, as Freud himself indicates in "Instincts and Their Vicissitudes", since so little is known about the somatic substrate underlying psychical phenomena, discussion focuses on the notions of "aim" and "object".

Assuming that the precise nature of the somatic substrate will someday be uncovered, Freud believes it is possible to proceed empirically on the basis of the way representatives of this unknown substrate reveal themselves in mental phenomena through the manner in which objects are differentially tied to lived life through the agency or medium of "aim".

In connection with the above, David Rapaport, a clinician, has a few peculiar comments that are worth mentioning in passing. He states:

"Instinctual drives are not anchored to any specific internal stimulation any more than to any external stimulation. They are mental representatives of action so far unspecified -- internal excitations about which we know only what we have postulated about them, namely, that these representations (the instinctual drives) serve as forces which initiate and regulate behavior."¹

It is difficult to know precisely what Rapaport has in mind the foregoing quote. On the one hand, he seems to want to argue that "instinctual drives are not anchored to any specific internal stimulation", and, yet, on the other hand, he appears to want to maintain that "they are mental representations of certain -- so far unspecified -- internal excitations".

One wonders how it is possible to be a mental representation of internal excitations without, to some extent, being tied to "specific internal stimulation". Apparently, for Rapaport, "internal excitations" are to be differentiated from "internal stimulations", but one is puzzled

about the precise nature of this differentiation, and Rapaport, during the course of his paper, doesn't offer much assistance in the way of helping to resolve the puzzle.

Leaving aside the mysteries and puzzles of the somatic substrate of instincts and turning to their characteristic of 'aim', one should note before proceeding further that "aim" is a theoretical construct used to account for why a human being interacts with human beings and objects in the variety of ways that are observed to occur. As Rapaport and Klein point out in their respective works, Freud's observations primarily were concerned with certain clinical problems that Freud encountered over a number of years.

These problems tended to give structural shape to Freud's theoretical view of "aim". Freud came to believe that "aim", together with the concept of "object", were the most significant tributaries that flowed from the basal headwaters of instinct, and that 'aim' was the passageway through that one must go in order to gain insight into human behavior.

In the 'New Introductory Lectures on Psychoanalysis' Freud defines instinct as:

"... both the mental representative of the stimuli emanating from within the organism and penetrating to the mind, and at the same time a measure of the demand made upon the energy of the latter in consequence of its connections with the body."²

Consequently, a simplified version of mental life might be described as a screen upon which representatives of instinctual processes make their appearance, and, according to Freud, one of the characteristics of this appearance is that instinctual processes act as a constant force, always seeking expression in one form or another.

In fact, for Freud, this criterion of constancy is one of the major differentiating factors between internal and external stimuli. The latter often can be discharged by a simple, isolated, appropriate action, while the former (i.e., internal stimuli) cannot be so easily eliminated.

Internal stimuli impose constant demands upon the available energy of the system. As Freud describes it:

“We see then how greatly the mind's physiological scheme is complicated by the introduction of instincts. External stimuli impose upon the organism the single task of withdrawing itself from their action; this is accomplished by muscular movements, one of which reaches the goal aimed at and, being the most appropriate to the end in view, is hence-forward transmitted as an hereditary disposition. Those instinctual stimuli that emanate from within the organism cannot be dealt with by this mechanism ... above all, instinctual stimuli oblige the nervous system to renounce its ideal intention of warding off stimuli, for they maintain an incessant and unavoidable afflux of stimulation.”³

In The Interpretation of Dreams Freud had likened psychical activity to a reflex-arc apparatus. For Freud, reflex processes serve as a simple prototype of the more complicated psychical functioning.

Accordingly, psychical activity began with stimuli (either internal or external) and terminated in some sort of enervation. In other words, stimuli were received and transmitted as energy into networks that manipulated this energy, usually tending toward discharge of these impulses.

Using the reflex-arc as his model, Freud assigned to these systems of nerves -- called "Psi-systems" -- sensory and motor apparatus. More specifically:

“At the sensory end there lies a system which receives perception; at the motor end there lies another, which opens the gateway to motor activity. Psychical processes advance in general from the perceptual end to the motor end.”⁴

The principle according to that psychical processes advanced toward enervation was termed the "pleasure principle". Originally, it was termed the "unpleasure principle" because an organism's activity -- that ideally ended in discharge of the energy supporting the existing tension -- usually began with the perception of unpleasurable or painful stimuli (i.e., tension).

As Rapaport points out in his article, however, Freud eventually came to realize there was not a necessary connection between whatever tensions might be created by accumulated energy and any felt discomforts that might ensue from that. Moreover, the discharge of cathexis did not always lead to pleasure -- the experience of anxiety being cited as a case in point.

Because there was not a one-to-one correspondence between either tension accumulation and felt discomfort, or between tension discharge and felt pleasure, Freud had to modify his initial position, but this was more in the way of noting exceptions to the rule, so to speak, rather than a total transformation of the underlying idea.

Such exceptions notwithstanding, Freud's primary working principle in these matters was that an organism tends to seek to discharge accumulated cathexis or to reduce excitations existing within the organism to as low a state of tension as possible. This was reflected in many of Freud's later works, including "Beyond the Pleasure Principle":

"The facts that have led us to believe in the supremacy of the pleasure-principle in psychic life also find expression in the hypothesis that there is an attempt on the part of the psychic apparatus to keep the quality of excitation present as low as possible -- or at least constant this tendency on the part of the psychic apparatus postulated by us might be classified as a special case of Fechner's principle of the tendency towards stability to which he has related the pleasure-pain feelings."⁵

Freud approached the same theoretical position from a slightly different perspective when elaborating on the role that mnemonic images played in psychical life. For example, when a hungry infant cries, the infant's felt tension will, among other things, activate attempts by the infant to re-cathect the memory image linked to a previous instance of tension reduction.

The path that leads from the perception of internal tension to a previous mnemonic image associated with satisfaction is called a regression. This procedure of regressive re-cathecting is aimed not

only at the mnemonic image. It also is directed toward re-evoking the perception itself, i.e., the actual condition of gratification.

Freud terms the initial impulse that seeks re-cathexis: a "wish". The actualization of the wish in terms of perceptual satisfaction is called "wish-fulfillment". This whole wish-mechanism of the primary process is aimed toward gratification of the original need and, thus, represents essentially the same position as the pleasure principle concept.

In the article "Freud's Two Theories of Sexuality", Klein makes a very strong case for what he terms 'the clinical theory of sexuality', while, simultaneously, pointing out some of the weaknesses of the drive-discharge account of sexuality, in particular, and instinctual drives, in general. The following quote captures some of the highlights of Klein's position:

"The clinical theory is under no obligation to make any assumption that the appetite is itself the consequence of a peripheral condition (a drive) independent of itself. Its focus of inquiry is the motivational context. In the clinical theory, sexuality is viewed as appetitive activity within a reticulum of motivational meanings rather than the manifestation of a linear force impelling itself against a barrier. The structural nature of sensual craving, in the clinical theory, is not that of a flow of something but of an activated schema -- a cognitive structure in action."⁶

Thus, central to Klein's view are the meaning structures that develop over time and to which sensual experience makes an extremely important contribution, but sexuality (in its broadest sense) is only one dimension of the context from which such meaning structures emerge. A directed aspect of motivation is rooted in these meaning structures.

Even when the predominate characteristic of a motivational structure focuses on a sexual theme, that structure receives its shape from the total context in which the sexual theme appears -- a context that might contain many non-sexual influences. Consequently, according to Klein, motivation cannot be reduced to anything that

resembles the physiological model that Freud develops in much of his writing -- for Klein, meaning structures are too intricate and subtle to be encompassed by any sort of linear conception, including the accumulation or discharge of cathexis.

Klein believed that the clinical theory that evolved out of clinical experience was Freud's great contribution to psychology and should be differentiated from the quasi-physiological aspects of Freud's meta-psychology. However, whether, or not, one can argue with Klein that Freud actually had two theories of sexuality, is another matter.

For whatever reasons -- good or bad -- Freud remained committed to the concept of a meta-psychology throughout his life, constantly trying to improve the system and make it more comprehensive, as well as more consistent with clinical experience. *The Ego and the Id* in 1923, *The Problem of Anxiety* in 1926, and the *New Introductory Lectures on Psychoanalysis* released in 1932 -- to name just a few works -- all were concerned with re-working various positions of the meta-psychology.

One cannot deny that many aspects of what Klein presents in the clinical theory have their beginning in observations made by Freud during his long career. One also might argue, however, that Freud had just one theory, consisting of many parts ... not all of which were necessarily consistent with each other.

What Klein refers to as Freud's clinical theory is not really a Freudian theory but a theory that bears a resemblance to certain aspects of Freud's theoretical position. In fact, quite possibly, Freud might not have agreed wholeheartedly with Klein's position had Freud had the opportunity to read Klein's paper. Given the numerous disagreements that Freud had with such people as Jung, Rank, Adler and others concerning the meaning of clinical experience and what theoretical conclusions could be drawn from such experience, one might speculate that Freud would not have been as receptive to some of Klein's proposals as the title of the latter's article suggests.

Despite the foregoing reservation, however, Klein does seem to make some extremely valuable points in his criticism of the drive discharge aspects of Freudian theory, as well as in his extension and broadening of a number of themes that do appear in Freud. Therefore,

much of what follows runs somewhat parallel with, and functions as a complement to, a number of themes in Klein's aforementioned article.

While discussing the defining characteristics of instinctual drives, David Rapaport makes reference in his previously cited paper to Freud's notion of "aim". Obviously, "aim" is a term that emphasizes a quality of 'directedness'.

Furthermore, as described by Rapaport and Freud, 'aim' concerns the seeking of satisfaction through the removal or discharge of a stimulus state from which tension originally arose. This proposal, however, raises some questions, for it tends to imply that the instinct 'knows', in some sense, what will satisfy it in terms of that which lies outside of or beyond it.

One might wonder about the nature of the epistemic process to which those authors appear to be alluding. More specifically, one might wonder: What is built-into the internal structure of an instinct that allows it to 'seek' discharge? How does an instinct go about the seeking process, and how does it recognize or select that which will lead to its successful discharge, along with, a subsequent state of satisfaction?

Earlier in his paper, Rapaport had listed four salient characteristics of "appetitiveness" -- an essential feature of his re-definition of the specific sort of internal forces to which, he believed, motives gave expression. Among the characteristics that collectively helped to define, first, appetitiveness, then, motives -- and, therefore, instinctual drives, since he categorized instinctual drives as a class of motives -- was the concept of "displaceability".

According to Rapaport:

"If the object of a motive is not available, the objects lying on the path toward it or related to it by other specifiable connections become its substitutes in triggering the consummatory action, that is, the discharge of the accumulated drive energy."⁷

This, of course, meshes with Freud's comments in *Instincts and Their Vicissitudes* concerning the alterations that an instinctual drive undergoes over the course of time, as well coinciding with the manner

in which object choice is supposedly affected by these changes. Nevertheless, the concept of "displaceability" doesn't really provide any solutions to the questions that arose at the end of the previous paragraph.

In other words, displaceability could be accounted for by a variety of theories (e.g., almost any phenomenological account of the quality of intentionality that is manifested toward objects will involve a theory of displaceability) and need not be limited to a psychoanalytic mode of explanation. However, it also seems evident that both Rapaport and Freud treat displaceability as an inherent aspect of motives -- and, consequently, instincts -- such that instincts are construed as being capable not only of seeking discharge but of being able to select objects according to circumstances.

Implicit in Rapaport's foregoing characterization of displaceability (which he maintains is another of the four defining features of 'appetitiveness') is the notion of 'decision'. More specifically, if an instinct is capable of displacing its discharge of cathexis from objects originally selected for discharge, then apparently, instincts have the capacity of assessing a situation in a fairly subtle manner, involving, among other processes, the estimating of likelihoods of being able to secure discharge through some originally selected object, or whether, temporarily, to delay discharge if the initially selected object is not accessible, as well as a capacity to recognize possible alternative, substitute objects of discharge if the first preference should, for whatever reason, not be available.

Such capabilities seem to involve processes that are somewhat different from the usual idea of an instinct that is rather blind or hardwired into the physiology of an organism. While one cannot always treat common language usage as a reliable guide to truth, nevertheless, in his book, *The Concept of Motivation*, R.S. Peters, a philosopher, states something worth keeping in mind when he says:

"The point of looking closely at ordinary usage, if one is a psychologist, is that it often provides a clue to distinctions that it is theoretically important to take account of."⁸

The property of 'fixedness' that often is associated with the idea of an instinct -- at least, as commonly understood in many forms of discourse -- is that instincts do not display the quality of vicissitude. Indeed, one of the features that tends to be cited, in order to distinguish intelligence (however defined) and instinct revolves about the idea of a continuum involving flexibility and rigidity ... with intelligence placed at one end, and instinct placed at the opposite pole, of the continuum.

There are, of course, potential weakness with the foregoing sort of picture, not the least of which is that intelligence might be discontinuous with respect to instinct, and, as a result, the two are different in kind, rather than merely separated by a matter of degrees. On the other hand, instincts might bear a 'family resemblance' (Wittgenstein's term) to higher forms of intellectual activity, in the way that an orange crate shares some of the same features as, say, an expensive, well-designed table, in the sense that one can use both as pieces of furniture that serve various household functions of a similar nature, and, yet, understanding what underlies, and makes possible, such functional similarities is often hard to specify.

In any event, the 'aim' of an instinctual drive -- to the extent that one can talk of such things without being misleading -- appears to be, primarily, a matter of bringing about the expression of its own inherent character. In this sense, the aim of a drive is fulfilled through its expression.

As far as the directedness of an instinct's aim is concerned, the drive does not 'know' what will satisfy it in terms of that which lies outside its characteristic mode of expression. A drive does not even necessarily 'know' that its quality of directedness is something that is, in some sense, incomplete.

An instinct only responds, as it were, to the conditions that interact with its structural character and through which the underlying processes that generated the conditions out of which the mental expression arose are either: (1) attended to, sufficiently, for the drive's expression to disappear from awareness; or, (2) overshadowed by other aspects of the organism's functioning. In the latter case the drive's expression also would disappear from the immediate focus of

attention -- although it might remain on the horizon of awareness and, as a result, continue to shape the framework of consciousness.

In short, on the basis of the perspective being advanced here, perhaps, instincts should be 'de-intentionalized' -- at least in any reflective/self-awareness sense of the word. Part of this process of de-intentionalization is the stripping of the characteristics of "selectiveness" and "displaceability" from the concept of instinct.

One must look elsewhere for the origins of these characteristics. Instincts are, to some extent, like channels of information that express a certain perspective -- namely, that of the instinct. However, under the appropriate circumstances, instincts also serve to establish boundary conditions and/or themes of focus within which and around which the phenomenology of subjective experience flows.

To extend this argument further, one might contend that satisfaction is not a function of the discharge of the accumulated energy which supports a drive but, instead, is a function of the "value" returned, so to speak, on expended energy. What constitutes "value" will be a product of a complex interaction of phylogenetic, developmental, environmental and individual hermeneutical factors that yield meaning structures in the way of beliefs, assumptions, goals, priorities, and so on.

The notion of 'value' in babies would, in the beginning, be largely a matter of constitutional properties such as temperament, reflexes, metabolism rate, and other congenital properties that might shape responses in one direction or another. Within a relatively short time, however, other factors (such as environment, reward/punishment contingencies, individual beliefs, feelings, and interpretations) would begin to supplement the initial constitutional properties and, as a result, impact upon the direction and shape of developmental history. As this developmental history continues to unfold, intricate, experiential patterns are woven -- some of which are more well-defined and elaborated than others and some of which acquire more significance than do others.

The foregoing is not meant as an explanation of motivation but, rather, as an alternative approach to the notion of instinct. George Klein seems to be pointing in a similar direction when he says:

“... sensual experience is not in itself driving, but an experience that is sought after because of meanings that have become associated with it over a person's developmental history. Signs of urgency -- for example the excitement of expectation, anticipation, and fantasy, commonly regarded as the peremptory drive aspect of sexuality -- are, in the clinical theory, manifestations of the cognitive schema in a state of continued or repetitive activation.”⁹

Thus, over time, instinctual 'representatives' become embedded in schemata of association, expectation, fantasy, emotions, value/belief systems, and so on. From these schemata come meanings that structure and give priority to different aspects of lived experience, and this process of phenomenological structuring is, to a large extent, what decides issues of value and satisfaction.

To be sure, as Klein indicates elsewhere in his article, sensual experience represents a powerful attention getting 'mechanism' due to its inherent nature as a source of "poignant pleasure". Nonetheless, once it has drawn attention or awareness to itself (in whatever particular form of manifestation this happens to be under a given set of circumstances), any directed activity that might transpire with respect to it is a function of the meaning schema that frame the consciousness within which such instinct now appear.

The foregoing, of course, has many points that require considerable elaboration. For example, how does meaning develop out of the various cognitive schema, or, how are issues of value decided, or, how are priorities established?

Despite the importance of the foregoing questions, there are some other possibilities that might be worthwhile exploring first. In order to bring some of these possibilities into sharper relief, one needs to return to a discussion of some additional themes developed by Freud and Rapaport.

The term "id" was used by Freud to designate the mental boarding house for the representatives of an unknown somatic substrate. The id is the most basic or primitive of the mental agencies.

In the *New Introductory Lectures*, Freud described it as follows:

“We picture it as being open at its end to somatic influences, and as there taking-up into itself instinctual needs that find their psychical expression in it. ... It is filled with energy reaching it from the instincts, but it has no organization, produces no collective will, but only a striving to bring about the satisfaction of the instinctive needs subject to the observance of the pleasure principle. The logical laws of thought do not apply in the id, and this is true above all of the law of contradiction. Contrary impulses exist side by side, without canceling each other out or diminishing; at the most they might converge to form compromises under the dominating economic pressure towards the discharge of energy ...”¹⁰

Furthermore, the id: lacks judgmental values; knows neither good nor evil, and is devoid of any sense of, or relationship to, time. The id is timeless and, yet, is timelessly seeking instinctual cathexis in the form of discharge. It is unavoidably and irrevocably committed to the pleasure principle.

Depicted in this manner, the id is, in and of itself, largely useless for purposes of long term (and, perhaps, even short term) self-preservation. It blindly strives for gratification without benefit of logic, judgment or any other aid capable of assessing the situation and, consequently, the id constitutes an extreme danger to the biological integrity of the organism. If allowed to seek gratification unrestrainedly, the id probably would lead an organism to destruction very quickly.

Although Klein does not discuss the concept of id in his article (and he likely would not support such a theoretical construct), he does develop the notion of "plasticity" that is not necessarily inconsistent with, or entirely unlike, some of the characteristics that Freud attributed to the id. In Klein's words:

“This plasticity is evidenced by the varied forms of sensual arousal, as in the fact that at all stages of development a sufficient sensual stimulus might be autoerotic, heterosexual and homoerotic. It is evidenced in the phasic changes in sensual capability of different

bodily zones and in the variations, in each stage of development, in respect to what is sensually stimulating and gratifying.”¹¹

He goes on to explain the sorts of potential danger that are inherent in the tendencies underlying the sensual experiences that are collectively tied together by this theme of plasticity. Such dangers involve, on the one hand, the problem of how an individual sets about controlling: (a) his or her manner of seeking sensual experience, as well as (b) the potential for sanctions that, subsequently, might be applied by the social environment (e.g., parents) if a given control issue is not successfully resolved. On the other hand, the aforementioned dangers extend to society itself and its normative values of heterosexuality and survival of the species that are threatened with being thoroughly undermined if the individual is allowed to pursue modes of sensual experience that are not syntonetic with institutional goals.

Klein especially draws attention to the immense difficulties that are posed by the apparent absence in human beings of any built-in defenses against the destructive ramifications that incestuous relationships have for the survival of either the human species or existing value systems. All in all, although the social environment might be a source for creating positive instances of sensual experiences during an individual's development, the interaction between individual and the social environment has numerous currents of conflict with respect to the dimension of sensual experience that run throughout many aspects of that relationship and that represent a huge set of shaping influences in the life of both the individual and society.

Although, as indicated previously, there might have been grounds for a disagreement between Freud and Klein concerning certain theoretical issues, the foregoing features of Klein's article certainly parallels -- if it is not directly rooted in -- such works of Freud as *Totem and Taboo* and *Civilization and Its Discontents*. According to Freud, id strivings, whether sexual or non-sexual, are blind to all values except the pleasure principle ... that is, factors that exist outside an instinct's expression or manifestation are not taken into consideration.

Even just a year before his death, Freud still maintained that:

“The power of the id expresses the true purpose of the individual organism's life. This consists in the satisfaction of its innate needs. No such purpose as that of keeping itself alive or of protecting itself from dangers by means of anxiety can be attributed to the id.”¹²

Apparently, the so-called instincts of self-preservation are self-protecting in name only, and one must look to something other than the id for an explanation of how a human being develops the ability to take into consideration factors external to the id's functioning that bear on the individual's continued existence.

Although the infant at birth can be described as an undifferentiated id, according to Freud, shortly after birth there is a certain aspect of the id that -- by virtue of its psychical proximity to the external world -- begins to become differentiated. This aspect of the id Freud terms "ego".

The ego represents the "receptive outer layer" of the id that is able to: collect information by means of sampling or "reality testing"; interpret this information for the id, and, as a result, ward off stimuli that might disrupt the biological transformations that are occurring within an organism. In Freud's words:

“... the living vesicle with its receptive outer layer ... operates as a special integument or membrane that keeps off the stimuli, i.e., makes it impossible for the energies of the outer world to act with more than a fragment of their intensities on the layers immediately below (it) which have preserved their vitality ... For the living organism protection against stimuli is almost a more important task than reception of stimuli.”¹³

There are, however, other ego functions that, in certain senses, are more basic than protection. For Freud, the ego is above all else a "body-ego". It does not simply represent a surface entity capable of receiving, interpreting and warding off external stimulation, it is an

agency rooted in the activity of the id and, therefore, concerned with the needs that are translated through the agency of the id.

One might describe the ego as a middleman, bounded by the external world on one side and by instinctual activity on the other side. The ego must negotiate transactions between the two realms, and it often has little control over the direction in which such transactions are to proceed. This demand characteristic of instincts with which the ego must contend is incorporated by Rapaport into one of the defining conditions of "appetitiveness" -- namely, "peremptoriness".

Rapaport stipulates that:

"In contradistinction to voluntary behavior which we can "take or leave", motivated behaviors are those which we cannot help doing."¹⁴

Apparently, according to Freud and Rapaport, the ego only can influence the rate at which psychic transactions occur, or the ego deflects, in varying degrees, the instinctual drive to more 'suitable' objects -- "suitable" being a function of the ego's assessment of prevailing circumstances at the occasion of the id's manifestation of an underlying somatic condition.

Freud indicates that:

"All thinking is no more than a circuitous path from the meaning of a satisfaction (a memory that has been adopted as a purposive idea) to an identical cathexis of the same memory that it hoped to attain once more through an intermediate stage of motor experience."¹⁵

The "intermediate stage of motor experience" of which Freud spoke is better known as 'reality testing'. It is a psychic sampling of the external world and forms the core of the secondary process.

The main purpose of reality testing is to block the aforementioned process of regression that occurs during the primary process. In other words, reality testing attempts to keep the regression on the level of a mnemonic image. By sampling the external world and inhibiting motor enervation until a sample is taken and studied, the secondary process

is able to economically seek out modes of enervation that are founded on the actual state of events in the so-called 'real' world rather than based just on a memory trace that might not correspond with any external reality.

The ego's utilization of the secondary process is what Freud terms: 'working according to the 'reality principle'. This regulatory principle achieves a number of purposes for the ego.

Through this principle, motor enervation can be inhibited and, thereby, the gateways to mobility can be controlled. Through this principle, information, in the form of stimuli impressions from the external world, can be gathered.

The ego retains experiences in memory for future reference. As a result, it can avoid excessive stimuli, as well as adapt to moderate stimuli, and, in the process, the ego has a potential for modifying the world to its own advantage.

Freud sums up the functioning of the ego in the following manner:

“As regards internal events, in relation to the id, it performs that task by gaining control over the demands of the instincts, by deciding whether they shall be allowed to obtain satisfaction, by postponing that satisfaction to times and circumstances favorable in the external world, or by suppressing the excitations completely. Its actions are governed by consideration of the tension produced by stimuli present within it or introduced into it.”¹⁶

Rapaport -- although approaching the foregoing issues from a slightly different vantage point -- develops the general theme of ego functioning, with some degree of depth, when he discusses his understanding of the theoretical way in which psychoanalytic thought attempts to account for the emergence of an individual's developmental mode of dealing with reality. In terms of his motivational theory, Rapaport indicates that instinctual drives not only represent the basic prototype for the motivational systems that shape human behavior, but secondary systems of motivations also are derivable from instinctual drives.

These secondary systems represent de-sexualized (neutralized) or sublimated ego systems that, depending on developmental circumstances, become structured as either defenses or 'modulation networks'. This latter 'modulation network' notion is somewhat more flexible in its functioning than are defenses, although both are really only variations on a single theme -- namely, what occurs when instinctual drives are frustrated.

Whether the cathexis of a frustrated instinctual drive is translated into a cathexis barrier termed "anti-cathexis" (defenses) or is diverted into a sort of neutralized or desexualized structure known as "hyper-cathexis", none of this makes much of a difference as far as the question of origins are concerned. Both are ultimately rooted in, and tied to, the id's processes, principles and characteristics.

During his discussion of the foregoing themes, Rapaport makes a somewhat puzzling statement that is interesting when considered in conjunction with one of his defining characteristics of "appetitiveness" (that is, "peremptoriness"). More specifically, Rapaport contends that:

"A hierarchy of defense (and/or control) structures is erected over the basic and peremptory instinctual drive motivations, and it is with the genesis of these layers of defensive and/or controlling structures that the genesis of derivative motivations is synonymous. It is plausible that the originally peremptory discharge tendency of instinctual drive energy is increasingly hampered by the layers of structure superimposed on it. Thus, the higher in the hierarchy of mental structure a derivative motivation appears, the more scaled down its peremptoriness and appetitiveness: in other words, the more neutralized it is."¹⁷

When, in his section on defining what he meant by the term "appetitiveness", Rapaport describes the characteristic of "peremptoriness", he distinguishes between voluntary and motivated behavior. The former he construes as actions that one could "take or leave", while the latter were actions one could not help doing or performing.

He went on to state that the differences between peremptory behaviors could be measured by the extent to which one could delay in performing them. With respect to the above quotation, it seems that the more neutralized a mental structure is, the more closely it approaches what would be called voluntary behavior -- actions that one could 'take or leave' because they had been divested of their quality of peremptoriness.

Voluntary behavior, however, does not involve just 'take-it-or-leave-it' attitude structures. Voluntary behavior is not merely a matter of indifference. It has a positive expression in terms of 'choice' -- or, if one prefers, 'directed control'.

Now clearly, on the one hand, both Rapaport and Freud believe control structures evolve out of primary instinctual drives. On the other hand, just as clearly and as previously noted, Freud has described the id as being without organizational capabilities, qualities of logic, judgmental capacities, and so on.

Furthermore, on the basis of the majority of the discussion in Rapaport's paper, Rapaport does not seem to be inclined to form a dissenting opinion with respect to this aspect of Freud's position. Consequently, one wonders about the actual nature of the neutralization process -- that is, one wonders not only how the neutralization process transpires but how such a process is possible at all given the functional qualities of the id in which it is allegedly rooted.

Correlative with the foregoing, one wonders about the precise nature of the etiology of ego structures. How, for example, does the ego actually gain control, even in tentative fashion, over the process of the id? How does a 'take-it-or-leave-it' process gain ascendancy over a set of behaviors that one cannot help doing?

According to Rapaport:

"The referents of the primary process are behavioral phenomena which are peremptory: will and conscious effort cannot curb them."¹⁸

Apparently, the notion of ego somehow presupposes its own logical and organizational capacities because there have been no provisions

made for these factors in the authors' theoretical description of either the concept of id or the notion of instinct.

Moreover, although Freud's account of the primary process and the pleasure principle do, on occasion, hint of certain organizational capabilities and logical qualities (as is evident, for example, in Freud's description of instinct with regard to its characteristic of "aim"), Freud does not seem to feel there is any need to reconcile such characteristics with the rest of his writing on, among other topics, the id and the nature of instinct. In addition, Freud does not seem to feel any need to explain the qualities of directed intelligence (or intentionality) that any number of his so-called explanations presupposes.

These are extremely important problems because, on the one hand, Freud and Rapaport both want to argue that intelligence evolves out of instincts and the primary process of the id. Yet, on the other hand, their theoretical account seems to offer no hope of even beginning to make sense unless one assumes that there is considerably more capacity for intelligence (e.g., with respect to a human being's potential for generating structured systems and logical networks, etc.) than Freud and Rapaport, apparently, are prepared to admit.

The inadequacies of the Freudian (or Rapaport's) position in this regard becomes painfully evident when one begins to try to envision how one is to use the concepts of "id" and "instinct" to account for the existence of talent and/or genius (or even 'above average' intelligence) as manifested in such diverse fields as music, art, mathematics, literature, science, technology, business and so on. It is like trying to empty the ocean with a pea pod -- the latter cannot possibly do justice to the task at hand.

Even if one allows the concept of sublimation as an actual phenomenon, this concept only represents a theory of energy flow and has no way of accounting for the existence of talent or intelligence. In fact, sublimation presupposes such ability.

Rapaport might be acknowledging some of these difficulties when he states:

“Freud only occasionally touched on the origins of the secondary process from roots other than frustration ... Moreover, it has been overlooked that Freud did come to recognize inborn ego functions and that Hartmann, Kris, and Lowenstein generalized his conception. They replaced the conception of the ego arising from the id by the conception of both arising out of the common, originally undifferentiated matrix of the earliest phase of ontogenesis ... these propositions... imply that ego structures, energies, and motivations pertaining to them need not arise solely as the derivatives of instinctual drives. This means that ego development does not consist solely of neutralization associated with frustration.”¹⁹

And, yet, just a few sentences later he argues:

“But ... we are faced with the difficulty that the autonomous development of ego motivations is complex, and is so intertwined with the development of instinctual drives that it is hard to establish unequivocal evidence for the existence of autonomous ego motivations.”²⁰

One might just as easily reverse this latter statement of Rapaport and contend that the autonomous development of id motivations is complex and is so intertwined with the development of intellectual functioning that it is hard to establish unequivocal evidence for the existence of autonomous instinctual motivations.

Strangely enough, this is, in many ways, not so very far from the position taken by George Klein in his aforementioned paper. To be sure, he emphasizes the importance of sensual experience and the tremendous role it plays in the shaping of developmental history.

Nevertheless, Klein also emphasizes that non-sensual processes can have an equally influential impact on an individual's development and that both dimensions (i.e., sensual and non-sensual) are intertwined into complex meaning structures that give direction to the sense of identity, integrity and coherence that is sought for by the individual. For the most part, however, although Klein clearly presupposes cognitive functions that are at least partially rooted in

intelligence and the sorts of meaning schemata that it can generate, his interests are largely concentrated on delineating the nature of the clinical theory of psychoanalytic thought that he feels is implicit, to some extent, in Freud's work.

Consequently, Klein's criticisms of certain facets of Freudian theory are not concerned all that much with demonstrating the kind of weakness in Freud's meta-psychology that are being suggested here. At the same time, his criticisms often do -- at least, peripherally -- touch on these issues and are very much related to them ... even if he is approaching them with a different purpose in mind.

With respect to the foregoing quotes from Rapaport, there are a number of difficulties that should be considered. To begin with, one wonders what is meant by the phrase: "the common, originally earliest phase of ontogenesis", from which both the id and the ego are said to emerge.

Is Rapaport describing the biological counterpart to, for example, Locke's 'physical substrate' ... 'the nature of which we know not what it is'? One might even question the use of "undifferentiated-matrix" since it would seem that inherent, or inborn, structures probably are quite different in each instance -- that is, one might easily suppose the innate structures or principles that generate intellectual activity are very much differentiated from the sorts of structures or principles that produce instinctual activity.

Moreover, although Rapaport quite freely acknowledges that "ego structures, energies, and motivations pertaining to them need not arise solely as the derivatives of instinctual drives" or "consist solely of neutralization associated with frustration", nonetheless, one still can ask why one should feel compelled to suppose at any point that ego structures are derived from instinctual drives or consist of neutralized energy. To say, for example -- as Klein often does -- that:

(a) sensual experience is intertwined with other sorts of experience, or (b) that sensual experience colors other kinds of experience, or that (c) non-sensual experiences are often invested with sexual meaning, does not logically or empirically entail that ego structures are derived necessarily from sensual experience or that they must consist of neutralized energy.

In fact, Rapaport's acknowledgment concerning inborn ego structure is tantamount to throwing in the theoretical towel with regard to large portions of the meta-psychology that is being proposed by both Rapaport and Freud. This impression seems substantiated, to some extent, by the token manner in which Rapaport often treats the concept of inborn ego functions.

What he gives with the one hand Rapaport frequently (though not always) tends to take away with the other hand. The last two cited quotations represent only one instance of the way in which his writing tends to exhibit something of a double-edged sword quality.

After spending much time discussing such notions as "cognitive controls", "desirability", "competence motivation" and so on, Rapaport is still looking for an explanation of "stimulus hunger ... including all those exploratory, curious, active, and other behaviors that Robert White subsumes under the latter's concept of "competence" (p. 895) that are consistent with the theoretical superstructure Rapaport has spent so much time in developing in most of the rest of his paper. One can't blame him for trying to retain his theoretical position, but, nevertheless, one still can wonder if, perhaps, his efforts (along with those of Freud in this same regard) are not ultimately doomed. Perhaps, the nature of the human being is such that one cannot get to where Rapaport and Freud want to go theoretically -- at least not with their quasi-physiologically rooted meta-psychology.

In short, when Freud, for example, argues that:

"... the ego ... was developed out of the cortical layers of the id, which being adapted for the reception and exclusion of stimuli, is in direct contact with the external world"²¹

he has not really done anything but gloss over the theoretical problems with which he is confronted. He has not explained how development begins with the primary process and interacts with these "adapted" cortical layers to launch the ascent of secondary processes. He is not able to justify theoretically the conveniently timed appearance of a 'rational', 'logical', 'judgmental' faculty for testing reality within an, heretofore, irrational and undifferentiated id.

Moreover, Freud has not given an adequate account of how psychic factors determine the eventual emergence of the reality principle's secondary process, or, at least, how such factors, in conjunction with the impact of the external environment, make the possibility of the reality principle's emergence plausible and consistent with the rest of the Freudian theoretical superstructure.

Footnotes

1.) Merton M. Gill, ed., “On the Psychoanalytic Theory of Motivation”, page 872, in *The Collected Papers of David Rapaport*, Basic Books Inc., New York, 1967),.

2.) Sigmund Freud, *New Introductory Lectures on Psychoanalysis*, edited by James Strachey W.W. Norton, New York, 1964, page 69.

3.) Sigmund Freud, “Instincts and Their Vicissitudes”, pages 73-74, *A General Selection From The Works of Sigmund Freud*, edited by John Rickman, Doubleday, Garden City, 1957,.

4.) Sigmund Freud, *The Interpretation of Dreams*, translated by James Strachey, Avon, New York, 1964, page 575.

5.) Sigmund Freud, “Beyond the Pleasure Principle”, page 142., *A General Selection From The Works of Sigmund Freud*, edited by John Rickman, Doubleday, Garden City, 1957,

6.) L. Berger, ed., “Freud’s Two Theories of Sexuality”, by George S. Klein, page 157, *Clinical-Cognitive Psychology: Models and Integrations*, Prentice Hall, Englewood Cliffs, 1969,.

7.) Merton M. Gill, ed., op. cit., pages 865-866.

8.) R.S. Peters, *The Concept of Motivation*, Routledge and Kegan Paul; London, England; 1969, page 50.

9.) L. Berger, ed., op. cit., page 147.

10.) Sigmund Freud, *New Introductory Lectures on Psychoanalysis*, edited by James Strachey W.W. Norton, New York, 1964, pages 73-74.

11.) L. Berger, ed., op. cit., p. 148.

12.) Sigmund Freud, *An Outline of Psychoanalysis*, translated by James Strachey, W. W. Norton, New York, 1949, page 17.

13.) Sigmund Freud, “Beyond the Pleasure Principle”, pages 152-153, *A General Selection From The Works of Sigmund Freud*, edited by John Rickman, Doubleday, Garden City, 1957,.

14.) Merton M. Gill, ed., op. cit., page 865.

15.) Sigmund Freud, *The Interpretation of Dreams*, translated by James Strachey, Avon, New York, 1964, pages 641-642.

16.) Sigmund Freud, *An Outline of Psychoanalysis*, translated by James Strachey, W. W. Norton, New York, 1949, pages 15-16.

17.) Merton M. Gill, ed., op. cit, page 886.

18.) Ibid., page 869.

19.) Ibid., page 887.

20.) Ibid. page 887.

21.) Sigmund Freud, *An Outline of Psychoanalysis*, translated by James Strachey, W. W. Norton, New York, 1949 page 110.

Chapter 2: Jungian Visions

Vision1

Broadly speaking, Carl Jung believed that in order for an individual's personality to develop properly a person must deal with certain kinds of psychological challenges during the course of her, his, or their life. Moreover, according to Dr. Jung, the nature of the challenges that confront an individual during the first part of life -- say, up until about young adulthood -- are quite different from the sort of challenges that are faced by a person during the second half of life (from, roughly, mid-life onward).

In many ways, Dr. Jung agreed with Dr. Freud that the task of the first half of life was to establish the sort of strong sense of ego identity and self-sufficiency that would enable an individual to operate independently and that would equip that person to find a productive place in society (in terms that Erik Erickson attributed to Dr. Freud: To be capable of 'lieben und arbeiten' – to love and to work). In order to accomplish this, a person had to break free of, and make peace with, the instinctually charged character of the relationships that arise in conjunction with one's parents or other family members and that shape many, if not most, of the events of the first half of life.

For Dr. Jung, however -- and unlike Dr. Freud -- an individual's psychological work did not end with a successful, neurosis-free navigation of the troubled waters of early development. According to Dr. Jung, in order for a person to become a fully functioning human being, an individual also had to revisit the realm of the unconscious during the second half of life in order to bring into balance and integrate certain aspects of personality that, for whatever reason, had not been attended to properly or had been separated off from conscious functioning while dealing with the earlier psychological crises of life ... for example, an individual might have to bring certain dimensions of the feminine (anima) or masculine (animus) facets of personality into balance or integrate them into some more stable relationship.

On the basis of his own harrowing encounters with the tremendous forces of the unconscious -- encounters that almost overwhelmed and destroyed him -- Dr. Jung believed that, at a minimum, two conditions were necessary to undertake the psychologically perilous journey of the second half of life. The first requirement, outlined earlier,

was for the individual to have achieved healthy ego functioning unencumbered by lingering residues of the problems characteristic of the first half of life.

The second condition noted by Dr. Jung was that an individual should not undertake the process of revisiting the unconscious without competent support, and, according to Dr. Jung, this assistance needed to come in the form of a qualified therapist who was familiar with the territory. Although therapy sessions could be used to help individuals to negotiate unresolved issues left over from the first half of life, Jungian therapy really tends to come into its own with helping people to meet the psychological challenges associated with the journey back to the unconscious that tends to arise during the second half of life.

One needed a strong ego in order to resist the temptation to surrender to, become lost in, and be overwhelmed by, the forces of the unconscious. Similarly, one needed an enlightened guide or therapist to help one learn how to enter into dialogue with, as well as interpret the symbols of, the unconscious so that the situation, if properly handled, would allow the individual to take advantage of the benefits that the unconscious had to offer in the way of an expanded, more balanced, more integrated sense of self than could be accomplished through the establishment of a strong, healthy ego as a result of successfully meeting the psychological challenges of the early stages of development.

Dr. Jung looked at the unconscious in a very different manner than did Dr. Freud. The latter conceived of the unconscious as constituting a wellspring of instinctual, primary processes, as well as the repository of repressed material that had been produced while an individual tried to prevent instinctual energies from being expressed directly. Dr. Jung, on the other hand, considered the unconscious to be a doorway of sorts that linked human beings to a realm far beyond instincts and primary processes.

For Dr. Jung, the unconscious realm was a treasure house of psychological wisdom that, among other things, might be able to help a person resolve many of the problems that arose during the process of psychological development. Jung claimed that this interior storehouse of knowledge and wisdom had been accumulating since the times of primitive man ... and, maybe, from an even earlier time in evolutionary history.

According to Dr. Freud, in many ways -- but not in all -- the unconscious is an entity created by the individual through repression of experiential

components drawn from everyday life. At the same time, Dr. Freud believed that the ego -- which was the home of the reality principle and secondary processes of rationality through which an individual dealt with the demands of the external world -- must become the master regulator of the ways, and the extent to which, various irrational processes and contents of the unconscious were to be given expression in any given set of social circumstances. Thus, his famous dictum: 'Where id is, there shall ego be'.

According to Dr. Jung, however, everyday experiences were merely the stimuli for eliciting various dimensions of an inherited -- not constructed -- unconscious that contains much more than repressed material. Furthermore, although Dr. Jung believed the unconscious could never be mastered or even tamed, he maintained that an individual could derive psychological benefit through limited, controlled excursions into the trans-rational realm of the unconscious.

Nonetheless, Dr. Jung also believed that because the unconscious had the capacity to mislead the individual, as well as destroy the individual, the process of bringing certain facets of the unconscious to some degree of conscious realization was a tricky business. The task had to be undertaken in measured, carefully analyzed, and properly interpreted steps, or the individual risked having his or her sense of self become fused with, and dissolved in, the forces of the unconscious.

By venturing into the realm of the unconscious through a series of limited, therapeutically guided excursions, the individual -- hopefully -- comes to realize that the everyday world is not the only reality. Rather, the objects of the everyday world are understood as 'a' reality instead of 'the' reality, and even though the external world gives expression to a reality of considerable importance, in many ways, the interior world constitutes an even more important dimension of Being/Reality.

In fact, the objects of the everyday world were able to assume symbolic significance by pointing in the direction of unconscious processes, as well as to serve as loci of projection for these same unconscious forces. This is where myths enter the picture.

For purposes of comparison, one might note that Dr. Freud construed myth to be an externalized symptom of the repressed contents of various kinds of libidinous striving, especially those associated with the incest wishes of children concerning their opposite sexed parent. Indeed, for Dr. Freud, all of civilization was a sublimated containment response to the

attempt of the forbidden inclinations of the id to seek public expression, and, considered from this perspective, myths constituted a process that was in the service of the defense mechanism of sublimation.

Dr. Jung, on the other hand, didn't consider myths to be public signs of an underlying pathological trade-off with the unconscious. He maintained that myths -- along with dreams, art, and the active imagination -- were clues or tools that could be used to unlock different secrets of the unconscious during the constructive, life-affirming process of individuation through which an individual sought to become whole, integrated, and balanced.

Myths, dreams, the active imagination, and art formed part of the running dialogue with the unconscious that Dr. Jung considered to be essential to the process of working toward a healthy resolution of the psychological challenges of the second half of life. Simply stated, myths were concrete, symbolic encapsulations of the unconscious wisdom and powers that were beckoning us to return to the hidden dimensions of the inner life in order to have a shot at winning the ultimate prize: Namely, a deeper, richer, more harmonious and integrated sense of the meaning of the self as a distinct individual identity and personality formed against the backdrop of both society and the history of the species.

According to Dr. Jung, running through the myths of different societies were a set of commonalities that he considered to be a reflection of the underlying archetypes that formed the collective unconscious. Archetypes were emotionally charged, primordial images that gave expression to different themes of psychic importance to an individual, and among such archetypes one could find images involving themes such as: The trickster, the mother, the flood, and the child.

The collective unconscious was the inherited repository of psychological forms, dynamics, themes, and meanings (i.e., archetypes) that constituted a deep -- although largely unconscious -- reservoir of wisdom from which human beings might draw in order to complete the process of self-individuation. Dr. Jung considered experiences involving primordial images that occurred in dreams, art, fantasies, and psychotic episodes to constitute evidence for the existence of the collective unconscious.

As intimated earlier, Dr. Freud believed that the similarities among the myths of different societies gave expression to the underlying libidinous drives that were part of our common biological inheritance that

differentially manifested themselves through a set of psychological stages of development that were rooted in human biology. Yet, each person underwent this encounter and struggle with the species-wide biological inheritance of libidinous drives in a fashion that uniquely reflected the individual's interaction with his or her family and the surrounding community.

Dr. Jung believed myths came into being when a given society created a symbol-laden story that was anchored in, and animated by, different archetypal motifs of the collective unconscious. The symbols of the myth were intended to elicit the active participation of those who heard or read the myth by helping to remind people of the forceful shaping presence of archetypes in our lives and, through this means, entice individuals to follow – through the process of therapy -- the symbolic clues of the myth back to its source.

The thematic contents, or archetypal forms, of myths came with the psychological inheritance that accompanied such contents, but unlike the case of Dr. Freud, those myths were not reducible to our biological inheritance. As such, the thematic contents of myths rather than their particular symbols were psychological givens in the lives of all individuals.

The particularized details of any given myth were drawn, according to Dr. Jung, from the social, cultural and historical character of the lived experience of a people. Therefore, the way in which these particularized details symbolize, and give expression to, the underlying archetypal themes is peculiar to the circumstances of the people out of which a certain myth arises, and, for this reason, Dr. Jung disapproved of the tendency of some people in the West to adopt the myths of various Eastern cultures and try to incorporate the symbols of those myths into a Western context.

For Dr. Freud, the purpose of myth is to serve as a sublimated, disguised medium for emotional release that is intended to provide a form of compensation ... albeit an inadequate one relative to the direct expression of libidinous energies and drives. According to Dr. Freud, the individual inherits a set of libidinous drives that are rooted in biology instead of in the phenomenology of experiential themes.

On the other hand, Dr. Jung considered the purpose of myth to be about providing individuals with an opportunity – by means of a return to the unconscious -- to seek a deeper understanding of the nature of self,

personality, meaning and identity. The individual inherits a common set of psychological themes that are a crystallization of certain aspects of the experiences of one's ancestors that carry ramifications for the process of self-fulfillment and self-realization (i.e., individuation).

The Freudian approach to myth is to consider it as a symbol of something that is hidden and, in reality, that hidden 'something' is different from the character of the myth. If the myth were not substantially different from that which remains hidden, then, various defense mechanisms would be activated in an attempt to prevent those contents from being given public expression.

However, from the perspective of Dr. Jung, the myth is not something that is different from the underlying archetype. The symbols of the myth are intended to lead toward, or elicit, the reality of the archetypes giving expression to different facets of the collective unconscious.

However, once the archetype or archetypes that are present in a myth have been properly identified, one must undergo a further process of interpretation by means of therapeutic guidance. According to Dr. Jung, one cannot understand the meaning of a myth in the context of one's life until one has insight into how the archetypes being symbolized through that myth fit into the concrete and particularized character of one's life circumstances and developmental history.

Dr. Jung distinguishes between mythology and myth by indicating that, unlike a complete mythology such as a religious tradition, no one myth can contain all of the archetypal themes that exist in the collective unconscious of human beings. Therefore, no one myth -- again, unlike any given mythology -- provides all of the materials that are necessary for working toward either a proper balancing of one's personality or toward a realization of the deep riches that Dr. Jung considers to be inherent, at least potentially, in the nature of the self.

Individual myths call one to particular aspects of: Identity, meaning, self, and personality through the specific archetypes to which our attention is being drawn by the symbols of the myth. A mythology, on the other hand, calls one to engage the full spectrum of psychological possibilities that are inherent in the archetypes of the collective unconscious to which one's attention is being directed through the complex symbolism of such a mythology.

When individuals concentrated on only certain myths -- rather than the dynamic intricacies of a fully elaborated mythology -- Dr. Jung believed that such people cannot help but leave substantial dimensions of their selves unexplored, undeveloped, unbalanced, and, therefore, not capable of being integrated with the rest of one's being. Consequently, at best, the process of individuation would be woefully incomplete, and, at worst, such people might risk becoming overly identified with the archetypal underpinnings of particular myths. According to Dr. Jung, these sorts of individuals rendered themselves vulnerable to a mental breakdown through loss of identity and sense of self as human beings who possess a potential that carries beyond any given archetype.

For some researchers, the idea of the unconscious appears to have a problematic ontological status. In other words, with respect to certain processes and issues, such researchers might be prepared to accept the existence of a realm referred to as the 'unconscious' that, in some way, is attached to, or a part of, one's being. However, there are many other aspects of life that often are said to belong to the unconscious, or that, supposedly, give expression to various forces of the unconscious, about which the foregoing researchers might harbor doubts as to whether or not one is talking about something that actually exists ... rather than merely being a way of talking about phenomena that we don't fully understand.

One obvious example where the existence of an unconscious dimension to human affairs seems apparent concerns various aspects of personal memory and motivation. For instance, there might be a name, fact, or piece of information that one knows but, for some reason, one can't produce or retrieve it on a given occasion.

Presumably, the data that remains out of the reach of our consciousness could be said to be residing in the unconscious. On the other hand, there might be some individuals who would wish to say that such material is not really in something called the unconscious as much as it merely remains inaccessible -- temporarily or permanently -- to conscious recall.

In other words, being out of consciousness is not necessarily the same thing as being in a realm of the unconscious. For example, what is going on in some country on the other side of the Earth might be taking place outside of our current state of consciousness, but this doesn't, as a result, automatically qualify that unknown data to be a part of someone's

unconscious regions, nor does it necessarily create, in and of itself, an unconscious realm in which such data can be said to exist or reside.

Moreover, there are many facets of a computer's database or memory banks that might not be in use at any given time. However, one might not, therefore, want to claim, therefore, that a computer can be said to possess an unconscious realm.

In fact, someone might wish to reverse the foregoing argument. That is, if one does not want to attribute an unconscious realm to computers when their current programming state or operating mode does not permit them to have access to certain aspects of stored data, then, perhaps, the same is true of human beings as well.

Another -- possibly better -- example that might indicate the existence of an entity called the 'unconscious' involves various non-conscious emotional or motivational patterns that are operating within us on an ongoing basis. More specifically, these motivational and emotional patterns or processes might be real forces shaping our behaviors, yet we are not aware of them because they are hidden beneath, say, psychological defenses that permit us to attribute more acceptable or flattering reasons to the behaviors that are rooted in this veiled network of emotion and motivation.

Although the idea of the unconscious existed before Dr. Freud came along, to some extent, he was able to place in a more scientifically acceptable light. For, in addition to dreams, hysteria and so on, Dr. Freud also took phenomena that he referred to as the psychopathology of everyday life -- like slips of the tongue -- as commonplace sorts of examples that might serve as empirical evidence for the existence of the unconscious.

Hidden emotions and motivations, along with instinctual drives, played a very important part in disclosing the presence of the unconscious realm as far as Dr. Freud and a variety of other psychological investigators were concerned. This data does not prove the existence of a region, state, realm, place or entity known as the unconscious, but, at least, the foregoing sorts of data lend some degree of plausibility to that idea.

Nevertheless, there are other cases -- and Dr. Jung's notion of the collective unconscious is one example of this -- to which the term 'unconscious' is applied as a way of talking about forces, processes, and phenomena that we don't really understand and that, in point of fact, might have nothing necessarily to do with a psychological or biological realm that

contains unconscious materials. Instead, these processes and phenomena might be impinging on us from some other realm, through a dynamic we are not aware of, and we merely attribute our experiences to the unconscious because, for a variety of cultural and historical reasons, we might be more prepared to accept that kind of ontological or metaphysical interpretation in conjunction with such events than if someone were to try to argue for an other-worldly or a spiritual account of those sorts of phenomena or processes.

The foregoing possibility could be due to the manner in which philosophical and cultural conceptions concerning the nature of the relationship between the individual and Being/Reality undergo transition over time. In other words, at certain points in history, people might be prepared to accept -- as true -- ideas such as: Visitations by a creative muse, demonic possession, satanic influences, or dreams as messages from some other world.

Now, however, as a result of various kinds of scientific, psychological, and philosophical influence, many people are ready to give credence to -- or, at least, entertain the possibility that -- alternative, more modern ideas concerning the nature of Being/Reality. These latter ideas might include, for example, the idea that dreams are due to certain kinds of brain activity during REM sleep, or such ideas might give expression to the notion that creativity is the result of a free play of concepts that is generated through various modalities of brain chemistry, together with K-complex electrical rhythms, or someone might wish to argue that demonic possession is really a residual, delusional effect of some kind of breakdown in the metabolic pathways of, say, serotonin and/or dopamine.

Yet, in point of fact, we are not necessarily any closer to understanding what is going on now than when people were attributing these phenomena and processes to other-worldly agents. Currently, terms such as neurotransmitters, brain chemistry, and electrical activity are used to give descriptive expression to the realm of the unconscious, but all we really possess with respect to the use of such terms are the existence of certain patterns of correlation rather than a solid case of causation ... in fact, we 'moderns' often like to feel superior -- somewhat smugly so -- relative to the allegedly primitive myths of yesteryear, simply because we

are able to couch our ignorance in very impressive-sounding technical language.

Carl Jung might represent an interesting sort of transitional figure with respect to all of the foregoing considerations. More specifically, in certain respects he is an important part of the conceptual revolution that has been taking place during the last hundred and thirty years, or so, in which psychological and biological accounts have gained ascendancy -- at least in some quarters -- relative to various spiritual or religious accounts, and are considered, by some individuals, to give expression to sound, empirical accounts or explanations concerning the events of our lives. Yet, at the same time, Dr. Jung's notion of the collective unconscious seems to be part of a metaphysical framework that transcends, and, therefore, cannot necessarily be reduced to, the brain functioning of individuals.

Moreover, one frequently finds Dr. Jung speaking about the soul, spirituality, the importance of religious symbols, and so on. Yet, in many respects, he appears to make spirituality a function of purely psychological processes.

For him, spirituality and religion sometimes appear to give expression to little more than concrete, psychological forms that are generated by processes of a mythological nature. These mythologies are significant in as much as they contain the symbols that might be able to help individuals to make contact with the archetypes of the collective unconscious. Consequently, spiritual themes provide a person with psychological/mythological material through which she or he can work toward resolution of the problems and challenges of identity, the self, and personality that Dr. Jung believes are necessary for a successful completion of the developmental processes -- i.e., individuation -- that characterize the second half of life.

Dr. Jung is willing to allow for dimensions of reality -- i.e., meaning, the self, identity, self-realization, and personality -- that extend beyond the overly simplistic world of the libidinous energies and instinctual drives championed by Dr. Freud. Nevertheless, even if one agreed with Dr. Jung concerning the need to: Reclaim balance or integrate aspects of personality and self by revisiting the unconscious, nonetheless, a purely psychological approach might not be capable of doing justice to that which spirituality or religion might be attempting to direct the attention of human beings.

In a sense, just as Dr. Jung's theories add very important dimensions to, as well as complement, the work of people like Dr. Freud, something might need to be added to Jung's framework in order to reflect the richness and depth of Being/Reality that transcends the realm of the psychological. In many respects, Dr. Jung appears to be just as reductionistic, in his own way, as he seemed to find Dr. Freud to be, even though Dr. Jung certainly is offering a far richer and nuanced picture of the nature of the human being than Dr. Freud appeared to be doing.

Dr. Jung often spoke quite approvingly with respect to such themes as religious discipline. He wasn't saying -- like Karl Marx -- that religion was the opiate of the masses or -- like Sigmund Freud -- that religion was merely an illusory projection of an overly moralistic superego trying to cope with the many problems presented by a very resourceful and devious set of instinctual urgings.

Nevertheless, to some extent, Dr. Jung might have been favorably disposed toward religion for several reasons that had nothing to do with Divinity or our relationship with Divinity. For example, Dr. Jung considered religion to be a fully adequate mythological medium that provided the individual with a means of making contact with the archetypes of the collective unconscious.

However, the collective unconscious represents the cumulative wisdom of human experience concerning the completion of personality and development rather than necessarily being a repository of Divine wisdom. Consequently, one's contact with the archetypes of the collective unconscious is not necessarily a process of reaching out to, or for, Divinity, nor does one necessarily enter into dialogue with the archetypes for the purposes of coming to know, love, worship or serve God.

Instead, one makes contact with the archetypes of the collective unconscious with the intention of coming to know, enrich, balance and integrate one's sense of self, identity and personality. This is done in order to complete a process of psychological -- not spiritual -- development ... although Jungians, including the master, himself, sometimes seem inclined to use a spiritual-like vocabulary as a way of speaking about such a psychological project.

One might argue that part of the wisdom that is psychologically inherited through the archetypes of the collective unconscious could involve the thoughts and emotions of previous peoples concerning the

properties that they believed a relationship with some transcendental, Divine Being should have if an individual were to successfully bring to completion the psychological project of creating a balanced and integrated personality and identity. However, the foregoing sorts of beliefs are not necessarily the same kind of thing as saying that such a Divine Being exists and that our attention and efforts should be directed toward making some kind of realized or enlightened contact with that Being rather than with the archetypes of the collective unconscious.

Another reason behind Dr. Jung's praising of religion and its framework of discipline might have been connected with his very healthy respect for, and wariness concerning, the tremendous powers he believed to be inherent in the realm of the collective unconscious. Jung had witnessed the overwhelming character of those forces and had experienced, first hand, that dimension's capacity to confuse, if not mislead, individuals who, either intentionally or accidentally, wandered into it.

Therefore, from the perspective of Dr. Jung, the rituals, practices, discipline and regimen of religion might be able to serve as so many psychological buffers between the individual and the forces of the collective unconscious. By exerting control over the individual's interior life, religions were, in effect – knowingly or unknowingly -- helping to protect individuals from potentially disastrous and destructive encounters with the collective unconscious.

If religious adherents were not prepared to undertake a serious journey into the realm of the unconscious, then from the perspective of Dr. Jung, those individuals might be better served if they were surrounded with a set of religious constraints and restraints that were likely to keep them out of harm's way. In other words, the practices, beliefs, rituals, art, and so on, of various religious traditions would provide the less venturesome of religiously inclined people with a limited, gradual, and somewhat superficial method for making contact with at least some of the archetypes of the collective unconscious through the symbols inherent in their religious traditions.

On the other hand, those same religious symbols might also serve as hints for the faithful with respect to the psychological wisdom that could be found by anyone bold enough to journey inwardly in a rigorous, sincere fashion. Yet, until such time as an individual was -- from a Jungian perspective – ready for a serious, inward journey, then, the symbols, myths, and other

aspects of a given religious mythology offered adherents some of the materials necessary for working toward completion of certain limited facets of the psychological tasks involving the self, identity, meaning, personality, and so on.

As far as the developmental challenges of the second half of life are concerned, Jungian therapy is intended to take the individual on a guided encounter with the forces and wisdom of the collective unconscious in a way that is both different from, as well as similar to, the modalities used in the mythological processes of religion. As such, not only did Jungian therapy provide an avenue for helping non-religious people to address the unfinished psychological business of developing the self, identity and personality in a complete and proper fashion, but his modality of therapy also could be offered to religious believers who weren't able to obtain the help they needed for tackling the problems surrounding the completion of the tasks entailed by psychological development within their own religious tradition.

Conceivably, Dr. Jung might have felt that his brand of therapy was a much more efficacious way of gaining access to, and deriving benefit from, the archetypes of the collective unconscious than was religion. In any event, and within certain limits, Dr. Jung might have been tolerant of, and somewhat positively disposed toward, religion simply because he felt it was trying, in its own way, to assist individuals to achieve some of the same kinds of goals concerning meaning, self, identity, personality, harmony, balance, integration and enrichment of the psychological soul, as he himself was attempting to do through his own therapeutic methodology.

Many individuals seem to want to take the modality of consciousness we use in everyday life or the modalities of consciousness that we tend to associate with abilities -- such as creativity, language, insight, and reasoning -- that we believe set human beings apart from the rest of animal and plant life and place those forms of consciousness at the very apex of a chart of evolutionary or cosmic accomplishment. However, few, if any of us, really understand how creativity, insight, reasoning, or language actually operates.

Consciousness -- the everyday-waking-variety kind of consciousness -- does not so much appear to generate the foregoing kinds of abilities as much as that consciousness seems to be a screening room for manifesting the results of talents and abilities that are transpiring in

some other realm or dimension. In reality, our work-a-day consciousness appears to be the very last to know what is going on within us.

Whatever it is that our everyday consciousness comes to an awareness of, then that awareness really only seems to give expression to a very partial, fragmented, shallow, and indirect sort of relationship with the centers of awareness that actually have the responsibility for regulating and governing a whole variety of complex operations and processes involving so-called 'higher' human functions and functioning. As such, the everyday consciousness in which we like to take so much pride is actually, relatively speaking, quite dumb and unconscious with respect to most of what is going on within us.

Only the human ego's inclination to appropriate the "unconscious" capacities and abilities as its own prevents us from realizing the absurdities inherent in our attempts to lay claim to those processes and functions that, for the most part, take place beyond the horizons of our everyday, waking consciousness. We seem to be zombies who operate from within a firmly entrenched delusional system that portrays our normal modalities of awareness as being the cat's meow of consciousness.

Conceivably, our everyday consciousness is really just a residual, trickledown effect of far more esoteric activities that are taking place beyond the horizons of our so-called normal, waking consciousness. In other words, our work-a-day form of consciousness is not so much an instance of emergent properties as it is a expression of a set of divergent properties of some sort that have become separated off -- like a dissociative mental condition or fugue state -- from its original source or context.

In some ways, the relationship of our everyday modes of awareness to the real consciousness that seems to be going on in some other realm or dimension of being is sort of reminiscent of certain science fiction movies or novels ... the ones where Earth gets visited by beings who are so far more advanced than humans are that the aliens either have great compassion for our pathetic condition and keep sending us anonymous gifts of consolation so we won't get too depressed about the rather abysmal nature of our waking consciousness, or, they adopt us as dumb but, on occasion, lovable pets and, every so often, give us trinkets with which we can amuse ourselves like kittens with a ball of string, or, they consider us to be only slightly different than the insect life on this planet,

but their moral values will not permit them to exterminate us and put us out of our misery.

In many respects, human beings have got the consciousness-unconsciousness distinction all inverted and twisted around. If one considers how impoverished our waking consciousness has become with our many routines, habits, biases, prejudices, psychological defenses, preoccupations with our fantasy life, and so on, one might be surprised that any of us can do much more than walk and chew gum simultaneously. Given the impoverished condition of the waking consciousness in which we spend so much of our time, the miserable state of the world is not all that hard to understand.

However, as problematic as the relationship is between the so-called unconscious and conscious domains of awareness, throwing the idea of the collective unconscious into the mix – as Dr. Jung does – creates a variety of additional problems. Among other things, for example, one might like to know where the collective unconscious is located.

If one says it is located in psychological space, whatever that is, then, the question just resurfaces in slightly different forms. Where is psychological space, and where can one find the collective unconscious in that space, and how do the contents of the collective unconscious gain access to such space?

Even if one were to argue that the regular forms of conscious and unconscious awareness are functions of certain kinds of brain activity, this option does not seem to be available to Dr. Jung in conjunction with the idea of the collective unconscious because he seems to want to distinguish between the mechanisms of biological and psychological inheritance. As a result, one returns to questions such as: Where is the collective unconscious, and how did it originate, and why, apparently, did only certain kinds of archetypal forms, rather than others, get deposited there, and what was the mechanism of the formation process of archetypes in which the particularized experiences of individuals became transformed into a generalized categorical form, and why should one suppose that the potential of the self is limited to the possibilities inherent in the archetypes, and why is there so much power and force associated with archetypes, and what precisely is the character and nature of such power or force, and how do we know that Dr. Jung's interpretations of the significance, meaning and function of the archetypes are what he claims to be the case?

As one possible alternative to the psychological theories of Dr. Jung, one might keep in mind that there are mystical traditions (e.g., the Sufi path) that speak of a realm or world of symbols and similitudes that, on the one hand, addresses human beings through the language of dreams, and, on the other hand, constitutes a dimension apart from the physical/material world and functions as a way station, of sorts, with a potential for offering the individual exposure to many different kinds of spiritual or mystical experience. The foregoing traditions suggest one can commune with the spirits of prophets and saints in this world of symbols and similitudes and, as a result, be in a position to acquire, at least potentially, a great deal of spiritual wisdom and understanding through those sorts of encounters.

However, these same spiritual traditions also indicate that individuals can meet up with other kinds of very powerful entities in this world or realm of symbols and similitudes ... entities that are capable of leading one into spiritual confusion and error. Perhaps, some of the powerful forces encountered by Dr. Jung and some of his patients during the process of therapy were not purely psychological in nature but came from an ontological realm or dimension beyond psychology.

When one compares some of what Dr. Jung says about the nature of the collective unconscious -- especially in the context of his own harrowing experiences -- with what various mystical traditions relate concerning the nature of the world of symbols and similitudes, one might wonder if Dr. Jung was trying to impose the structure of his own psychological theory onto a dimension of reality that might have nothing to do with the collective unconscious or archetypes, -- at least not necessarily in Dr. Jung's sense of those ideas.

In a very fundamental way, Dr. Jung might have found himself in the middle of something he really didn't understand. However -- like most of us -- he simply tried to make coherent sense of his experiences and those of his patients in a way that was consistent with his philosophical and psychological predilections.

Of course, just as the ideas of Dr. Jung can be subjected to a variety of questions, so too, one can raise similar questions in relation to the aforementioned idea involving a world of symbols and similitudes. For instance, a person might ask: What is the nature of the world of symbols and similitudes if that is not physical or material in nature, and, if that world is

not physical or material in nature, then where is it located? Or, how did it come into being? Or, how does one gain access to it and under what circumstances? Or, why should one feel compelled to accept a spiritual interpretation of such a realm, any more than one should feel compelled to accept Dr. Jung's psychological interpretation of his encounter with what he claimed was the realm of the collective unconscious?

Whether we are psychologists, philosophers, mystics, or scientists, we all are involved, more or less, in the same kind of quest. We all are trying to find out what the nature of the relationship is between our experiences and the structural character of the dynamics, processes, events and so on of the dimensions of reality that help make our experiences possible and help lend to those experiences certain kinds of differential character under various circumstances.

If one is sincere about exploring the reality problem, then one will not want to read something into experience or reality that doesn't belong there. At the same time, if an individual is sincere with respect to her or his investigation concerning the nature of his or her relationship with Being/Reality, then that individual does not want to exclude anything from, or read something out of, the book of reality if such phenomena are present in Being/Reality.

All of our methodologies, techniques, instruments, procedures, tests, questions, and modes of critical analyses are intended to try to discover whether our theories, hypotheses, conjectures, speculations, ideas, and so on, give accurate expression to, or are reflective of, our experiences, both individually and collectively. Moreover, irrespective of whether we are professional investigators or amateur sleuths, we tend to critically reflect on the ways in which other people describe and explain their experiences as measured against our own experiences and understanding of those experiences.

When discrepancies arise in this process of comparison, we tend to be confronted with a variety of possibilities and options. The other person's description or explanation might be problematic in some way, or our own description and/or explanation might be flawed, or both of our approaches might suffer from certain kinds of difficulties that might be either of a peripheral or essential nature, or each of our accounts might be right – each in its own way and within certain limits -- but we are referring to different aspects of the same phenomenon.

Dr. Jung agreed with Dr. Freud on some issues especially in relation to the nature of the problems, challenges and tasks of the first half of the developmental process. However, there were many aspects of Freudian theory that did not appear to match up well with Dr. Jung's own experiences or the experiences of many of the people Dr. Jung was seeing in therapy.

As a result, Dr. Jung went in search of a set of descriptions and explanations that were – for better or worse -- more satisfying to him, both conceptually and experientially, than could be provided by either a purely Freudian and/or biological account of psychological processes, dynamics and human possibilities. The collected works of Dr. Jung are his response to the questions and issues that bubbled about inside of him while he struggled to come to grips with what he believed was the relationship between the character of human experiences and the nature of the reality in which those experiences are rooted and out of which they develop.

As noted in passing earlier, Dr. Jung tended to be opposed to the inclinations of some people who wanted to borrow the symbols of another culture or mythology and try to import those symbols into a different mythological tradition or set of social/historical conditions. According to Dr. Jung, this act of transposing symbols constituted a potential source for considerable distortion, error, and confusion to enter one's quest for the truth concerning the nature of one's relationship with Being/Reality.

Somewhat ironically, however, Dr. Jung himself might have been guilty of such a process of transposition by taking spiritual issues (e.g., individuation of the soul) out of context and placing them in a purely psychological framework. In doing this, he might have opened the gates for a great deal of error, distortion, and confusion concerning the nature of the reality or realities to which his psychological theory of archetypes attempted to make descriptive and explanatory reference.

Although an individual starts out on her or his spiritual journey in the world of forms, nonetheless, spirituality or mysticism points in a direction that might transcend the realm of forms. Therefore, even if one were to grant the existence of Dr. Jung's archetypes, they might be a purely formal manifestation of some further dimension of reality and, as such, archetypes might not adequately address that which lies beyond the psychological mode of communication and understanding that is capable of being given expression through one's entering into dialogue with those archetypes.

Just as Dr. Jung believed that individuals must actively participate in the hard work that is entailed by the process of individuation, so too, the religious, spiritual, or mystical journey is one that must be done with the full participation of the individual and not just through books. Neither Dr. Jung nor mystics believe that one can sit back in a rocking chair and speculate one's way to an understanding of how, and under what circumstances, worlds exist that might be neither of a physical nor material nature.

Dr. Jung advised individuals who wanted to encounter the realm of archetypes that they must do so under the guidance of someone who knew: The landscape, potential problems, and ways of moving about in the regions of the collective unconscious without becoming: lost, confused or overwhelmed. The language used by mystics seems to say something very similar in nature, except they might be speaking about dimensions of reality that are quite different from the psychological realms for which Dr. Jung's theoretical framework appears to be attempting to provide a map.

One cannot replicate an experiment from the sidelines. If one wishes to seek to verify whether, or which parts of, Dr. Jung's understanding of things is correct, true, accurate, or tenable then, to some extent, one must follow in his footsteps. Furthermore, if one wishes to test the veracity of a mystic's understanding of the relationship between experience and reality, one must follow in the footsteps of an authentic mystical guide (and, unfortunately, there are many inauthentic spiritual guides).

Unfortunately, individuals do not possess enough time, energy, or resources to go about trying to replicate, test, confirm, or disprove everyone's understanding of their respective experiences. So, we all are faced with choices about which paths of replication, testing, and confirmation will be pursued.

Our conception of: Self, identity, meaning, purpose, fulfillment, harmony, human potential, truth, and reality becomes a complex function of the choices that we make concerning what we attempt to replicate, test, or validate. Trying to figure out whether we have chosen wisely or correctly in this regard is what often keeps many of us up at night.

Vision 2

The foregoing section (Vision 1) explored some of the ideas of Carl Jung in a, more or less, traditional fashion. In other words, although the foregoing section might have given emphasis to certain themes

that other people writing about Dr. Jung might have de-emphasized, or while the foregoing section might have de-emphasized various issues to which other writings exploring Dr. Jung might have given emphasis, and despite the fact that I have thrown in some criticisms of certain aspects of Jung's perspective with which others might agree or disagree, nonetheless, most people would be able to recognize the basic framework of Carl Jung's theoretical framework in the foregoing pages. What follows is another way of engaging the work of Carl Jung that is much more controversial and presents a very different picture of Jung's perspective from the one with which most people – including so-called Jungians -- are familiar.

According to Richard Noll, author of *The Jung Cult: Origins of a Charismatic Movement*, the supposedly autobiographical book by (allegedly) Carl Jung that is entitled: *Memories, Dreams, Reflections* is, to a large extent, an exercise in revisionist history. Dr. Noll indicates in his aforementioned book that with the exception of the first three chapters of *Memories, Dreams, and Reflections*, along with a final section entitled "Late Thoughts" that were written by Carl Jung, most of the rest of the book was largely put together by, and constructed through, the efforts of Aniela Jaffé, an intimate of Carl Jung, as well several other close disciples of Dr. Jung, and, in addition, Dr. Noll notes that much of what Dr. Jung wrote for *Memories, Dreams, Reflections* was, subsequently, edited by Jaffé and others.

The latter book is intended to preserve the idea that Dr. Jung was some sort of a saint-like, holy person who was teaching people the wisdom of the ages, when, according to a great deal of historical evidence that has been brought together by Dr. Noll, Jung was, among other things, anti-Semitic (and Dr. Freud was both aware of, and commented on, this aspect of Jung), harbored racist attitudes, was sexually active throughout his life with a number of women who were not his wife, and fudged data concerning so-called evidence for the idea of the collective unconscious.

Memories, Dreams, Reflections paints a picture of Carl Jung as a person that came into contact with the most fundamental Ground of Being/Reality by means of his dreams, fantasies, ascetic retreats, reflective meditations, and visions and, in the process, became a wise, holy man. The foregoing book gives voice to the idea that the

experiences, thoughts, and understandings of Dr. Jung constitute a case study in the process of individuation in which a person – i.e., Dr. Jung – journeys into the realm of persona, archetypes, symbols, myths, mythology, animus, anima, the shadow, as well as the collective unconscious and becomes a fully realized, balanced, integrated human and, thereby, maps out the nature of the process through which other human beings might be able to do the same.

Dr. Noll depicts Carl Jung as an individual who was often deeply intrigued with issues involving cultural and biological heritage – as was true of many people at that time. He tended to identify with the German side of his ancestry, rather than the maternal, Swiss side of his family tree (which seemed to be laced with issues of emotional disturbance of one kind or another), and, he often appeared to be quite taken with the possibility that he was a direct descendant of – although, perhaps, illegitimate – Goethe by way of his paternal grandfather.

According to Richard Noll, Dr. Jung was someone who deeply identified with the Volk of his Germanic ancestry. The notion of Volk is filled with numerous currents of blood ties, pantheism, life energy, and a transcendent sense of spirituality – all of which impinged on the perspective of Karl Jung and his close followers.

Among other things, völkisch spiritual orientations gave expression to the idea that religious and mythological differences were rooted in the biology of various peoples. The Germanic ancestral tree – with which Jung identified – was often infused with ideas involving Aryan origins and the existence of Teutonic gods and religions that either pre-dated Judaism and Christianity or were independent of that Semitic tradition.

The foregoing Greco-Roman influences played a crucial, formative role during Carl Jung's early cultural and educational life. Many Germans – whether well educated or not – tended to be acquainted with various aspects of Greco-Roman mythology, and this included Carl Jung.

Germans were also much taken with the supposed purity of Greco-Roman culture and its emphasis on ideals involving rationality, truth, serenity, genius, and beauty. Those ideals were often filtered through, and modified by, the Romantic ideas (which gave emphasis to themes of individualism, emotion, nature, and glorification of certain aspects of the past) that were present in the writings of Goethe.

Nineteenth century German research on religion tended to distinguish between Semitic traditions (i.e., Judaism and Christianity) and spiritual traditions based on the Aryan culture associated with Greece and Rome. Jung believed there was a fundamental difference between Aryan-based religious traditions and Semitic-based religious traditions, and Dr. Jung was as drawn to the former as he was inclined to reject the latter.

Although Dr. Jung did not have a problem with the general idea of religion, nonetheless, he came to believe that the Judeo-Christian tradition was a Jewish disease that infected the minds, hearts, and souls of human beings and, thereby, prevented people from gaining access to their true spiritual heritage. As a result, according to Dr. Noll, Dr. Jung instituted a decades-long policy that sought to prevent Jewish individuals from taking an active part in their meetings and gatherings (in the form of a Psychology Club in Zurich), and, then, later on – in order to attenuate criticism to some degree -- adopted a quota system in which only a limited number of Jewish individuals would be permitted to actively participate in those gatherings.

Following Jung's break with Sigmund Freud (which began during a sea voyage to America in 1908 and came to a head in 1912-1913), Dr. Jung claimed to have had a vision toward the end of 1913 in which he supposedly was initiated into an Aryan mystery cult associated with the teachings of Mithras, an ancient tradition linked to Vedic, Persian and Roman religious systems that focused on the nature of the primordial covenant between human beings and the gods. During the process of initiation, he reportedly had become a god-like figure – the Aryan Christ – and, from that point forward, he considered himself to be a prophet whose mission was to usher in a new age of spirituality through which people – both individually and culturally – could become reborn and renewed in accordance with their inherent potential.

In other words, he believed he was the spiritual core around which an elite would form. Together they would develop their intuitive capacities for grasping essential truths concerning the nature of Being/Reality and, then, they would use their insights to construct a utopian philosophy of life (Lebensphilosophie) to which they would initiate others.

Consequently, in many respect, Jungian psychology – that is, analytical psychology -- is an elaborate mythology. Moreover, the persona of Jung plays the role of a key archetypal symbol at the heart of that mythology.

At the heart of this mythology is worship of the Sun that is a symbol for the God within each of us ... the source of life, light, and understanding -- and there are many symbols other than the Sun that represent the same idea. The hero becomes initiated into ancient spiritual mysteries, and, then, sacrifices himself – thus, the image of an Aryan Christ in Jung’s aforementioned December 1913 dream – in order to gain access to the primordial images that directly connect human beings with their ontological or existential Ground and, thereby, provide them with an opportunity to become a realized God-like figure.

One of the key concepts in the Jungian perspective involves the notion of an archetype, but this idea did not begin with Dr. Jung. In part, the archetype concept sprang from the work of Richard Owen, a renowned morphologist of the nineteenth century who was searching for the “Urtyp” or the primordial forms that governed the dynamics to which each species gave expression.

Prior to Owen, however, Johann Goethe already had introduced the idea of a science of forms – i.e., morphology – in the early 1800s. Moreover, Goethe’s approach to primordial forms was not restricted to biological organisms but extended into the realm of images, or “Urbild,” that constituted transcendent, eternal forces capable of shaping the natural world, including human beings, in fundamental ways.

‘Urtyp’ and ‘Urbild’ played important roles in the natural philosophy that was developed during the nineteenth century by, among others, Johann Goethe, Carl Carus, Richard Owen, and F.W.J. Schelling. Such investigators believed that human beings possessed a capacity for intuiting the primordial forces at work in the universe, and when that capacity was nurtured in the right way, the foregoing capacity became active and enabled a person to grasp the nature of Being/Reality.

Thus, Dr. Jung’s use of the idea of archetypes was rooted in a conceptual tradition of Romantic vitalism that came to prominence during the nineteenth century. That strain of natural philosophy was also the source of Dr. Jung’s idea of “active imagination” that involved a process of meditation (a means of accessing one’s intuitive capacities)

that was intended to bring forth primordial contents of the unconscious in the form of images, dreams, and fantasies through which an individual sought individuation by integrating different, often opposing dimensions of personality.

Another one of the philosophical/religious currents that ran through the times and culture in which Carl Jung grew up was that of Friedrich Nietzsche – especially the Dionysian, trans-rational tendencies within the later Nietzsche that were willing to stand in opposition to tradition and authority in order to be able to give expression to one's capacity for creativity and continuous renewal. Inherent in the foregoing tendency was the belief that the way to renewal would be led by the *übermensch* ... individuals, such as Goethe, who already had succeeded in casting off the shackles of various forms of authority (e.g., religious, cultural, academic, philosophical, and political) and, therefore, were capable of showing others how to accomplish the same form of liberation and renewal. Dr. Jung's writings are replete with quotes from, and references to, Nietzsche.

Carl Jung lived during a time in which there were many new elements within politics, art, literature, philosophy, and music that were surfacing. Issues involving sexuality, evolution, mediums, trances, mesmerism, positivism, mysticism, paganism, Volk-religion, and theosophy were set against an array of established values as the currents of modernity encountered the currents of traditional approaches to life, and people were caught between the dynamic push of progress and the static pull of traditional, conservative inclinations. Jung also grew up during a time when scholarship that was directed toward exploring the nature of the historical Jesus was generating a great deal of skepticism toward Christianity in particular, if not religion in general (Nietzsche was just one individual who had been deeply affected by that research).

In addition to the work of Nietzsche, Carl Jung was also deeply influenced by the writings of Ernst Haeckel, a zoologist, who, among other things, had beat Charles Darwin to the punch – and Darwin acknowledged this priority -- with respect to the idea that human beings were descended from simian ancestors. Haeckel also originated the notion that “ontogeny recapitulates phylogeny” – that is, the biological

development of any given human being tends to replay the evolutionary history of human beings in general.

The latter “Biogenetic Law” – i.e., ‘ontogeny recapitulates phylogeny’ – became part of a natural, pantheistic religion (termed Monism ... the integration of matter and spirit) that Haeckel constructed in which God’s presence is disclosed through every facet of manifested Being/Reality. Science became the means through which to engage and come to know Divinity.

Haeckel’s Monism – as was also true of Nietzsche’s work – constituted a rejection of Christianity. It was one of many alternative responses to traditional forms of religion that arose in the late nineteenth and early twentieth century and focused on some form of natural religion or natural philosophy.

Dr. Jung was greatly influenced by Haeckel’s idea that human beings not only had a history of biological evolution but, as well, there was a phylogeny of the soul that needed to be taken into consideration. The unconscious – in the form of dreams and fantasies -- was the phenomenological gateway to the residues of that process of phylogeny.

Through the unconscious, Dr. Jung believed that it was possible to gain access to the realm of pagan traditions that existed prior to, or independently of, the rise of Christianity. In fact, Dr. Jung felt that Christianity constituted an obfuscation and distortion of such pagan themes and primordial forces.

A common element in many of the challenges to traditional, organized religion that arose in the nineteenth and twentieth centuries (e.g., Romantic forms of natural religion, Haeckel’s Monism, and Nietzsche’s philosophy) involved a quest for fundamental forms of renewal by re-establishing contact with the primordial, archetypal forces of Being/Reality. The ideas of Carl Jung resonated deeply with that sort of quest.

All of the foregoing traditions were seeking sources of spiritual inspiration that were independent of the Christian tradition. According to Richard Noll, one of the primary sources of extra-Christian spiritual inspiration for Dr. Jung were the works of G.R.S. Mead whose writings helped introduce Jung to Hermetic, Gnostic and Mithraic teachings, and, in the process, provided him with considerable material on which to

reflect in conjunction with his ideas about the possible roles that archetypes and the collective unconscious might play in the lives of human beings when accessed through the process of active imagination during a person's project of individuation during the second half of life.

By the time that Dr. Jung established the Psychology Club in 1916, he had begun to weave together strands of evolution, heredity, vitalism, Romanticism, ancient pagan religious traditions, mythology, spiritualism, occultism, Hermetic traditions, and Gnosticism into an integrated method for exploring and interpreting the nature of the relationship through which Dr. Jung believed that individuals were linked to Being/Reality. Jung was convinced that he had put together a system that not only would enable human beings to struggle toward having essential contact with the God/Sun within, but, as well, had devised a means that also offered individuals an opportunity to contact the dead ... indeed, following the founding of the Psychology Club in 1916, he often referred to the collective unconscious as the 'Land of the Dead'.

Eventually, Carl Jung rejected the form of Christianity that he – at least nominally – had accepted during the early part of his life. Among other things, he felt that God was not some transcendent Being as many Protestants considered God to be, but, instead, Dr. Jung felt that God was a palpable mystery that existed at the core of a human being.

Although Carl Jung completed medical training around the turn of the century (1900-1901), and, therefore, was well schooled in many aspects of the science of his day, over the course of his career he moved away from the mechanistic ideas that often dominated the world of science during his lifetime. Instead, he was committed to the idea of vitalism ... that is, a perspective that alluded to an elusive life-principle that could not be reduced to physics and chemistry and which he referred to as "soul".

The sea voyage that took place in 1908 when Carl Jung and Sigmund Freud traveled to America together and analyzed one another's dreams during the journey gave birth to the beginning of an ideological schism between Freud and Jung. Another set of events that began in 1908 also had a deep effect on the ideas and behavior of Dr. Jung, and these events involved his relationship with Otto Gross, a controversial individual from a respected family in Austria.

Gross was an avid promoter of Friedrich Nietzsche's teachings. In addition, politically speaking, he was interested in re-shaping German society and engaged such matters through an allegedly anarchistic perspective ... although anarchism means different things to different people.

Gross also was a physician and psychoanalyst. Initially, Sigmund Freud was quite impressed with the brilliance exhibited by Gross in, among other ways, some of his writings on psychoanalysis, but as far as the advancement and spread of psychoanalysis were concerned, Freud came to see Dr. Gross as being more of a problem than a possible asset.

One reason for Freud's rejection of Gross had to do with the latter's predilection toward – if not craving for -- morphine and cocaine. On a number of occasions, those addictions had landed Dr. Gross in psychiatric facilities – such as the Burghölzli in Zurich, and on one of these stays, Gross was assigned to Dr. Jung as a patient.

When the two individuals met, Dr. Jung was a relatively conservative, middle-class, Christian. Dr. Gross, on the other hand, was not only an addict but, as well, he was an individual who was actively committed to pursuing a licentious life-style ... indeed, he was rather infamous for his ability to persuade people to abandon sexual proprieties and engage in an array of sexual liaisons – including orgies – free from any sense of shame or guilt.

Although Dr. Gross was the client and Dr. Jung was the therapist, the two often switched positions during sessions that lasted twelve hours or more. By the time that Dr. Gross escaped from the hospital in order to re-engage his various addictions, Carl Jung had undergone a rather substantial transformation in perspective.

Prior to interacting with Otto Gross as a patient or client, the philosophy of Nietzsche played a large role in Jung's understanding of things. However, Gross not only was conceptually influenced by Nietzsche but, as well, he was actively engaged in putting such teachings into practice.

During many, lengthy sessions, Otto Gross induced Carl Jung to abandon his previous commitment to bourgeois, Christian ideas concerning, among other things, sexuality. As a result, from that point

forward, Jung became more licentious in his behavior – a tendency that was active throughout the subsequent years of his life.

During the foregoing transitional period in Jung's life, he had become immersed in the field of mythology. One of the themes that is given prominence in certain approaches to mythology – e.g., the work of Bachofen who was from Basel, Switzerland and promulgated his ideas during the mid-to-late nineteenth century – concerned the idea that early cultures were matriarchal rather than patriarchal in character and in such societies, polygamous arrangements often played a central role. Consequently, the mythology that Jung was engaged in reading at the time that Otto Gross was a patient was also being reinforced by the tremendous influence that Gross's charismatic and brilliant personality was having on Jung's ideas about, among other things, issues of sexuality and Christianity.

According to Richard Noll, Carl Jung subsequently borrowed elements from Ernst Haeckel's ideas concerning the phylogeny of the soul and combined the latter notion with themes of: Vitalism, Bachofen's matriarchal-based mythology, as well as strands drawn from the Earth Mother cult in order to construct a theory of the unconscious in which the libido undergoes developmental changes. For Jung, the libido – as an eternal life force -- is tied to the presence of gods and is rooted in the collective past of human beings

By organizing his perspective in the foregoing manner, Dr. Jung has created an understanding of the unconscious that is larger than a single individual. Individuals are tied to the Divine and to their collective human past through the unconscious.

Apropos to the foregoing considerations, Dr. Jung interprets the hero myth as giving expression to the holy longing of the individual for the lost mother and most essential reservoir of human existence. The hero represents the unconscious in search of an end to its suffering state of exile from its Source ... a search that carries the hope of a state of rebirth and renewal that supposedly comes through reunion with that Source.

Dr. Noll considers Jungian analytical psychology to be a cult in the sense that it attempts to induce individuals who are seeking their essential selves to come under the influence of a charismatic prophet in the form of Jung, or his acolytes, who – allegedly -- has (have) been

initiated into the mysteries of the unconscious. Seekers are taught the technique of introversion or active imagination by the elite group of leaders that allegedly permits seekers to journey into the deepest recesses of the unconscious – the realm of the mothers – commune with the forces that are present there and, then, are assisted by elite leaders to resurface in an redeemed state of renewal and rebirth ... that is, a completed condition of individuation.

However, there is no guarantee of success for the hero. In fact, one of the possibilities is that an individual's libido might be incapable of freeing itself from the realm of the mothers and, in the process, one's sense of self becomes annihilated, resulting in a psychotic state of one kind or another.

Whereas Sigmund Freud envisioned psychoanalysis as a means of analyzing the phenomenological products of biological processes, as well as a means of demonstrating how such products revealed different principles concerning the nature of biological development over the course of life, Carl Jung considered psychoanalysis to be a method for replacing Christianity – at least as generally understood in Protestant Europe -- that enabled an individual to follow myths back to their Source and, thereby, provided human beings with an opportunity to integrate different aspects of personality, as well as a means through which to experience rebirth and renewal in their souls. When Freud and Jung exchanged letters concerning such matters in 1910, Freud rebuffed Jung, indicating that Freud was not interested in founding a religion.

After Freud and Jung finally parted ways (approximately 1912-1913) concerning the nature and function of psychoanalysis, Dr. Jung began to publically promote the idea that psychoanalysis – that is, analytical psychology – offered human beings a form of redemption. However, in order to take advantage of that possibility, people had to rid themselves of their illusions concerning culture and religion.

Neuroses give expression to failed attempts on the part of individuals with respect to the process of individuation. In other words, when people were unsuccessful in their attempts to become integrated, whole human beings, neuroses would arise.

Analytical psychology was Dr. Jung's method for engaging such neuroses and assisting individuals to heal their souls. Analytical psychology was a method that helped people to excavate the material

within the unconscious and learn how to differentiate between dross metals and real gold.

In order to succeed in such a method, an individual had to be willing to make sacrifices. According to Dr. Jung, among the sacrifices a person needed to make was the discarding of any illusions and delusions one might harbor concerning Christianity and sexual morality.

From a Freudian perspective, Jung's analytical psychology might be considered to be little more than an extensive process of wish fulfillment. In other words, after being deeply affected by Otto Gross's licentious, anarchistic, Nietzschean perspective, Carl Jung wanted to be able to indulge himself sexually but be able to do so in a way that was free of any sense of guilt or shame and, therefore, Jung invented a conceptual framework – namely, analytical psychology -- that would help him to fulfill his underlying sexual wishes in the desired manner, and he promulgated that system of wish fulfillment to others.

Of course, Dr. Jung didn't just want to indulge his sexual desires. He also wanted to redeem his soul by becoming one with Divinity. Consequently, he proposed the idea that one could become redeemed spiritually by taking an inward journey to the Land of the Dead (or the realm of the mothers) and, in the process, become a hero by making contact with the Divine that is within every human being and, thereby, achieve rebirth by sacrificing one's delusions and delusions concerning the nature of Being/Reality.

In 1914, both Dr. Freud and his colleague, Ernest Jones, criticized Jung's foregoing philosophical framework. The focus of their comments were directed toward the issue of narcissism, but, to a certain extent, such comments were made – both directly and indirectly – with Jung's God Complex in mind.

Dr. Jung, of course, did not consider himself to be self-indulgent narcissist who had become lost in a God complex of his own making. Instead, he believed himself to be a prophet who was working for the good of humankind by showing it the way to redemption, renewal, rebirth, and self-realization by making contact with the presence of the Divine within every human being through the techniques of analytical psychology.

Was Carl Jung a deluded, narcissistic, self-indulgent egomaniac who had convinced himself that he was a modern-day prophet who had made contact with the Divine? Had Carl Jung become entangled in a gigantic web of sexual wish fulfillment that he sought to justify through his ideas concerning archetypes, the collective unconscious, the shadow, mythology, Romanticism, the soul, Gnosticism, Hermetic teachings, matriarchal traditions, mysticism, spiritualism, as well as völkisch beliefs concerning Teutonic Gods?

Whatever the actual nature of Carl Jung's condition and purposes, he considered his own anomalous experiences, as well as the anomalous experience of others, to constitute evidence that served to substantiate his ideas. His faith in the truth of his perspective was based on such data.

A great deal of Dr. Jung's perspective concerning the idea of the collective unconscious and the supposedly universal nature of his ideas is based on a very small sampling of case studies compiled by Dr. Jung. Furthermore, and unfortunately, despite Dr. Jung's claims to the contrary, it is often difficult to determine whether, or not, the individuals that were involved in his case studies actually had experienced, for the first time, certain myths and symbols through their own inward journey or whether the experiences of those individuals might have been contaminated by the religious, mystical, spiritualistic, philosophical, theosophical, and mythological ideas that were in the air (culturally, literarily, educationally, and popularly) during the late 1800s as well as during the first several decades of the twentieth century.

In fact, Jung's accounts of his own encounters with the forces of the unconscious might actually just be a function of the process of confabulation. In other words, Dr. Jung had been exposed extensively – with respect to literature, discussions, and lectures – to the idea of mythology, esoteric traditions, Gnosticism, Hermetic traditions, spiritualism, mysticism, Romanticism, vitalism, and so on. Consequently, one can't be sure whether, or not, Dr. Jung's reports concerning his own experiences during his inward journeys weren't the confabulated concoctions of his overly active imagination (and ambitions) ... constructions that he sought to pass off – perhaps in all sincerity – as actual encounters with the primordial realms of the unconscious when, in truth, those contents might only have been the experiences of a person whose seeking was being shaped by what he had read or heard

from a variety of other sources ... in other words, what Dr. Jung discovered during his inward journeys was nothing other than the unpacking of the hermeneutical baggage that he had brought with him during those journeys and which consisted of ideas, images, symbols, myths, and so on that were derived from material he had read, or conversations he had, or lectures that he attended, or speculations that he had concerning such matters.

After all is said and done, there are several questions that must be addressed in conjunction with the work of Carl Jung. First, one must consider whether, or not, he was sincere in his search for the truth concerning the nature of the relationship between himself and Being/Reality, or whether Dr. Jung's motives in this regard might have been corrupted by his desire to justify his own wish to pursue a licentious lifestyle without feeling guilty or ashamed concerning such behavior.

A second question – and this question is applicable to both Jungian Vision 1 and Jungian Vision 2 that have been outlined in this chapter – revolves about the issue of whether, or not, Dr. Jung is right or correct with respect to his ideas concerning the nature of the relationship between human beings and Being/Right. Irrespective of whether one engages Carl Jung through the filters of Vision 1 or Vision 2, if one is searching for the truth concerning the nature of the relationship between human beings and Being/Reality, then one would like to have some sense of whether, or not, the work of Carl Jung can assist one in such a quest.

Dr. Jung took a lifetime to develop his ideas, and if one were to dedicate oneself to those ideas, then, one likely might have to spend a lifetime trying to: Explore, confirm (where possible), as well as apply such ideas within the context of one's life. If Carl Jung is right about things, then all would be well and good, but if he is wrong, then, one might waste one's life chasing delusions and illusions.

One term that might be apropos concerning the foregoing possibilities – and many other possibilities as well -- is the notion of caveat emptor. This means that the responsibility for determining the quality of that which one is buying rests with the individual who is doing the buying.

There might be a great deal at stake surrounding the choices one makes during one's search for the truth concerning the nature of one's relationship with Being/Reality. Scientifically, philosophically, religiously, politically, ethically, and mythologically there are so many candidates to consider, and, yet, the time one has within to which make one's choices is very limited.

Chapter 3: Being and Becoming

According to Harry Stack Sullivan:

"Experience is anything lived, undergone or the like."¹

However he quickly emphasizes that experience is not synonymous with the event experienced. In other words, there is a difference between the event in which one participated and the structural organizational character of the structuring processes of an individual that permeates such participation. For example:

"when I look at and see a frog, my experience of the frog ... my, perception of the frog ... is not the frog." ²

This perceptual experience involves interpolation and extrapolation between reality (whatever it might be) and the mind's contents. The mind's contents are immersed in the organism's participation in three sorts of experiential processes. Sullivan refers to these processes as: prototaxic; parataxic; and syntactic.

The earliest form of experience is in the prototaxic mode. This rudimentary form of experience gives expression to a discrete series of undifferentiated, momentary states, without serial connection, and with only vague prehensions of, or awareness of, earlier and later events and states. Perhaps, the most colorful way to describe this mode of experience is in terms of a lighted Christmas tree.

Imagine a Christmas tree on which there are a number of lights, each of which flicks on and off according to its own temporal manner. At any given moment, there are a certain number of lights that are on. If each lighted bulb represented a different zone of interaction upon which a stimulus was impinging, then the number of lights in any discrete experience would be the basic prototaxic experience.

In terms of prototaxic experience, the infant has certain recurrent, physiochemical needs, the felt aspect of which, an adult might term 'hunger', thirst, and so on. These recurrent needs create tension in the infant, and the infant feels discomfort in the presence of that tension. If

one were to plot a gradient of possibilities – extending from a state of maximum well-being (euphoria) to a state of minimum wellbeing (terror) -- one could describe such tension in terms of its reduction in the infant's level of 'euphoria' (Sullivan's notion). In other words, the recurrent biologic disequilibrium brought about by the infant's relationship to the physiochemical environment causes tension, which lowers the level of well-being. It is important to note, however, that such disequilibrations have a definite reference point (i.e., source). Whether a given tension consists of a lack of water, oxygen, or body temperature, the tension is directed toward a particular need.

Now, tension not only has a felt aspect, it also has an aspect that might be termed a 'potentiality for action'. In other words, tension has a potentiality for the transformation of energy that can modify biological disequilibrium and bring about a state of equilibrium once again. Once a tension of need exists, the infant will manifest activity (transformation of energy) to reduce the tension and restore the lost 'euphoria' or sense of well-being.

At this point, the first of several postulates appears within Sullivan's theoretical system. When the mothering one observes an infant's activity (say, crying-when-hungry) that is the result of the felt aspect of tension, the mothering-one feels tension that might be termed "tenderness". The feeling of tenderness directs the mothering-one's activity toward the relief of the infant's needs.

While this tender activity is manifested, the infant feels, -- prototaxically -- 'tender behavior'. That is, the feeling of undergoing tender behavior -- like other feelings at this stage -- is only an undifferentiated, momentary state, unconnected with any other event or state.

It is from such experiences that an infant eventually develops the characteristics of a general need for tenderness ... in other words, a general need for the cooperation of another person with respect to an infant's communal existence. Sullivan terms this the theorem of the "need for tenderness".

When tension exists in an infant and that tension is relaxed or reduced by the mothering-one's tender activity, satisfaction results. In terms of prototaxic experience, the infant no longer feels the tension of need. The child feels the return of a relatively high state of euphoria or

sense of well-being. Indeed, this unconnected alternation of tensional need and satisfaction constitutes, to a great extent, experience in the prototaxic mode of experience. Even in early infancy, a need begins to obtain its meaning from the on-rush of energy transformations that lend to the satisfaction of a given need. In Sullivan's terms:

"The need --- that is, the felt discomfort of the disequilibrium, the specific tensional reduction of euphoria --- begins to be differentiated in terms of the direction toward its relief, which amounts to increasingly clear foresight of relief by appropriate action."³

The employment of foresight in using appropriate methods to satisfy needs develops into what Sullivan calls the "foresight function". Furthermore, to the extent that experience effects a change in an infant's functional activity, such experience must be two-pronged -- it must involve not only foresight but recall, as well. Experience must relate not only to 'the foresight of relief by appropriate action', but experience must relate back to the zone(s) of interaction to which such experience was initially connected.

The tension of need, however, is not the only cause of reduction in the infant's euphoria. Anxiety⁴ can also cause such reductions. Yet, unlike other needs, anxiety is indeterminately related to an infant's physiochemical environment.

As previously indicated, tension of needs are directed toward a specific source. Tension of anxiety, on the other hand, is, for the infant, sourceless or non-specific.

According to Sullivan, anxiety is empathically transferred from the mothering-one (this term refers to whoever might be attending the infant's needs) to the infant ... that is, the infant is, in some unspecified manner, able to feel discomfort of whatever sense of anxiety might be present in the mothering-one. Due:

" ... to the peculiar emotional linkage that subtends the relationship of the infant with other significant people --- the mother or the nurse"⁵

an infant might feel a strange tension without any accompanying physiochemical need. Thus, the tension of anxiety, as expressed early in the prototaxic mode, is distinguished from other reductions in euphoria by the absence of a specific source. It simply exists in the infant.

This leads to Sullivan's second postulate, namely:

"The tension of anxiety, when present in the mothering-one, induces anxiety in the infant."⁶

When the foregoing sort of anxiety-laden tension is reduced in an infant – and this, first, requires anxiety to be reduced in the mothering-one – then, according to Sullivan, this kind of reduction process does not result in satisfaction but in "interpersonal-security". This simply means that anxiety is a function of the infant's necessary, interpersonal, communal existence' ... in other words, in order for anxiety in an infant to be lessened, a 'significant other' needs to cooperate in helping to relieve that infant's needs.

It is almost as if such a child sensed (but did not understand) any emotional change that might be brought about by tension in the mothering-one and that potentially might have the capacity to interfere with cooperative behavior between the infant and the mothering-one or significant other. This analogy is somewhat misleading, however.

Prototaxically speaking, an infant is unable to connect the anxiety that it feels with the mothering-one that induced it. Moreover, an infant is not developmentally able or ready to connect logically the anxiety in the mothering-one with the possible impairment of future cooperation that such anxiety might imply to an adult. Perhaps, it is more accurate to say that in such circumstances an infant might 'sense' or 'feel' that something is wrong, without knowing what that something is.

Originally, if an infant feels a tension of need, it could evoke, say, the nipple-in-lips situation by crying-when hungry. Crying-when-hungry (this expression is used by Sullivan to denote the infant's experiential perspective and, for the infant, is distinct from 'crying-

when-cold') causes the mother to manifest tenderness. In this instance such tenderness takes the form of presenting the nipple to the infant's oral zone of interaction. The infant's tension tends to integrate the nipple-in-lips situation and to maintain this integrated situation until the tension no longer exists --- at which point the infant's need is satisfied or resolved.

Now, imagine an instance in which the mother becomes anxious while feeding the infant. Also suppose that, as a result of the presence of such anxiety, an infant's need has not been brought to resolution.

The felt aspect of anxiety for an infant is such that this experience tends to cause the child to resist any sort of integrated solution that is directed toward resolving a physiochemical need. As far as the infant is concerned, the present nipple-in-lips situation is no longer the satisfactory nipple-in-lips situation experienced in the past.

Something is wrong. Anxiety modified the situation. The infant's transformation of energy -- i.e., sucking -- ceases.

To this extent, anxiety is disruptive and opposes a tension of need rather than reduces it. The infant is so preoccupied with the felt aspect of a tension of anxiety that significant needs get pushed into the background.

There is still a need for food. The infant is still hungry. The nipple of the anxious mother is still capable of providing milk.

Yet, the interpersonal situation has disintegrated. Functional activity has ceased not because the infant's needs have been resolved, but, instead, functional activity has ceased because anxiety prevented such activity from continuing toward resolution.

Under such circumstances, an infant's predicament is quite complicated. Not only is the significant need unresolved and unattended, but as well, the infant also feels a discomfiture from anxiety that is quite unmanageable.

For the infant, anxiety is non-specific as to source. The child's rudimentary functions of recall and foresight cannot be relied upon to point the way to appropriate action for the relief of anxiety. Thus, there is no experiential foundation for any differentiation of action appropriate to the relief of anxiety.

The infant's only resort is to call out for tenderness from the mothering-one. However, since the mothering-one's anxiety is what initiated this cycle of events, the infant has no apparent and ready way to reduce the felt discomfort of anxiety.

Obviously, rejection of the nipple is not an appropriate way for an infant to deal with such a situation. This act neither reduces the tension of need nor does it reduce the tension of anxiety.

The infant, however, does not understand this. The child is not able to differentiate the irrelevance of rejecting the nipple in the present instance from instances in which it is quite appropriate to reject the nipple-in-lips situation ... for example, in cases when the nipple provides no milk.

The reason for this state of affairs is fairly straightforward. Recall and foresight are both necessary to develop the ability to differentiate among tensional reductions in euphoria ... necessary in terms of grasping appropriately and adequately directed activity for the relief of such tension. Anything that interferes with recall or foresight impairs the development of such a differentiating ability.

Therefore, the discomfort of anxiety tends to camouflage the very aspects of experience necessary for the acquisition of recall and related foresight. Thus, anxiety not only opposes the satisfaction of needs, it interferes with the infant's experiential development ... as related to recall and foresight.

To the extent that an infant can differentiate between 'good nipples' (i.e., nipples that provide nourishment) and 'useless nipples' (i.e., nipples that provide no nourishment), the infant might have acquired a collection of useful experiences. Such accumulation of experience enables an infant to begin 'searching' activity when the present nipple is inadequate. Furthermore, an infant, to varying degrees, might be able to modify transformations of energy to reflect the characteristics of such a situation.

To the extent that anxiety interferes with the foregoing processes, development becomes sluggish. In many ways, one of the factors that affect an infant's rate of development is a function of the amount of felt anxiety.

The experience of, say, hunger, can be said to envelop the functions of recall and foresight. Recall relates back to previous instances of satisfaction (along with the 'coloring' that accompanied that experience), and foresight relates forward to anticipated satisfaction in new instances of hunger (along with projecting certain anticipated 'coloring' onto the new situation).

Satisfaction-giving activity achieves a foreseen goal. In the current scenario, the goal is satisfaction of hunger.

Eventually, the tactile and thermal sentience in the oral region, as well as visual and other sentience involved in such activity, come to represent a 'sign' that satisfaction of hunger will, or will not, follow shortly. As the infant's ability to identify tactile, visual, and auditory sentience -- in association with satisfaction-giving and non-satisfaction-giving situations -- grows, an infant becomes able to differentiate between types of signs. He is able to attach interpretations to various discriminations effected by the different receptors that become signs and categories of signs.

Sullivan terms such signs "symbols". For instance, a certain facial expression of the mothering-one might invariably appear concurrently with other factors (such as posture, sound of voice, etc.). In time, each of these might indicate that tender behavior is forthcoming -- which, in turn, indicates the likelihood of the satisfaction of some need.

It is during this stage of development that an infant is able to generalize experience marked with the characteristics of several zones of interaction as events pertaining to one pattern of sentience rather than another. In effect, the infant has gathered that which is left over after all the differences have been noted.

When the infant has begun to live within this sort of elaborated experience he has entered what Sullivan calls a 'parataxic mode' of experience. Yet, this does not mean that such an individual has completely graduated from the more-primitive prototaxic mode of experience.

One is consistently bombarded by stimuli that are felt but not elaborated (though in time they could be elaborated upon). Thus, one can simultaneously exist in both modes of experience – that is, prototaxically and parataxically.

Perhaps, the analogy of the Christmas tree -- mentioned earlier in conjunction with the prototaxic mode of experience -- will help to clarify matters. If one will remember, prototaxic experience was designated as the number of lighted bulbs at any given moment. Parataxic experience might be the awareness that such lighted bulbs not only form a pattern but come to mean something other than, or beyond, the felt experience.

For example, an individual might realize that when a pattern of green, red and amber appear, it is a sign foreshadowing the appearance of another pattern of light -- say, orange and green. This latter pattern of lights might come to mean that "Merry Christmas" is flashing on for the duration of time that this pattern exists.

Thus, the first pattern of lights becomes a symbol indicating that a further sign is anticipated -- namely, the second pattern of lights. This, in turn, indicates that "Merry Christmas" will normally follow. Furthermore, one might say that the color of the lights within such a framework of lights marked that pattern with a recognizable characteristic ... in other words, gave it a phenomenological 'coloring' in more than just a sensory sense.

Sullivan's third postulate (the first two were, respectively, the postulated "need for tenderness" and the belief that anxiety in the mothering-one induced anxiety in the infant) is called the "theorem of reciprocal emotion".

"Integration in an interpersonal situation is a reciprocal process in which (1) complementary needs are resolved, or aggravated; (2) reciprocal patterns of activity are developed or disintegrated; and (3) foresight of satisfaction, or rebuff, of similar needs is facilitated."⁷

More simply, socialization of the child has begun. In childhood the mothering-one must begin to carry out her social responsibilities. These tend to interfere with the kind of tenderness manifested during infancy.

Consequently, although the child might need tender behavior, this need does not necessitate forthcoming reciprocal activity from the mothering one. The form that the mothering-one's behavior will assume might depend on the nature of the need and social expectations concerning a child's relationship to that need.

In infancy an individual is biologically helpless. During childhood this is, to a certain extent, still true. Moreover, in childhood the individual continues to be psychologically helpless. As Mullahy points out:

"The young one must ... accept the attitudes and codes of behavior of the significant others, not only because he depends on them for life itself but because he has no, or only incipient, ability to think, and no, or only rudimentary, social experience. The question of their validity cannot readily occur to him ... What happens, therefore, is neither right nor wrong; fitting nor unfitting; it just is. It happens"⁸

This means that a child's experience with respect to the process of socialization will be colored, in part, by the feelings, beliefs, and idiosyncrasies of the mothering-one or significant other. Although this is equally true for infancy, the impact of this truth tends to become more emphatic in childhood because a child is able to elaborate experience parataxically, whereas an infant only could engage stimuli prototaxically. Socialization, perhaps more than any other single factor, reveals the full gamut of the mothering-one's emotion beliefs and personal quirks.

As one proceeds into childhood, disapproval:

"... is felt by the child through the same emphatic linkage that has been so conspicuous in infancy. Gradually, he has come to perceive disapproving expressions of the mother; he has felt the disapproval that he was not able to comprehend through the ordinary sensory channels.

"This process, coupled with the prohibitions and privations that he must suffer in his education, sets off the experiences that he has in this education and gives them a peculiar coloring of discomfort, neither pain nor fear but discomfort of another kind ... The peculiar discomfort is the basis of what we ultimately refer to as anxiety."⁹

Anxiety is peculiarly tied to the interpersonal communion between the individual and a significant other. The nature of this peculiarity is that the significant other is often anxious, and this

anxiety is quite contagious (via empathy). This distinction becomes both clearer and more significant in relation to the notion of the self system.

Of considerable importance in Sullivan's theory, is the concept of 'dynamism'. This concept is intimately woven into the fabric of one of the prevalent scientific theories of modern times -- namely, that matter is a representation of energy. Moreover, activity represents the dynamic nature of energy.

Living organisms -- in both their microscopic (cellular) and macroscopic (multi-cellular) forms -- are dynamisms. The individual cells are organized into systems of dynamisms such as the heart, liver, kidneys, etc, that are, in turn, organized into a total encompassing dynamism of a sovereign organism. This totality, so to speak, is an integration of the internal dynamisms (such as heart, kidneys, and so on), the zonal dynamisms (such as the oral region, anal region, genital region, and so on), and the experience that relates to these various kinds of dynamisms.

Sullivan defines dynamism as:

"... the relatively enduring pattern of energy transformations which recurrently characterize the organism in its duration as a living organism."¹⁰

The key word in the foregoing definition is 'pattern'.

"A pattern is the envelope of insignificant, particular differences."¹¹

In other words, a pattern is a category that has enough characteristics in common with a given definition to enable one to identify the pattern as an instance of that definition --- despite the differences that might exist between the exemplar and such a definition.

For example, an 'apple' might have certain definitional characteristics of size, shape, color, and so on. However, a given specimen might vary within fairly wide limits from those definitional

characteristics and still not fall outside the boundaries of such a definitional pattern.

When a specimen does fall outside the boundaries of this definitional pattern, it is no longer an apple. It is some other pattern (an orange, for example).

In the study of interpersonal behavior, the most important dynamisms are the relatively enduring patterns of energy transformations that are characteristic of interpersonal relations. Sullivan believes that it is inaccurate to describe behavior as:

"... person-in-isolation-manifesting-this-or-that-tendency-or-drive."¹²

According to Sullivan, a more accurate description would be in terms of a situation integrated by two or more people. The relationship between the mothering-one and the infant is an 'exemplary instance'.

Interpersonal relations involve dynamisms focusing on the episodic tensions that manifest themselves as integrating or disjunctive tendencies. Probably, the most important of these dynamisms is the anti-anxiety system -- i.e., the self-system.

The primary job of this system is the maintenance of interpersonal security ... that is, the avoidance of anxiety. Moreover, the origins of this system extend back to the first encounters with the felt aspect of anxiety. This involves the initial struggles with the unmanageable feeling of discomfort. As noted earlier, the phenomenology of anxiety is neither one of 'pain' nor a tension of need but has, rather, a coloring all of its own ... often with overtones of what Sullivan calls "uncanny emotion", such as "awe"; "dread", "loathing", etc.

Sullivan characterizes the infant's prehension of a typical interpersonal situation in the following way:

"The nipple-in-lips is one of the first examples of an interpersonal situation and is integrated and maintained by the infant's need for water and food and the mother's need to give tenderness in this connection ... The infant's personification of the good mother is the

prehended pattern of her participation in recurrent nursing situations and integrations of other needful sorts that have been resolved by satisfaction. She -- the infant's personification of the good mother -- symbolizes ... the integration, maintenance, and resolution of situations that include her, through appropriate and adequate activity on the infant's part.

"This personification is not the 'real' mother --- a particular living being considered as an entity. It is an elaborate organization of the infant's experience. The infant's personification of the mother is ... elaborated out of what has occurred in the infant's relation to what one might call the 'real' mother in satisfaction-giving integrations with her."¹³

Just as there is a personification of the good mother, there is also a personification of the 'bad mother' ... the mother who is anxious. Furthermore, the beginning of the self-system involves rudimentary personifications of 'good-me' (somewhat organized experience in that satisfactions have been enhanced by rewarding increments of tenderness), 'bad-me' (crudely organized experience in which increasing degrees of anxiety are associated with behavior within the interpersonal relationship), and 'not-me' (very crude and very vague organization of experience associated with, and gradually evolving out of, situations involving intense anxiety).

These crude personifications of self, however, are not at all like so-called 'adult' notions of self. In the former case, such personifications form only a part of an individual's initial entry into the elaborating of experience that is to be incorporated into, what is later to become, the self-dynamism.

In other words, through the gradual elaboration of satisfaction-giving experiences and the development of discriminating capabilities that can detect slight increases of anxiety, there comes into being a 'secondary dynamism'. As such, this secondary dynamism does not focus on any particular zone of interaction (i.e., end station) ... rather, it envelops all the biological apparatus that are significant in the maintenance of interpersonal security.

One of the most striking features of the self-system is its 'inertia' ... its resistance to change. Unlike the dynamisms built around the tension of needs, the self-system did not evolve or develop out of interaction with the physiochemical universe.

Although the self-system depends on the material/physical universe, that system requires something in addition to a biological sustenance by the environment. It requires an interpersonal communal existence because it is the product of interpersonal relations.

Although the interpersonal situation often proves to be the nemesis of many individuals, it is also necessary for existence. The individual acknowledges this need, according to Sullivan, by developing a self- system that will allow one to interact somewhat with the interpersonal community despite the anxiety that might arise because of such interaction.

The underlying principle of the self-system is directed toward coping with situations in which one is confronted by anxiety. Sullivan terms it the "theorem of escape":

“the self-system from its nature ... its communal environmental factors, organization, and functional activity tends to escape influence which is incongruous with its current organization and functional activity.”¹⁴

The meaning of the foregoing theorem will become clearer if one reconsiders the developmental history of anxiety.

According to Sullivan, during infancy an individual acquires the discomfort of anxiety by induction from an anxious mothering-one. The nature of the discomfort pushes needs that coincide with the felt anxiety into the background. Thus, anxiety interferes with the resolution of needs.

Moreover, because the source of the anxiety is a mystery to the infant, important segments of information relevant to the formation of recall and foresight are blurred. Therefore, the structural features of the situations causing anxiety are not grasped by the infant. Thus, anxiety also interferes with the function of recall and foresight.

During childhood, an individual still acquires the felt aspects of anxiety through a process of induction. Again, the nature of the discomfort pushes significant needs into inattention and blurs the character of the situation surrounding the experience. However, beginning in late childhood and continuing into the juvenile stage of development, two classes of symbols are gradually differentiated by the individual.

The first class of symbols is comprised of those signs (disapproving gestures) that foreshadow further signs (mother's restriction of some activity of the child) that come to mean that some tension of need will go unresolved. With respect to the mother, very little, if any, anxiety exists coextensively with the disapproving gesture (for example, the disapproving gesture might have been in response to the child's exploration of his foot with his mouth). A great deal of anxiety is usually associated with the second class of symbols – for instance, such disapproving gestures might have been in response to a child's exploration of the genital area with his hand.

The child is eventually able to learn how to deal adequately with the class of disapproving gestures that are not linked with anxiety. More specifically, a child might have a particular tension of need. The child also has a general need for tenderness.

If the child disregards the initial symbol and continues to work toward resolution of the particular need, not only will the need not be satisfied, but the child will not receive any tender behavior from mother. Consequently, the child soon learns to modify his or her behavior in the direction of approved behavior in order to receive the reward of tender behavior. This is simply to say that the child's general need for tenderness is often stronger than any particular tension of need ... provided that the particular need does not endanger biological integrity (such as a need for food, water, etc.).

On the other hand, the child is not necessarily able to deal adequately with the class of disapproving gestures linked with anxiety. Anxiety continually interferes with the functions of recall and foresight involved with the useful elaboration of experience.

More importantly, however, the second class of disapproving gestures comes to signify that anxiety will be forthcoming. The

coextensive fact that the non-satisfaction of a particular need is not forthcoming is pushed into the background. It becomes insignificant.

In terms of learning, the situation is much different from those situations that are not linked with anxiety. The child is not thinking in terms of foregoing a particular need in order to gain tender behavior. He is thinking in terms of anxiety avoidance in which non-satisfaction of a need and the reward of tender behavior often are incidental factors.

Herein lays the meaning of Sullivan's theorem of escape. Most of the self-system's functional activity is directed toward either the relief from, or avoidance of, anxiety.

Any new experience within the interpersonal context that symbolically hints of anxiety will necessarily be incongruous with the self-system's current organization and functional activity. Therefore, such experience tends to be discarded or avoided.

The self-system is a function of the imperfect observations of the circumstances correlated with early and later instances of felt anxiety in interpersonal relations. It is an equilibrating force that attempts to resist any event that might disturb the basic inertia of an established pattern of interpersonal interaction. Moreover, it activates equilibrium mechanisms when such patterns do become disorganized.

Sullivan called these mechanisms "security operations". They are used to maintain the interpersonal security of the individual.

One of the major instruments in such operations is "selective inattention". The self-dynamism develops the ability to adjust 'focal awareness'. Consequently, disequilibrating factors tend to get excluded from conscious consideration.

Although there are adequate and appropriate uses of selective inattention, Sullivan also points out:

"Selective inattention is, more than any other of the inappropriate and inadequate performances of life, the classic means by which one does not profit from experience which falls within the area of one's particular handicap. One doesn't have the experience from which one might profit -- that is, although it occurs, one never notices what it

must mean; in fact, one never notices that a good deal of it has occurred at all.”¹⁵

In short, selective inattention is most deleterious when it opposes change that would improve the individual's successful interaction within the interpersonal situation.

The foregoing, by no means, represents all of Sullivan's ideas concerning development. It is only an introductory tour of the foundational level of an extensive theoretical network ... some aspects of which are more fully developed in these pages than are other facets of Sullivan's work. However, even when limited to the brief character of the present excursion, it is readily evident that a number of Sullivan's thoughts reflect or, at least implicitly acknowledge, the intellectual debt to Freud to which most of twentieth century psychology is heir.

With respect to Sullivan, this indebtedness is perhaps, most conspicuous in relation to his description of an individual's biological interaction with the physiochemical environment. Yet, despite such isomorphism, Sullivan has also attempted to journey into "those areas to which psychosexual considerations are not able to offer conceptual transportation easily". As indicated earlier, Sullivan's work is an attempt to transcend the essentially Freudian perspective of human behavior as consisting of: "... person-in-isolation manifesting-this-or-that-tendency-or-drives" and move toward emphasizing the importance of the interpersonal context.

Freud, of course, was acutely aware that the social environment blocked, punished, and frustrated many of these 'drives' and 'tendencies'. As a result, he had to contend with the enormous power of the social environment theoretically just as an individual has to deal with such forces developmentally. Erikson points out, however, that:

“The critical phases of life have been described in psychoanalysis primarily in terms of instincts and defenses, i.e., as 'typical danger situations ... Psychoanalysis has concerned itself more with the encroachment of psychosexual crises on psychosocial (and other)

functions than with the specific crisis created by the maturation of such function".¹⁶

Implicit in the above position is the germinating-seed of the psychosocial dimension. More specifically:

"Instead of emphasizing what social organizations denies the child, we wish to clarify what it might first grant to the infant, as it keeps him alive and as, in administering to his needs in a specific way, it seduces him to its particular lifestyle."¹⁷

Significantly, the "we" in the foregoing quote could just as well have referred to Sullivan (or Horney, Fromm, and a number of others), as it did to Erikson -- for the psychosocial dimension was the common denominator around which their theories revolved despite other theoretical differences among the various individuals who subscribed to a school of thought that emphasized the importance of psychosocial factors in developmental processes.

While in some instances the impact of psychosocial forces is not so much a case of seduction as it is a case of rape, Erickson tries to explore both the positive as well as negative aspects of the interaction between an individual and his or her social environment. Not only does sexual life begin at birth, but, as well, social life also begins at that same biological juncture point.

However, camouflaged within the change of theoretical emphasis (i.e., away from the psychosexual and toward the psychosocial) is the fact that the specter that haunted Freud remains, basically unchanged, to also haunt Sullivan¹⁸. The wording and phrasing have been altered, but the particular conceptual problem in question has not been eliminated -- namely, little more than a token gesture has been offered to account for, or explain, the development of cognitive functioning and how such processes relate to and affect general behavior over time.

Sullivan speaks of: an interpolation between reality and the mind's content; a foresight function; differentiation of action appropriate to

the relief of anxiety; signs of 'categories of signs' (i.e., symbols); elaborated experience; learning, and security operations.

Yet nowhere does one find a concomitant exploration of the manner in which the brain and/or the mind accomplishes any of this. One is often told what is done, without being told how it is all possible.

Naturally, one cannot expect Sullivan -- or anyone for that matter - - to denote considerable time to an area beyond his immediate focal concerns. Nevertheless, being willing to theoretically or empirically (or both) outline the fundamental characteristics of the very dimension that psychology has set out to explore and in which any system of psychological development must be rooted – namely, the mind – would seem to be an extremely important goal for Sullivan to work toward.

Among other things, both the last chapter and this one have attempted to indicate how the conceptual accent of particular theoreticians has been placed over an aspect of development that coincided with the general theoretical orientation to which he or she wished to adhere and out of which the individual wished to operate. Both Freud and Sullivan have been only incidentally concerned with what is here termed the psycho-conceptual dimension of development. Their interest in this issue has extended only to the point that such considerations helped to emphasize the importance of the particular features of psychosexual or psychosocial development in which they were interested.

The domain of mental functioning that was introduced into their systems seemed to have little identity of its own. Such overtures to mental functioning were pawns whose functioning and idiosyncrasies were directed by psychosexual and psychosocial forces beyond its control.

Thus, for Freud, the mind is, essentially, a mental screen upon which conflict and representatives of instinctual processes make their characteristic appearances. For Sullivan, mental life consists of an accumulation of experience received and elaborated in a prototaxic, parataxic, or syntaxic (the latter has not been discussed yet) mode of relating to 'reality' and 'colored' by the psychosexual or psychosocial nature (or both) of an array of experiences. Whereas Freud attempted to explain 'thinking' (to use a rather imprecise and loose term) as an

extension of more fundamental considerations such as instincts, Sullivan, apparently, simply assumed that an exploration of cognitive development could be given that would be consistent with his observations and the theoretical considerations in which those observations were embedded.

To be sure, both the psychosocial and the psychosexual dimensions leave their imprint upon mental functioning. Nonetheless, one needs to accentuate the 'active' and 'constructive' side of cognitive functioning as well. Mental functioning is not just a passive entity to be molded and shaped by various sexual and social forces or by a range of factors that are external to it --- though it is subject to such shaping and molding contingencies ... nor is mental functioning just a reception and storage center for external and internal stimulus data -- though, it surely does receive and store such information ... nor is mental functioning just a psychological middle-man that never has the opportunity to become an entrepreneur with respect to behavior -- though it sometimes does operate for goals or in directions other than its own.

In short, there are aspects of the cognitive sphere that seek expression in their own peculiar fashion ... a fashion that not only can leave a characteristic imprint on the other two dimensions (i.e., the sexual and the social) but can shape and color those set of forces as well ... sometimes tremendously. Indeed, much of the next two sections of the present essay is concerned with attempting to come to some understanding of the 'what's', 'why's', and 'how's' of what Freud referred to as the "secondary process" and Sullivan termed the "parataxic" mode of experience even though the results of such an exploration should be considered more as a theoretical probe than a definitive conclusion.

Immanuel Kant, the great German philosopher of the late eighteenth and early nineteenth centuries, contended that 'being' is not a real predicate in the sense that it does not add any observable property or attribute to the concept of an object. According to him, if one were to think of, say, a chair and, then in addition, one were to think of the chair as existing, the attachment of existence to the chair does not alter the concept of chair in any way. In both cases the chair

remains the same with respect to the attributes that define it. In criticizing this Kantian position, William Barrett wrote:

"... surely, we have to agree with Kant that we can have no mental picture of the existence of a thing. In forming the concept of a table, I can represent to myself its color, size, shape. etc., but not its existence. All of these --- color, size' shape, etc. --- are what philosophers nowadays call observable properties; and the existence of the table is not one of the properties. To be sure, if there were not actually existing tables, we would not be able to sense these observable properties, and from there proceed to form a mental picture of a table that is indifferently an actual or a possible table. However, this fact is allowed to lurk like an unmentioned and unpleasant ghost in the background of the whole Kantian discussion ..."¹⁹

Indeed, existence is not an attribute or a property something has. It is something in which everyone is immersed, and the various moods of happiness, grief, despair, joy, and so on are just some of the modes through which human beings participate in our existential encounters.

In contradistinction to Kant, Martin Heidegger, a twentieth century German philosopher, was intent on developing the concept of 'Being' to what he considered to be its full potentialities. One of his main tasks was to destroy the preoccupation with the thing 'which-is' and concentrate on the to-be of 'what-is'. In doing this, he hoped to divert thinking away from objects per se (people, as well as things) and to redirect this thinking into a channel concerning what it is 'to be' ... perhaps one of the most basic problems entailed by existence.

'Being' and 'existential encounter' -- at least with respect to most psychologists in the United States (and perhaps in many places outside the U. S. as well) – are terms that do not usually enjoy either wide use or consideration. Between, on the one side, the psychoanalytical school of thought and, on the other side, learning theory approaches to things, there does not seem to be much room for one to discuss the sort of metaphysical and ontological subjects that are suggested by use of such terms as 'Being' and 'existential encounter'. Nonetheless, there have been a number of individuals who have stuck their 'foot in the door' to the doctor's office and have not been willing to remain in the waiting room until called upon to discuss the theoretical problems that

bother them and that do not seem to be addressed by, say, either a psychoanalytical perspective or a framework that is rooted in learning theories of one kind or another.

Maynard Boss, for example, is an individual who has attempted to introduce a number of interesting ideas into American thought. In a book written relatively recently (when compared to Kant or even Heidegger), Boss outlined what he called “Dasein analysis”, and he attempted to show how this concept was not really opposed to psychoanalysis as the latter was practiced but only conflicted with various aspects of the theoretical system underlying psychoanalytical thought.

In developing his thesis, Boss believed there were other aspects of developmental experience that might prove to be rather provocative and intriguing to consider. These other possibilities could assist or help broaden the scope of the idea of 'existential encounter' -- from merely a term to, perhaps, a crucial theme of development.

According to Boss, if one analyzes an individual and the world in which that person exists, one will soon come to understand that the individual's:

“... existence is originally a 'being-in-the-world', in which this 'in' is not to be understood in the sense of 'within' a case of empty space but always in its original meaning of being 'with' a thing.”²⁰

Being-in-the-world is primordial and, as such, is always a concrete encounter, never an abstraction. It is on the basis of such a contention that Boss contends:

“... analysis of Dasein enables us to become aware that the things and fellow men which an individual encounters, appear to him---within the meaning --- disclosing light of his Dasein --- immediately (and without any subjective processes being involved) as what they are, according to the world openness of his existence.”²¹

"Dasein" is the term that Boss has borrowed from Heidegger to convey the meaning of human existence. Indeed, when this German word is broken down into its component parts, 'da' (there) 'sein' (being), this word means, literally, 'Being-there'.

The 'da' – or 'there' -- component refers to 'being-there-with-the-world' and designates the 'luminous' realm in which all 'particular beings' might appear and 'be'. On the other hand, 'da-sein' is the fundamental awareness of Being-in-the-world (i.e., Being-ness-as-such) that enables human beings to be a light which illuminates all that individuals encounter while 'in' or 'with' the world.

Although everything has its own form of 'being', Dasein refers exclusively to the human sort of Being. Following Heidegger's example, Boss distinguishes human 'Being' from the 'being' of objects or animals by using large and small case letters, respectively.

This distinction is extended by using another of Heidegger's "existentialia" (as is becoming quite apparent, Boss relied heavily on many of Heidegger's ideas to provide the philosophical basis for a psychological conception of human beings and therapy), to refer to the fundamental characteristics of Dasein and the term "categories" when referring to the characteristics of beings other than Dasein. More specifically, according Boss, existentialia generally referred to three fundamental characteristics of human existence: (1) primary understanding; (2) mood or affective mode of Being, and (3) speech.

Boss maintains that the foregoing three characteristics are not to be thought of as representative of some internal 'soul-substance', or mental state. Rather, those characteristics are to be construed in terms of Heidegger's conception of human existence as a 'field' -- of which the things 'Homo Sapiens' are only one facet. In this way, Heidegger – and, therefore, Boss -- attempts to eliminate the notion that a human being is a definite object with a fixed nature ... something to which one can point and say: "that is 'human-ness'. As Barrett points out:

"To be sure, this existence is always mine; it is not an impersonal fact, as the existence of a table is merely to an individual case of the class, table. Nevertheless, the mine-ness of my existence does not consist in

the fact that there is an I-substance at the center of my field, but rather in that this mine-ness permeates the whole field of my Being.”²²

It is Heidegger's belief that human beings do not peer down upon the world through the isolated windows of an ivory-towered ego. Human beings are already outside with the world. Man's field of Being is not a prisoner bounded by skin, unable to get outside. The Being of being human occurs 'there-with-the-world'.

The 'primary understanding' of Dasein to which Boss, following Heidegger, refers is neither an abstract nor theoretical understanding - i.e., a derived understanding -- but is, instead, a part of Being in which one's existence is rooted and without which derived understanding could not occur. The 'primary understanding' of Dasein signifies the 'openness' of the world to which human beings are exposed from the moment of birth, and such primary understanding describes the 'natural' state of the world's being unconcealed that is revealed in the luminosity of Being ... a condition of being unconcealed in the sense that 'particular' beings stand open in revealing their varied meanings and only need to be cast into the luminous realm of Dasein for such revelation to be possible ... and, indeed, for Heidegger and Boss, this 'luminosity' is the human contribution to such primary understanding.

In a manner of speaking, 'truth', that is related, to primary understanding, is a bipartite concept for both Heidegger and Boss. Things -- i.e., particular objects -- will disclose themselves to the individual if one does not attempt to force them to fit into a ready-made conceptual pigeon-hole. However, under these circumstances, it is necessary for both primary understanding -- or luminosity -- and the particular thing that is to reveal itself to merge at some juncture of existence. Boss puts it in the following manner:

“... all particular beings/need' the illuminating nature of man in order to be. Fundamentally, 'being' always means 'coming forth and lasting'. How could any such coming forth and lasting be possible without a lightened realm into which this happening can take place? However, as things cannot be without man, man cannot exist as what he is without that which he encounters. This is so true that Dasein usually understands itself at first, and in most cases, through its encounter with particular beings.”²³

It is from this merging of the foregoing two aspects of the existential field that truth, according to Heidegger and Boss, is precipitated. Truth, therefore, is not a product of the intellect but a much more basic characteristic of 'Being-with-the-world, and all intellectual truth is derived from this more fundamental sense of truth.

Moreover, to the extent that one is hindered from participating in the open-ness of the world, one exists 'outside of truth, since the disclosed meanings of particular things are hidden or concealed. To the extent that one removes this quality of being concealed, then one exists "in" truth (i.e., the truth is revealed). In short:

"Man is illuminated by letting Being reveal itself, and not vice versa."²⁴

The second characteristic (i.e., existentialia) fundamental to human existence is mood or the affective mode of Being. 'Mood' however, is not to be construed psychologically, but ontologically.

In other words, mood is a mode of being. It concerns the individual's way of Being attuned in any 'here and now'.

Mood describes the joy, sorrow, despair or fear toward which one's Being is oriented. In Boss' words:

"As a luminous realm, Dasein, as every light, is always attuned in one or another way. Things can come forth into its openness only in consonance with Dasein's actual attunement, or 'pitch'. Just as the coloring and the brightness of a physical light determine what can be seen by such a light, so things are always disclosed in accordance with man's pitch. An individual's pitch at a certain moment determines in advance the choice, brightness and coloring of his relationships to the world."²⁵

Thus, for Heidegger and Boss, mood is quite naturally related to truth and revelation. If one is attuned, correctly, then one is able to receive the self-disclosing aspects of the particular objects one encounters. If, on the other hand, one is not 'properly attuned' to the

openness of the world, then the meaning of particular objects is prevented from disclosing itself and remains hidden until one can become properly attuned.

Furthermore, the more ways there are in which one can experience such moods, the more opportunity will one have for existing in truth. Just as a radio that is capable of receiving both FM and AM is attuned to more wavelengths than is a radio that is only capable of receiving AM, a Dasein that is able to receive more of the world-disclosing-wavelengths than other Daseins are attuned to, and, therefore, according to Heidegger and Boss, exist in truth more than those other, less-attuned instances of Dasein.

The final, fundamental characteristic of Dasein concerns speech, and this, as one might have already guessed, is related to the other existentialia of human existence – namely, understanding and mood. Marks on a piece of paper or sounds uttered from the vocal cords do not constitute language as such. They are its manifestations.

Language, in Heidegger's sense of the word, is not something one acquires or has. Language is a fundamental part of one's Being.

The language to which Heidegger refers is an extension of a human being's primary understanding. Just as derived truth (i.e., abstractions and theoretical notions) is not possible without 'rootedness' in primary understanding, derived languages (i.e., the language used by a culture) are not possible without the 'language' of primary understanding.

Primary understanding in the foregoing sense is the characteristic of human existence that helps one to be attuned to another in the silences between verbal utterances. Primary understanding is the characteristic about which Boss speaks in the following passage:

"The recognition that others have the same ability as I do to understand --- or to become 'conscious' of --- something is not based on deduction or analogy... This recognition is, rather, an integral part of man's fundamental openness for an immediate understanding and perceiving of a being as the being that exists in the same way as the one who perceives."²⁶

Human beings are capable of communicating with one another because all human beings exist within the primary understanding that makes such communication possible – namely, Being itself.

By applying the philosophical ideas of Heidegger to psychological problems, Boss among has attempted, among other things, to surmount some of the difficulties mentioned elsewhere in the present book. More specifically, one problem -- namely Freud's explanation of the transition from primary to secondary processes – might be eliminated if one adopts Boss' position.

Essentially, what Boss has done is to establish immediate, primary awareness of “Being-ness-as-such” as a fundamental characteristic of human existence and that includes psychological existence as well. Consequently, according to Boss, there is no need to explain how an individual develops or acquires a capacity of 'primary understanding', or to explain how, for example, the requisite neurophysiological units mature and are capable, at some point, of providing the individual with his or her 'intelligence' and, thereby, permitting an individual to gain such understanding.

A need for such forms of explorations does not arise because the primary understanding of human beings does not evolve or develop. Such understanding is coextensive with the beginnings of being human.

Moreover, one is no longer the 'mysterious' possessor of a property called existence that can never be known. Boss does not leave the individual in the background as an unknown quantity ... as one who is enigmatically connected with ego-processes ... as one who must climb out of his narcissistic subjectivity in order to interact (cathect in Freudian terminology) with things of the world. One is there with the rest of Being by 'Being-in-the-world'.

This is what Dasein entails. This 'being-in-the-world' is not a property of the individual. Rather, it is the individual. To speak of one, is to speak of the other.

According to Heidegger and Boss, this 'Being-ness-as-such' is the fundamental condition for all other themes that manifest themselves through an individual's actions. Whether those themes concern thinking, feeling, playing, or some other mode of existing, they all are

considered manifestations of one of the three fundamental characteristics (existentialia) of Dasein that have been outlined previously in this essay.

Although Boss and Heidegger present a number of appealing insights into the foundations of Being, there seems to be an absence of a sense of how development of the individual -- or how thinking, feeling etc. -- manifests itself while 'Being-in-the-world'. Noting this point, however, is more a criticism of Boss than of Heidegger since the goal of the latter individual was not, strictly speaking, psychological theory but, rather, ontological theory.

Thinking, feeling, acting, and so on are said to be the 'different modes in which Dasein's luminosity takes place'. Nonetheless, one has no idea of how these different modes operate.

One is given no indication of what roles these different modes play in helping a child, differentiate herself or himself from the world, and vice versa. The closest that Boss comes to such problems is when he says:

"Of course the child cannot, as yet, articulate his understanding in thought and abstract notions. His meaning ... disclosing encounters ... remain, for a long period of time, of a nature which psychology and biology up to now have tended to describe with such incomprehensible and distorting terms as 'empathic', 'instinctual', and 'reflexive'.²⁷

Presumably, the foregoing terms are now to be replaced by the fundamental triumvirate of 'primary understanding', 'mood,' and 'speech'. Unfortunately, Boss did not indicate what determines, for example, a man's pitch or attunement, or how the individual makes the transition from one 'pitch' to the next (are they learned or innate, or are they a combination of the two?).

Boss' failure to create a sense of development can probably be attributed to his belief that meaning and, therefore, truth, are disclosed by the particular being encountered. Because of this belief, he felt little need to offer an explanation of human, or more specifically, cognitive, development. Since the task of the intellect was

to be receptive to, or attuned to and in consonance with, world disclosure, he did not believe it was necessary to describe the functioning of an intellect that could create its own meaning. Indeed, much of the existential tradition (both philosophically and psychologically) has been directed toward reintegrating within Being the concept of an intellect that had been alienated from the world and from its own existential roots. The spirit of this trend is captured nicely by Barrett:

"In modern philosophy particularly (philosophy since Descartes), man has figured almost exclusively as an epistemological subject --- as an intellect that registers sense-data, makes propositions, reasons, and seeks the certainty of intellectual knowledge, but not as the man underneath all this, who is born, suffers, and dies."²⁸

Human beings neither exist 'in' truth or 'outside' of/truth ... human beings exist. The 'truth' that is discovered by human beings is always relative to the system of meaning from which the 'truth' was extracted. Consequently, human beings exist within some systems of truth while simultaneously existing outside other such systems.

At best, human beings have the capacity to juxtapose various aspects of non-Dasein and Dasein existence within the 'revealing light of their 'Being-ness-as-such'. Yet, this 'revealing-light' need not be construed as a light that, when 'switched-on', allows a particular object to reveal its (the object's) meaning through self-disclosure.

'Being-ness-as-such' might designate an individual's capacity to be open to possibility ... possibility in the sense that one does not approach existential encounters with preconceived and dogmatic modes of Being (such as thinking, feeling, acting, etc.), but is ready to observe and experience the encounter in new, previously untried, undiscovered modes of understanding, conceptual approaches, and frameworks of categorization. Consequently, the emphasis need not to be directed at the world opening before the individual (although this could occur) but, instead, might be focused on an individual's being open to the world and its possibilities ... as such, this would not be a matter of truth but of 'openness' and 'closedness'.

To be open does not necessarily mean that one has no conceptual approaches or categories (and I give the reader fair warning that categories and conceptual approaches are to be distinguished and kept distinctly separate ... roughly speaking, categories are the labels attached to a group of objects or series of events that are judged, on the basis of some criterion, to be related. Conceptual approaches, on the other hand, refer to systems or methods -- complex and simple -- of approaching and interacting with the environment ... for instance, the methodological principles governing scientific investigation form a conceptual approach, as do the methodological principles of philosophy and mythology). Nor does being open necessarily mean that one cannot act ... which, with certain exceptions, usually means one is presupposing certain values that guide or direct such behavior. Instead, perhaps to be open, an individual must always be ready – given appropriate grounds or reasons or experiences -- to change the basis (i.e., conceptual approach) from which acts emanate.

Certainly, to the extent that human beings act, an individual can be considered to be enacting a 'sequence of closedness' to other possibilities that could just as well have been enacted. Therefore, the most for which one can hope is to have a conceptual approach that is open to many possibilities and from which 'appropriate' acts might be derived.

On the other hand, a person does not always act in an outward fashion. Sometimes (even if infrequently), human beings are reflective or contemplative (which could be considered a sort of inward action).

In these periods of quiescence between outward acts, an individual has the opportunity to modify the basis from which acts are launched and, consequently, to be open to further possibility or -- in the instances in which one narrows the conceptual baseline – to be closed to even more possibilities than before the modification. With each new level of openness arises a new set of considerations, and yet, at the same time, a new level of closedness might emerge. This is a closedness to whatever possibilities the new level of openness does not open one.

Since there might be no absolute truth²⁹ that human beings are capable of grasping but, rather, only truths within the context of a particular system or epistemological orientation (e.g., a proposition is

said to be true if it fills or satisfies the criterion for truth in a given system), openness and closedness are relative to possibility and not necessarily truth³⁰. In short, each conceptual approach or hermeneutical manner of operating that one adopts is open or closed to the extent that such a way of engaging experience allows one to create new approaches that transcend, either partially or totally, the values governing the old approach.

However, it is important to point out two warnings with respect to the foregoing. The first warning concerns the notion of 'transcendence'.

Transcendence is not to be construed in the sense of a Hegelian dialectic in which each thesis gives rise to its own antithesis and an eventual synthesis of the two that, in turn, is another thesis, and so on. Moreover, transcendence does not necessarily designate -- as indicated previously -- a process that approaches some absolute sense of truth. Transcendence refers only to the capacity and willingness to change values regulating and directing acts ... some changes will result in more openness, other changes will result in more closedness, and still other changes might result in both³¹, or neither (i.e., no change).

A second warning to note is that one should not infer that in any one situation there is only one conceptual approach that is solely responsible for directing the acts that are taking place. Nor should one infer that when two or more conceptual approaches are engaged in an existential encounter, then the engagement is necessarily harmonious.

Human beings are confronted with a bewildering array of impinging sense data. This is true whether one believes human beings create their own meanings or one believes that individuals receive meaning by being open to world-disclosure (as Heidegger and Boss do), or that human beings might be capable both of creating their own meanings as well as being able to receive – within certain limits – the meanings of Being by becoming open, in various methodological ways, to Being-ness-as-such (as I do).

Such sensory data do not always 'jive', nor is there necessarily any rule that says that, eventually, all the data must be capable of being understood (though this is the positivistic hope of some) or constructively integrated. Yet, each of us is confronted with this bewildering challenge of data in every existential encounter, and, quite

frequently, the solutions that are proposed to meet this challenge are conflicting, and sometimes, antagonistic (as, for example, when one is ambivalent about the possibilities with which one is confronted).

In summary, it seems far more “open-ended” to assume that human beings have a primary capacity for understanding than to assume that individuals have primary understanding in Heidegger’s and Boss’ sense. This contention seems to be justified for at least one very good reason.

If one assumes that human beings are in possession of the sort of primary understanding that allows one to definitively establish the meaning-disclosures of the world, one is committed to assuming that there is some, unified determinate, absolute meaning to which human beings are open and receptive. If, on the other hand, one assumes that the capacity for understanding is primary and that such a capacity permits one to be open to possibility, then one has a basis for not only investigating the various possibilities of meaning that might be created, but one has laid the groundwork for investigating various developmental possibilities and the connections, if any, with the ‘realities’ that Being might be revealing to us through our engagements with Being-ness as such ... something that seems to be absent from the position advocated by Boss.

Furthermore, if one were to assume that meaning comes from world-disclosure and not through human beings, then what criterion (or set of criteria) does one use in order to judge the truth of what the world might, or might not, be disclosing to us. It seems far less closed-ended to acknowledge the possibility of truth (in an absolute sense) and, in the meantime (i.e., ‘until’ such a notion of truth can be ‘confirmed’ in some manner) act as if there were not any such absolute ... thereby allowing one to construct a sense of truth within the context of a system being examined rather than on the basis of an unknown – or, possibly, incorrect sense of -- absolute ‘truth’.

By engaging Being-ness-as-such in this manner, one is able to have a procedural means of engaging Being-ness as such, even if one might not have the full truth. Such a procedural means might help lead one toward increasingly more accurate and/or more heuristically valuable understandings of various aspects of world disclosure without being

forced to become bogged down in point-counterpoint arguments concerning the nature of absolutes.

Finally, there is no need to fear that the position advocated here will emphasize the intellect and forget the man underneath “who is born, suffers and dies”. The basic theme inherent in the foregoing perspective is neither realism nor idealism (both of which Heidegger wants to eliminate in order to relate subject and object in Being) at least as outlined by Langan:

“Realism is distinguishable historically from idealism because the former conceives the truth relationship in terms of a conformity of the intellect to the ‘reality’ presented by the immediately intuited presence of the things that are; while the latter [i.e., idealism] conceives the relationship in terms of the internal discovery of the ideal to which the concrete changing things must form themselves in order to be vested with the light of intelligibility”.³²

The perspective that is here being offered for consideration deals neither in ideals nor ‘reality’ (which in itself is an ideal of sorts). Instead, the current theoretical framework is focused on the generating heuristically valuable approaches to the processes of cognitive functioning and that which makes such approaches possible. This methodological approach assumes: that human beings can interact with the particular things of the world; that both human beings and these aspects of Being-ness-as-such constitute complementary, yet, sometimes conflicting, facets of the field of Dasein; that human beings can never be existentially separated from the things that are ‘at hand’ in the field; and that human beings have the capacity to create conceptual approaches that regard, or disregard, the ‘objects’ of Being-ness-as-such in almost an endless, variety of ways. However, the concern here is not with the particulars of individual conceptual approaches but, rather, with the general cognitive functioning that is capable of generating such approaches and affecting them over time

Consequently, although the basic perspective being adopted here is an epistemological one (i.e., how does a person cognitively function in the world) there is an open-ness to the possibilities of Being-ness as such that are considered in this approach that affects such functioning ... of which two have already been mentioned – namely, the

psychosocial and psychosexual dimensions. Yet, at the same time one should note that the distinct flavoring which the cognitive or psycho-conceptual dimension adds to the developmental soup, should not be destroyed, by an overzealous brandishing of theoretical condiments of either a psychosocial or psychosexual variety.

Intellect does not have to become isolated from Being. There is no reason why a human being's cognitive capacity cannot be as much a part of Being as one's capacity for birth, suffering, and death. In fact, a person's capacity for understanding -- construed in the broad general sense of creating or forming epistemological and hermeneutical systems -- can create opportunities for interposing more than suffering between birth and death but can, as well, generate a sense of meaning concerning such suffering, birth, and death. One's capacity to understand not only creates epistemological and hermeneutical systems involving science, philosophy, and/or spirituality, but such systems create systems of emotional intelligence as well.

The solution -- if there is one (and if there is one, then quite possibly, there might be many possibilities that are 'roughly' equivalent) -- involves creating epistemological and hermeneutical approaches that will seek to integrate rather than isolate intellect and Being. One cannot resolve the problems of Being by denying the existence of either Being (as Kant did) or cognition (as Boss tends to do) ... to do either is to close oneself off to a considerable number of constructive possibilities and, in the process, limit the heuristic vitality and versatility of what one might try to do and how one might go about engaging one's encounter with Being-ness-as-such.

Freud spoke of 'instinctual drives' and Sullivan used the term 'tension of need' in order to describe-certain, characteristic crises encountered by the infant, as well as to account for the infant's responses to these crises. Despite the difference in wording, both individuals refer to the same complex of physical disequilibrium (i.e., need) and the action directed toward remedying that particular need (i.e., response).

With respect to the latter part of this complex -- action directed toward the restoration of equilibrium -- Sullivan is in general agreement with Freudian ideas about the economics of energy ...

namely, the infant is able, from birth onward, to expend energy in activating and sustaining, for as long as necessary, certain mechanisms designed to bring about relief from felt tension. Thus, when an infant is hungry, the child's crying is to be interpreted as an initial action devoted to securing relief from an existing, homeostatic imbalance with respect to nourishment. When a child is wet and needs to be changed, the crying is understood to be a response directed toward affecting the necessary change.

Of course, neither Freud nor Sullivan implies that an infant's behavior patterns are to be construed as 'intentional'. Such actions supposedly are manifestations of an infant's non-rational, innate, and undifferentiated, way of initiating action necessary to relief. They signify the "energetics" of behavior, and over time, the actions 'somehow' become more attuned and appropriate to the gaining of felt satisfaction.

Whether one speaks in terms of instinct, as Freud does, or in terms of tension, as Sullivan does, the notion of a 'driving', 'activating', 'manifestation of energy' directed toward relief is inherent in their explanations of need and response. The story, however, does not end with this ... instead, the story is just beginning.

In ways that are characteristic of their individual theoretical systems, both Freud and Sullivan attempt to show how the stages of development are immersed in the basic paradigm of need and response. Freud, for instance, attempts to demonstrate that all human behavior -- including cognitive activity -- is a manifestation of, and reflection upon, the underlying themes of development that are indigenous to the human organism, and these themes are rooted in sexual forces broadly construed as 'polymorphous perverse' tendencies in human beings. According to Freud, there are no aspects of an individual's behavioral repertoire or characteristics of personality that are not derived from, directed by, influenced by, or precipitated in response to, the sexual drives of the organism.

The foregoing perspective involves something more than the contention that sexuality, in all its varied manifestations, has a hand in shaping development. It is tantamount to stipulating that all facets of human behavior and personality are governed by the rules and regulatory oversight generated through the forces of sexuality.

Sullivan, on the other hand, although guided by the same general biological spirit that had pervaded Freud's work, tried to attach an additional dimensional component to the developmental explanation offered by Freud. For Sullivan, one's behavior and personality were not only influenced by innate biological drives, one's 'life-line' could also be plotted along an existential graph that described the individual's responses in relation to various needs that developed within an interpersonal context. Although individuals were innately equipped for, or predisposed toward, interacting within an interpersonal dimension (e.g., the empathic linkage between the mothering-one and the child), nevertheless, the needs that emerged during this interaction were, for Sullivan, more 'derived' than innate.

Conceivably, one might wish to question the use of 'derived' as being unique to Sullivan's discussion of needs ... not so much because this sort of usage is not appropriate but, rather, because it seems to be applicable, in certain instances, to Freud, as well. For example, one might argue that sublimation was a derived need in the Freudian scheme, and such an argument would have considerable merit since there is a relatively important parallel to be drawn between Freud's sense of derived functional activity and the kind of sublimated activity in which Sullivan was interested.

In *Life Against Death* -- which examines the relationship of psychoanalysis to history as well as to man's cultural situation -- Norman O. Brown tries to integrate, among other things, Freud's views on sublimation into the overall thesis of his book. As he points out early in his discussion of sublimation:

"The concept of sublimation is essentially an attempt to relate the organic and super-organic levels, as part of the general effort of psychoanalysis to rediscover the animal in man and to heal the war between body and soul."³³

In other words, for Freud, sublimation was the means through which an individual redirected the original sexual instincts into more culturally acceptable modes of activity. Sublimation was the process through which sexual impulses were unconsciously 'socialized' and

directed toward reality in a 'de-sexualized form' such as work, art, or intellectual pursuits. Furthermore, sublimation also represented the means through which an individual would adopt the social neuroses of his or her culture, rather than just giving expression to a personal form of neurosis in which:

"The activity is resexualized, withdrawn from' the social, and involves a flight from reality."³⁴

Apparently, Freud felt that an individual's acceptance of certain forms of activity which a given culture provided for the individual as a socialized means of dampening down individual sexual impulses -- especially those impulses stemming from polymorphous perverse activity -- was far more satisfactory to the ego (i.e., ego-syntonic) than some form of personal neurosis might be. The former allowed the individual to work and love, to a certain extent, despite the limitations that such cultural sublimation imposed upon sexuality, whereas individual forms of neurosis impaired a person's interaction with, and relationship to, society, and, consequently, the organic and super-organic levels would not be able to relate to each other in a harmonious manner.

Freud, however, tended to be pessimistic about the degree of harmony that was possible between the ego and the id. He believed that only a certain degree of attenuation with respect to such conflict was possible. One could never entirely eliminate the warfare between the two entities.

Described in the foregoing fashion, the treating of sublimation as a 'derived need' seems quite defensible. This is so because an individual's inclination toward sublimation arises in relation to an individual's encounter with the environment and not independently of such an encounter. Thus, one does not seem to be dealing so much with an innate need, as much as one is considering an organism's response to fundamental drives that are being thwarted, frustrated, and channeled by means of social forces.

Certainly, there must be a capacity for sublimation within individuals -- and here one tends to agree with Brown's criticism of this aspect of Freudian theory:

"... it is not clear how desexualization and socialization³⁵ take place, or even what these terms mean. The connection between infantile sexuality and culture is postulated, not explained."³⁶

Yet, despite Brown's critical commentary, Freud's postulated conception of sublimation still emerges from an interpersonal setting in which parents mediate cultural demands and children become socialized through the presence of other people ... a socialized activity in which some aspects of that behavior are manifestations of sublimated activity. In such a context, emphasis might still be directed largely toward the organic economics of the distribution of libidinal energy, but one cannot deny the psychosocial presence that is involved in such processes.

Sullivan defined sublimation as:

"... the unwitting substitution for a behavior pattern which encounters anxiety or collides with the self-system, of a socially more acceptable activity pattern which satisfies part of the motivational system that caused trouble."³⁷

By "unwitting", Sullivan was referring to the covert processes that go on within all of us, yet that are largely external to consciousness. The existence of such processes can only be inferred in relation to overt activity.

More importantly, however, is Sullivan's contention that these covert processes originate during the organization of interpersonal experiences. As such, these 'covert' processes either directly reflect interpersonal experiences (through being shaped, limited, or colored by them) or represent the synthesis of a number of such experiences into a new organizational scheme.

According to Sullivan, sublimations are almost completely gratifying ... almost, but not quite. There usually is a certain amount of unsatisfied need which is left over.

For Sullivan, one of the primary means for discharging the excess need is through covert processes. Consequently, in relation to adults, one of the best opportunities to discharge unsatisfied need is during sleep.

Under the canopy of sleep, covert discharges are unlikely to run a collision course with social disapproval and the concomitant anxiety that arises in relation to such disapproval. Of course, adults also are able to discharge the unsatisfied aspects of sublimation by means of some form of overt symbolic activity, but this method is not the usual method of discharge because it tends to be more risky in the sense of leading to experiences of anxiety.

Children, on the other hand, are able to discharge excess (that is, unsatisfied) need during flights of fantasy. Although children can do this during sleep, there does not seem to be as much cultural pressure for children to do things in this manner and, therefore, the flights of fantasy can be overtly expressed -- at least up to certain ages that might vary from culture to culture -- with little risk of generating experiences of anxiety.

Sullivan gives one fairly clear example of sublimation that demonstrates most of the elements involved in the kind of covert processes to which he is alluding:

"What happens in the kind of sublimation that I am now trying to describe is that a need collides with anxiety at the behest of the social censor or acculturating person; a notable example of this ... is the very young child who wants to put his thumb in his mouth but his thumb is soiled with, say, feces. If we find that this very young child, when his fingers are soiled in this particular way, always or very frequently picks out a particular toy and sucks it, then we might actually feel with reasonable certainty that there has been a 'substitution' of the experience of sucking this toy, in place of the experience of putting this particular type of soiled thumb in the mouth. When something like this happens in late infancy, we can scarcely presume that it is the result of

much thinking on the part of the infant, and for this reason it seems to be a peculiarly good instance by which to call attention to the way sublimation occurs all through life. The person never figures it out. It occurs and is continued, but it is unwitting."³⁸

Consequently, sublimation, as described by Sullivan, emerges from the interpersonal matrix of experience as an activity that persists but cannot be consciously explained because the origins of that matrix involve covert processes that occur but that have not registered their activity cognitively in a manner that is accessible to conscious manipulation. Furthermore, for Sullivan, since anxiety is an experience to which one is predisposed and not a product of physiological mechanisms operating in isolation from the interpersonal environment, then sublimation is a 'derived' need.

Therefore, Sullivan and Freud -- although engaging the process through different methodological and clinical styles, as well as in relation to different emphases -- both have placed sublimation in an interpersonal or a super-organic context. Freud has given priority to innate mechanisms over cultural factors, while Sullivan has given more emphasis to the importance of cultural, interpersonal factors over whatever innate mechanisms might be involved.

Both would agree, however, that, to varying degrees, sublimation is shaped by external as well as internal factors. That is, in general, sublimation involves -- whatever the characteristics of one's particular theory might be -- innate drives that collide with cultural demands and during that the individual almost always loses the battle. Furthermore, even though -- due to the collision of innate needs and cultural demands -- one is driven to sublimate, the need to sublimate (i.e., the motivation) is derived from Being-in-the-world and not just Being per se.

Notwithstanding the foregoing considerations, the explanations offered by Freud and Sullivan as a means of accounting for the various complexes of need and response -- of which sublimation is just one example -- are not the result of empirically proven demonstrations. Complexes, such as sublimation, represent conceptual fictions. They are hypothetical mechanisms that are constructed on the basis of

inference from observable phenomena, but they are not necessarily logically implicated by such observations.

Consequently, one is free -- to a degree -- to examine alternative explanations. While these alternative possibilities also are constructed out of various conceptual fictions that do not necessarily lend themselves to a closer approximation of the truth, such fictions might have varying degrees of functional utility that might prove to be of value and might even help an individual to reassess her or his position with respect to certain theoretical ghettos that might be badly in need of re-construction and some sort of a conceptual renewal program.

For instance, consider the concept of 'need'. More specifically, consider the idea of a 'need for preservation'.

For centuries many people have adhered to the idea of a so-called 'drive of (or for) self-preservation'. Indeed, long before Freud arrived on the historical scene, the drive for preservation was believed by many to permeate a considerable portion of human behavior.

Part of Freud's accomplishment, of course, was to integrate this notion of a drive for self-preservation into a more encompassing explanation of human behavior. Nonetheless, Freud, as was true of others, might have assumed more than is warranted. More specifically, Freud might have confused an ontological 'capacity to survive' with a theoretical idea that revolved about the notion of a 'drive to survive' and, in the process, he might have added an elaborate chapter to the long-standing tendency of human beings to construe nature anthropomorphically.

Organs and organisms ('self-dynamisms' in Sullivan's terms) function successfully when a relatively complicated set of conditions are satisfied. As long as these conditions are maintained within the allowable limits of variation, the organ or organism survives.

Survival is to be equated with the functioning process. It is not a goal to be achieved but is, rather, an incidental by-product of proper functioning under the appropriate conditions. If, for some reason, the organism should be beset by major malfunctions, or even a series of small ones, or if the conditions conducive to successful functioning are absent, then functioning might cease altogether, and, consequently, so will its by-product, existence. In the jargon of the previous section of

this essay, the no-longer-functioning organism still exists as a particular object, but it no longer represents the field of Dasein that it did when functioning, and, therefore, surviving.

Certainly, organisms have the capacity to defend and protect themselves. Some of the mechanisms are externally oriented in order to assist the organism, if necessary, to ward off injurious, incoming stimuli. Some of these mechanisms are inwardly oriented and are involved with the maintenance of internal homeostasis or equilibrium. These capacities, however – whether external or internal -- do not guarantee existence ... they only help make such existence possible.

Sometimes those sorts of capacities are effective. Sometimes they are not.

When an organism is unable to continue functioning, to contend, as some individuals might, that the organism has failed to achieve its goal seems questionable ... just as questionable as it would be to say of an organism that continues to function that it is fulfilling some innate goal – namely a drive to survive. 'Life' is sustained because organisms function in a certain way under an appropriate set of conditions! However, organisms do not necessarily function in order to sustain 'life'.

This particular perspective concerning the principle of self-preservation can be extended to needs in general. One cannot deny that there are needs and that there are responses to such needs. On the other hand, one is not logically, and perhaps not ever empirically, required to choose a particular interpretation concerning the significance of such givens.

For instance, a need might be likened to a hole in a street -- needing to be filled but unable to direct or bring about the requisite action, in and of itself. The need is, in a sense, without direction, and it is without the means, in and of itself, which are necessary and sufficient to satisfy that need once it arises. The need simply exists. There is no primary, innate driving force that is activated when a disequilibrating need emerges that is designed to seek and gain satisfaction.

For example, the crying and kicking of an infant in response to felt needs need not, at least initially, be interpreted as behavior directed

toward relief but might be considered to be behavior that arises as an expression of the felt discomfort. As such, that behavior is more of an expressed opinion about the situation than it is a directed mandate for specific sorts of changes.

As long as an infant exists in the prototaxic experiential mode, the infant is not capable of linking events to needs or responses. In short, the child is not able – at least in the beginning -- to organize the experienced phenomena into any kind of meaningful schema.

Of course, Sullivan used the idea of a prototaxic mode of experience in a slightly different manner than the way that idea is applied in the foregoing example. As noted in several places already, Sullivan subscribed to a view similar to that of Freud in which drives were considered to be forces seeking expression in the form of satisfaction. Consequently, although an infant can be said to exist in a prototaxic mode of experience, this does not necessarily entail the postulated innate mechanisms that supposedly are involved in seeking the satisfaction of those needs.

Just as a need was not differentiated with respect to cause, source, and aliment in the prototaxic mode, so too, whatever responses might arise in relation to such a need are not differentiated in terms of intentional behavior ... that is, the response was not necessarily experienced as adequate and appropriate behavior in relation to the need with which it arose. For instance, the child might have cried, or moved arms and legs, on other occasions and, yet, was not fed or changed, and so, initially, there is an indeterminate causal relation between, on the one hand, crying, arm movement, kicking, and, on the other hand, eventual satisfaction.

To be sure, gratification might have been experienced since physiological tension of some kind (e.g., hunger, thirst, the discomfort of unchanged diapers) was lessened. However, only at a later stage -- when an infant is able to experience existential encounters parataxically and, therefore, could elaborate such encounters in terms of recall and foresight -- would need and response begin to be differentiated and organized into various kinds of cognitive schema.

One of the major differences between Sullivan's (or Freud's, etc.) position and the one being presented in this essay is that Sullivan

believed in the idea of primary (i.e., innate) needs that were capable of driving the organism in specific, intentional directions. Therefore, he adhered to a built-in principle of motivation in which, even at birth, primitive means for directing behavior were readily available to use in gaining satisfaction.

Of course, Sullivan was not quite as insistent as Freud was on this issue. From the perspective of Sullivan's theoretical framework, much more of human behavior is approached from the point of view of 'derived needs' that are precipitated through an interpersonal context. Indeed, Sullivan's notions of: anxiety, interpersonal security, self-dynamism, security operations and the theorem of escape all stem from the characteristic way in which many interpersonal interactions occur. On the other hand, woven into all of these is the same, underlying theme as described in connection with sublimation: namely, innate need encounters cultural demands, as mediated by the parents.

The major difference between sublimation and self-dynamism is that the latter is, according to Sullivan, initially, at least, more intentional than the 'unwittingness' of sublimation. A self-dynamism works toward maintaining interpersonal security and organization by selectively inattending to, or dissociating from, certain aspects of interpersonal interaction in relation to conscious awareness, while sublimation involves a covert change of object or mode to satisfy certain innate needs ... with the same covert processes discharging excess or unsatisfied need of a given instance of sublimation. However, to reiterate, despite the differences in emphasis, the underlying theme of innate need encountering cultural demand remains the same for both Sullivan and Freud.

Although there are innate physiological mechanisms, such as the sucking reflex, which allow nutrients to be incorporated, those reflexes need to be triggered by the proper stimulus or set of stimuli. In addition, a few days are often needed to get things coordinated so that the feeding process becomes relatively efficient and weight is gained rather than lost as, sometimes, is the case within the first week, or so, following birth.

Consequently, such physiological mechanisms as reflexes are capacities that help make certain kinds of satisfaction possible, but

those mechanisms do not guarantee that satisfaction will occur. Among other things, this means that infants must begin to adapt to prevailing circumstances.

The infant's initial experience is described as prototaxic precisely because there is, in fact, no cognitive organization that governs the process. An innate, pattern of 'need and response', postulated by Freud and Sullivan, do not exist, nor does any innate sense of motivation. These patterns must be built-up by means of cognitive functioning over a period of time.

At birth, one has needs, a range of responses, an array of capacities, and energy. How these factors combine with each other and with the rest of the field of Dasein is the subject of developmental processes after birth. As Hunt points out:

"The first of the assumptions to be called into question is the one that all behavior is motivated and that organisms become inactive unless stimulated by homeostatic need or painful stimulation or conditional stimuli for these. A large variety of observations contradict this assumption and imply spontaneous motor activity...

"Such evidences of spontaneous behavior, that is unmotivated in the traditional sense, have led to the naming of such new motives as a curiosity drive ..., an exploratory drive ..., and exteroceptive and curiosity drives ... I would like to object that merely naming such drives explains nothing ... Let us stop with noting that organisms will become inactive unless driven by homeostatic needs and painful stimuli and give up this ancient Greek notion that living matter is inert substance to which motion must be imported by extrinsic forces. We can then embrace the thermodynamic conception of living things as open systems of energy exchange that exhibit activity intrinsically and upon which stimuli have a modulating effect, but not an initiating effect."³⁹

The foregoing position of Hunt can be integrated quite well with some of the considerations expressed in the previous section of this essay concerning the 'concept of Being'. More specifically, 'Being-in--

the-world' assumes that an individual has the ability to respond to things with are at hand in one's field of Dasein.

One does not need to be pushed from within in order to be able to interact with 'Being-ness-as-such'. One can relate to the particular objects of the world and to other Daseins because one has an intrinsic capacity for spontaneous motor activity that allows such interactions but does not necessarily intrinsically direct that activity in any particular direction.

Furthermore, since one is a thermodynamically open system of energy, one can -- within certain degrees of freedom -- be open to the possibilities of the world. In addition, because one can construct conceptual systems or schema, one is, at any given time, characterized by a condition of being simultaneously open and closed toward one's condition of Dasein and the field of Being in which Dasein participates and that it illuminates according to its capacity to do so.

On the basis of one's capacity for 'primacy' as previously described, one gradually begins to organize the backlog of data derived from the many existential encounters of Dasein -- including sexuality and interpersonal encounters (i.e., the psychosexual and psychosocial dimensions) -- and, as a result, one creates meaning structures (i.e., 'conceptual approaches') which allow one to add depth, breadth, and character to one's intrinsic capacity for spontaneous motor activity. In short, 'Being-ness-as-such' contains all the fundamental existentialia necessary for one's 'Being-in-the-world' -- both intellectually, as well as in the sense, that one is 'born, suffers, and dies'. It is the specific existential encounters of 'Being-in-the-world' that, together with cognitive activity, will provide the initial, crude rudiments (as well as the relatively complex intricacies characteristic of later development) from which motivated behavior will emerge.

Clearly, the foregoing sort of perspective runs counter to the framework of sublimation postulated by Freud and Sullivan. After all if, by definition, needs exist only as somatic holes that require filling and are unconnected, initially, with motivational mechanisms, then there is no reason to suppose that innate drives will collide with cultural demands if the former (innate drives) do not exist.

On the other hand, the 'derived' needs that Sullivan discussed -- which are not incompatible with Freud's notion of sublimation -- are somewhat comparable to the notion of motivation offered here. Indeed, motivated behavior is characterized by its being derived from one's existential encounters ... just as Freud's and Sullivan's conception of sublimation required an encounter with cultural demands.

However, once one eliminates the idea of innately driven needs colliding with cultural values, one no longer seems to be discussing sublimation as it usually is understood. The most that sublimation and 'derived motivation' have in common is that both result in the modulating of behavior. Consequently, rather than retain the term 'sublimation,' and run the risk of theoretical confusions or misunderstandings, simply eliminating the term (that is, 'sublimation') and continuing to use the notion of 'derived motivation' seems less problematic.

Naturally, there are complexes of human behavior beyond hunger and thirst to which one might apply the 'derived motivation' concept. One could even apply this idea to sexuality construed in a narrow sense of genital activity.

More specifically, there does not appear to be any empirical evidence that conclusively demonstrates that a particular innate drive necessarily predates the erotic quality of sexual activity ... indeed, spontaneous exploratory behavior might have eventually led to the fondling of the genital area (the response) that, in turn, was felt to be pleasurable (the reinforcing stimulus). Since masturbation (with and without orgasm) probably often precedes adult genital activity, it is quite conceivable that the backlog of pleasurable experiences surrounding the genitalia has provided the motivation to participate in sexual intercourse.

Consequently, one need not resort to the notion of a drive as being the dominant force underlying sexuality. Postulating an innate capacity for skin or organ eroticism that becomes immersed in a matrix of behavioral responses and reinforcing stimuli might offer an adequate account of things quite independently of any mechanism rooted in an allegedly instinctual drive of 'sexuality.'

As such, the 'driving force' for sexuality is secondarily derivative and not necessarily primary. Therefore, in this sense, sexuality is not a

drive, per se, but a motivational force in the true sense of the word since this 'driving force' provides the organism with a rationale ... something often absent from any notion of innate drives. Furthermore, although human organisms possess the necessary equipment to preserve the species, one is not necessarily forced to argue for any inherent drive in an individual to preserve the species. As Goldstein points out:

"My assumption that nature is concerned with the individual might appear to be merely a metaphysical belief. Yet it is certainly no more metaphysical than the idea which ascribes to nature a lack of concern with the individual and sees as its goal the preservation of the species."⁴⁰

This notion of 'derived motivation' might have been one of the crucial factors that Harry Harlow stumbled upon while studying various aspects of the development of monkeys. Although the emphasis given to the results of some of Harlow's work often concerns the importance of social experience for acquiring the requisite responses necessary to react to certain social cues, there is a finer distinction that is also possible. Miller, while reviewing some of the highlights of Harlow's investigation, points out:

"But as the youngsters grew up, it becomes increasingly apparent that they were all very unhappy, asocial, aggressive, maladjusted monkeys. The most significant biological handicap they suffered was that none of them, male or female, was able to copulate. They all looked interested, but they did not know what to do."⁴¹

Is it that the monkeys did not know what to do, or was it, possibly, that they were not motivated to engage in sexual activity? One might suspect that if the monkeys were really interested (and, here one might give Miller the benefit of the doubt with respect to his use of "interested"), a way might have been found to satisfy that interest. However, perhaps it was not that they couldn't figure out a workable 'proposition', but, rather, that they simply did not possess a rationale

for seeking to utilize or discover the practical knowledge that was necessary to proceed with things.

In either event, the fact that Harlow's monkeys did not copulate causes one to question the idea of an innate, all-powerful sex drive seeking expression through its satisfaction. The existence of such a postulated instinctual drive seems to be inconsistent with Harlow's findings.

Moreover, there is no reason to conclude that the "asocial, aggressive, maladjusted" behavior of the monkeys was the result of a damned-up libido that could not be discharged through sexual channels. One of the centerpieces of Harlow's observations is the emphasis it tends to place on inter-monkey interaction as a explanatory source for such problematic behavior.

Consequently, a possible implication of Harlow's findings for human beings concerns the possible importance of interpersonal interactions in shaping and coloring the character of 'Being-with-the-world'. Aggressive, maladjusted, behavior patterns might be the result of any number of factors that were absent in the experimental setting of terry-cloth and wire-mesh mothers but were present in the normal, social context of monkey life ... and the same is also true in relation to human beings.

There are several ideas stemming from the investigation of operant conditioning that are quite suggestive here and help to clarify some of the foregoing ideas. For instance, in Keller's *Learning Reinforcement Theory* one finds the following selections concerning Thorndike's law of effect and related topics:

"In essence, the law states that an act might be altered in its strength by its consequences ... We commonly speak of such 'effect learning' as operant or 'instrumental' conditioning, and even measure its strength in terms of rate -- the frequency with which it occurs in time when the organism (animal or human) is free to respond at will ...

"This operant conditioning may be pictured as follows:

R----- > S

'R' is the response ... > means 'leads to', and S is the reinforcing stimulus."⁴²

There is a definite isomorphism between the foregoing description of operant conditioning and the conception of 'need' discussed previously. A need is a 'hole' that needs to be filled but does not become a motivating force until after a set of reinforcing stimuli have been processed cognitively such that the individual conceptually interacts with the environment in what Sullivan would refer to as a parataxic mode of elaborated experience.

More simply, certain somatic manifestations -- i.e., responses (such as kicking and crying on the macroscopic level and physiological and biochemical changes of the microscopic level) -- become associated with a need and, over time, are differentiated and linked with a range of reinforcers that result in satisfaction or result in a lessening of tension. However, as Hunt notes, it is not just a simple matter of response and reinforcement:

"Especially important in this connection (i.e., with respect to spontaneous, molar activity)⁴³ are the studies of human behavior under conditions of minimal variation in stimulation ... Few subjects could endure more than two or three days of such conditions. They developed a desire for variation which was almost overwhelming.

"While interpreting such facts in terms of drives for curiosity, exploration, or stimulation will get us only a re-description of them, Hebb's notion of an optimal level of activation -- and, I would like to add, stimulation variation below which increases are reinforcing and above which decreases are reinforcing -- is an integrative concept of fair magnitude."⁴⁴

Interestingly enough, this idea of 'optimal level of activation', together with Hunt's addendum -- which, when combined, might be termed the 'principle of derived motivation' -- fits rather well with the notions of 'openness' and 'closedness' discussed earlier and leads to a number of interesting possibilities. More specifically, absolute 'openness' or 'closedness' are likely to be extremes that probably are

beyond the range of one's capacity for attunement (or lack of such attunement) with respect to the world.

Generally speaking, one is usually somewhere between the two polar extremes. For example, even when one is sleeping, a human organism receives, and can adjust to, certain stimuli and, therefore, one is not completely closed off to Being-with-the-world in such a state.

Moreover, while one fluctuates from closedness to openness -- and vice versa -- one's mode of 'Being-in-the-world' is likely to be limited and/or facilitated by the structure of biological needs and capacities that modulate and color such modes of Being ... indeed, this, in essence, is the implication of Hunt's previously quoted argument. In other words, just as a biological organism tends to be characterized by openness ("stimulus-variation above which increases are reinforcing") and 'closedness' ("stimulation-variation below which decreases are reinforcing") so too, cognitive functioning -- which is (in part, at least) a special case of biological functioning -- tends to be characterized by the same sort of openness and closedness as outlined above.

Perhaps, therefore, the position advanced in the last part of the quote taken from Hunt's article can be applied, with some changes, to the idea of conceptual approaches or coping strategies. Every conceptual approach can successfully engage -- to a greater or lesser extent -- a range of possibilities ... the range varying with the approach (i.e., 'optimal level of activation') and the set of circumstances with which one is confronted.

If one is presented with a set of problems that are easily solved by a given conceptual approach (i.e., at, or slightly below, the optimal level of activation for a given set of circumstances), then such a conceptual approach will tend to become more established (i.e., reinforced) as part of one's cognitive mode of interacting or coping with the world in relation to such problems. On the other hand, just as every conceptual approach might be able to successfully deal with a certain range of possibilities, there also are likely to be a range of possibilities that such an approach might not be able to successfully handle and, again, this range varies with the character of the conceptual approach in question as well as with the nature of the set of existential contingencies in which one is immersed. If, in this instance,

one is presented with a set of problems that are too difficult for such a conceptual approach (i.e., above the optimal level of activation for that approach), then the conceptual approach might tend to become more established (i.e., reinforced ... but also more closed in character) as a style of coping strategy if it is presented with (or seeks out) problems it can handle (i.e., there is a decrease, of sorts, in stimulation variation or the level of difficulty of the problems one seeks to resolve).

As indicated earlier in this essay, every conceptual approach is simultaneously characterized by openness and closedness. To the extent one's conceptual approach allows one to consider and successfully deal with possibilities, then such approaches are open-ended ... and to the extent that one cannot do this, such approaches are said to be close-ended.

The array of possibilities with which a conceptual approach or coping strategy can, and cannot, deal are indices of the openness and closedness, respectively, of that approach or coping strategy. As long as the conditions of the aforementioned 'principle of derived motivation' are maintained, then a conceptual approach or coping strategy will tend to retain the overall balance of degrees of openness and closedness that is characteristic of such a conceptual approach or coping strategy. However, in those instances in which the conditions of the 'principle of derived motivation' are not maintained, one is presented with a new difficulty.

Thus, if one is confronted with a problem or a set of problems that are too difficult for a given conceptual approach or coping strategy, and yet there is not any accompanying decrease in the level of difficulty of the problems encountered or to which one is exposed, then there seems to be no provision within the 'principle of derived motivation' to predict what will occur. Will the initial balance of openness and closedness be maintained despite the presence of unsolved problems, or will there be a change of coping strategy in the direction of either one of the poles (becoming more open or more closed) with respect to one's way of trying to cope with things?

There is one consideration which might be of considerable importance in helping to predict an individual's possible way of responding when difficult problems are encountered. This

consideration concerns a type of motivational factor that enters almost every existential encounter ... namely, ontological insecurity.

In an article entitled: "Affectional Responses in the Infant Monkey", Harlow and Zimmermann refer to an interesting parallel between some of the results of their research with monkeys and the findings of an experimental study concerned with human infants. Harlow and Zimmermann describe the work of Arsenian in which the responses of children accompanied by a mother (or familiar nursery attendant) in a strange room containing toys were compared to the responses of children who were required to go into the strange room unaccompanied by a mother (or familiar nursery attendant).

The children were quantitatively compared on the basis of a "security score" that was a composite measure of a child's play behavior together with her or his general emotional response to the circumstances within which the play occurred (i.e., mother or no mother). Just as Arsenian maintained that the calculated security scores are higher for children accompanied by their mother (or familiar nursery attendant) than are the security scores for those children who were not so accompanied, Harlow and Zimmermann tend to lend support to the results of the Arsenian experiment when they report that:

"As soon as they [the monkeys] were placed in the test room, the infants raised with cloth mothers rushed to their mother surrogate when she was present and clutched her tenaciously, a response so strong that it can only be adequately depicted by motion pictures. Then as had been observed in the fear tests ... they rapidly related, showed no sign of apprehension, and began to demonstrate unequivocal positive responses of manipulating and climbing on the mother. After several sessions, the infants began to use the mother surrogate as a base of operations, leaving her to explore and handle a stimulus and then returning to her before going to a new plaything".⁴⁵

R.D. Laing has written along lines that might contribute considerably to the parallel noted by Harlow and Zimmermann to the work of Arsenian. In *The Divided Self*, Laing says:

"Most people feel they begin when their bodies begin and that they will end when their bodies die. We could say that such a person experienced himself as embodied.

"This, however, need not be the case ... there are individuals who do not go through life absorbed in their bodies but rather find themselves to be, as they always have been, somewhat detached from their bodies. Of such a person one might say that the, has never become quite incarnate and he might speak of himself as more or less disembodied.

"Here we have a basic difference in the self's position of life. He would almost have, if the embodiment or disembodiment were ever complete in either direction, two different ways of being human."⁴⁶

The embodied person is rooted in his or her biological constitution and its componential building-blocks of bone, muscle, etc. It is the embodied individual's corporeal being that constitutes her or his base of operations. From here, the individual goes out to meet the world.

As might be expected, the nature of one's base of operations greatly influences an individual's approach to life. For example, to the extent that a person is thoroughly embodied (which is, probably, rarely the case), the individual will consider herself or himself to be co-extensive with his or her body. The dangers that threaten that person's body, threaten that person as an individual.

On the other hand, the life experience processing style of a 'disembodied' individual contrasts significantly with the processing style of an embodied individual. Essentially, according to Laing, observation -- rather than bodily participation -- is the central characteristic of the 'disembodied' individual's approach to life.

In conjunction with the process of observing the actions that transpire in the physical world, the 'disembodied' individual focuses upon criticizing, directing, or applauding the body. The 'disembodied' individual focuses on gaining control over all that the body does.

The center of biological gravity, so to speak, has changed from the body (i.e., the embodied individual) to an 'internal' or mental station. The 'self' is no longer synonymous with one's body but becomes

coextensive with agencies of control and observation, and these agencies are felt to be detached and isolated, to varying degrees, from the external world in which the body is an active participant.

It does not take a great deal of translation to convert what Laing is saying into the terminology being used in the present essay. The person who is 'embodied is the person whose Dasein is physically and materially immersed in 'Being-in-the-world'. That individual is open to the field that his or her Dasein generated, including particular objects, other Daseins, and his own Being-ness as such.

The 'disembodied' individual, on the other hand, is characterized by various possible degrees of closedness to 'Being-in-the-world' as well as her or his own Being-ness as such. This individual tends to close himself or herself off from objects qua objects that the person's luminosity encounters while 'Being-in-the-world', and, in certain respects, this sort of individual has closed herself or himself off to many of his or her own possibilities as a biological/physical entity. In this condition, the fundamental existentialia that are characteristic of Dasein have become impaired and are prevented from becoming attuned to 'Being-ness-as-such' and 'Being-in-theworld'. Thus, Laing says:

"Under usual circumstances, the physical birth of a new living organism into the world inaugurates rapidly ongoing processes whereby within an amazingly short time the infant feels real and alive and has a sense of being as entity, with continuity in time and a location in space. In short, physical birth and biological aliveness are followed by the baby becoming existentially born as real and alive."⁴⁷

Laing goes on to describe the existentially alive individual as one who is able to:

"... experience his own being as real, whole; as differentiated from the rest of the world in ordinary circumstances so clearly that his identity and autonomy are never in question; as a continuum in time; as having an inner consistency, substantiality, genuineness, and worth; as spatiality co-extensive with the body; and, usually, as having begun in

or around birth and liable to extinction with death. He thus has a firm core of ontological security ...”⁴⁸

The experiential background of the ontologically secure individual forms a solid framework from which to extend out into the world. Such a background gives an individual a relatively clear conception of his or her own position in relation to other people and other things. Moreover, it helps direct the individual’s conceptual approach with respect to interpersonal situations by anchoring that individual’s psychic life with relationships that have been gratifying. From such a stable, secure sense of ‘Being-in-the-world’, an individual might easily be inclined to view most interpersonal relations (present as well as future) with others as likely to be of a gratifying nature.

In short, ontological security is intimately woven into the fabric of one’s conceptual approach or coping strategies. In fact, ontological security is more than woven into one’s conceptual approach ... it is often a precipitate of such successful conceptual approaches and coping strategies.

The experiential background of the ontologically insecure individual, on the other hand, leaves sizable gaps in the existential foundations upon which such a person must build her or his life. In other words, the conceptual approach or coping strategy life-style of an ontologically insecure individual tends to be characterized by a closedness that can limit the effectiveness of that person’s conceptual approaches and coping strategies.

Since the threshold for experiencing a felt sense of insecurity is low in such an individual, that person’s whole existence might seem to be fraught with dangers of one kind or another. This tends to help perpetuate the closedness of that person’s set of conceptual approaches and coping strategies with respect to the problems of life ... for, to be open (or not) to possibility and its consequences is to lay bare one’s basic sense of security or insecurity with respect to coping while Being-in-the-world.

Laing acknowledges that no one is likely to feel entirely ontologically secure and, therefore, most, if not all people, tend to exist in both existential modalities (insecurity and security) to varying

degrees and at varying times. However, Laing never really explains how an individual becomes basically insecure or basically secure in the first place.

Here Sullivan's perspective might prove to be helpful. More specifically, in an attempt to explain the origins of insecurity, Sullivan postulated that one of the fundamental driving forces of human behavior was a need for interpersonal security.

From Sullivan's perspective, anxiety cannot be handled by an infant on his or her own because such anxiety was induced by the very person required to remove it – namely, the mothering-one. Moreover, when such anxiety is removed, the result is not euphoria, according to Sullivan, but a sense of interpersonal security. Sullivan believes that the felt characteristics of such interpersonal security have an experiential coloring all of their own and are quite different from what transpires when there is a simple reduction of a tension of need with an alleged concomitant return of a euphoric state or sense of well-being.

In order to maintain this interpersonal security, an individual gradually develops a 'self-dynamism'. According to Sullivan, this dynamism is an equilibrating force that tends to resist any event that threatens -- or is perceived to threaten or disrupt -- the fundamental inertia of the pattern of interpersonal interactions that have been established over a period of time.

As such, the main function of such dynamisms is to allow individuals to confidently interact – to varying degrees -- within the surrounding interpersonal community despite the possibility that anxiety might arise during these interactions. This confidence has been developed through security operations -- such as selective inattention and dissociation -- which tend to help keep out of consciousness any conceptual disorganization that might have been caused by past instances of anxiety. The price, however, that a human being often pays to maintain such a sense of interpersonal security, is a certain degree of closedness to those experiential possibilities that might have been able to assist a person to modify the individual's self-system in more advantageous, successful, or useful ways.

Interestingly enough, Sullivan felt that the primary job of a psychiatrist:

"... is more or less to spread a larger context before the patient, insofar as that succeeds, the patient realizes that, anxiety or not, the present way of life is unsatisfactory and is unprofitable in the sense that it is not changing things for the better; whereupon, in spite of anxiety, other things being equal, the self-system can be modified."⁴⁹

However, one has difficulty conceiving of how a system that is as resistant to change as the self-system often tends to be would somehow become capable of being modified unless, at the same time that such a system was closed to certain existential encounters, it also was open (at least potentially so) to other aspects of 'Being-in-the-world'. In other words, unless an individual's 'Being-in-the-world' is characterized by certain kinds of ratios of openness and closedness, there appears to be none of the requisite degrees of freedom (either motivationally or cognitively) through which to initiate change. Consequently, to this extent, it seems more consistent, within the context of the present approach to things, to picture the self-system as, at least in part, a complex matrix of conceptual approaches or coping strategies ... all of which are characterized by varying degrees of openness and closedness to the possibilities of 'Being-in-the-world'.

Of course, the interpersonal dimension is only one aspect of 'Being-in-the-world'. Each human being has been cast adrift through unknown means into a strange and mysterious Ocean of Being, and because Being is both strange and mysterious, human beings are heir to an ontological insecurity that encompasses more than the interpersonal realm ... as important as the latter might be to 'Being-in-the-world'.

Furthermore, the ontological insecurity about which Laing spoke is not indigenous to just 'disembodied' individuals. Indeed, such a sense of basic ontological insecurity is a fundamental aspect of 'Being-in-the-world' for everyone and, consequently, something that Dasein cannot escape except – and possibly not even in this way -- by dying and losing the luminosity through which 'Being-ness-as-such' is encountered.

Laing came closer to the perspective that is being developed in the present essay than did Sullivan. Ontological insecurity is a part of becoming existentially born. To exist is to be ontologically insecure, to some degree, because Dasein might be epistemologically limited with respect to discovering, with certainty, all that Dasein needs to know in order to become completely, ontologically secure and totally at home in the world.

Therefore, although one might agree with Sullivan that a need for security is one of the major driving forces underlying human behavior, one might also disagree with his contention that this motivation is derived solely from interpersonal interaction. Rather, interpersonal security is only one, but an extremely important, form of manifestation or expression of a more fundamental ontological insecurity. Consequently, seeking interpersonal security is only one of the existential encounters with 'Being-in-the-world' from which motivation to seek security might be derived.⁵⁰

To the extent that an individual can gain, or is allowed to gain, a certain level of ontological security by constructing conceptual approaches that are open enough to allow one to interact on an ever-widening, more differentiated, and more heuristically valuable basis -- and, therefore, become more familiar with, more open to, and less insecure with respect to one's Being-in-the-world -- then one might predict that such an individual might be able to discover or uncover the motivational wherewithal to at least attempt to meet the challenges -- though there is no guarantee of success -- of the problems that one encounters throughout the realm of 'Being-ness-as-such'. On the other hand, to the extent that an individual cannot gain or is not allowed to gain such ontological security, the tendency with respect to such an individual might be for that person to become more closed to possibility and, to turn away -- without resolution -- from the problems that plague all human beings ... the most fundamental of which are birth, suffering and death -- and the significance that these have in our lives.

According to Piaget, intelligence constitutes a special form of biological functioning, and because it is rooted in such processes, intelligence inherits some of the limitations of biological of activity. In

describing this fundamental aspect of Piaget's system of thought, Flavell says:⁵¹

"Intelligence is first of all allied to biology in the sense that inherited biological structures condition what we might directly perceive. For example, our nervous and sensory system is such that only certain wavelengths give rise to color sensations, and we are unable to perceive space in more than three dimensions."⁵²

On the other hand, even though an individual is limited by the inheritance patterns characteristic of the human species, these same patterns also encompass various potentials that constitute the degrees of freedom that give expression to the intellectual possibilities that characterize what a person might be able to do. Thus, while one only might be able to see certain wavelengths of electromagnetic energy, one, on the basis of various data, also can infer the existence of other wavelengths outside of the visible spectrum and go on to hypothesize about, and experiment with, such phenomena on the basis of those inferences.

Thus, biological inheritance is something of a double-edged sword. One edge is relatively dull, hindering and limiting one's understanding of the environment, while the other edge is somewhat sharper and permits one to cut through – at least intellectually speaking -- some of the more subtle and more complex qualities of the environment.

Piaget terms the factors responsible for the limiting aspect of biological functioning as "specific heredity". On the other hand, those factors that allow somewhat more freedom in relation to biological functioning and interaction with the environment are referred to as "general heredity". With respect to this latter modality of biological functioning, Flavell points out that:

"The positive, constructive something which we inherit, Piaget argues, is a mode of intellectual functioning. We do not inherit cognitive structures as such; these come into being only in the course of development. What we do inherit is a *modus operandi*, a specific manner in which we transact business with the environment."⁵³

One of the fundamental characteristics of the aforementioned modus operandi is adaptation. For Piaget, however:

"Adaptation is said to occur whenever a given organism-environment interchange has the effect of modifying the organism in such a way that further inter-change, favorable to its preservation, are enhanced."⁵⁴

Adaptation is not just a passive process in which an organism modifies itself in accordance with the demands and nature of the environment. There is an active component as well as a passive component.

The passive component -- which Piaget calls "accommodation" -- refers to an organism's adjustment to those features of 'reality' that are not subject to being substantially, if at all, altered. For example, a child must adjust to the fact that a piano is -- for the child -- an immovable object, and when the child uses this understanding or acts with this unchangeable aspect of reality in mind, then the child is said to have made an accommodation to the way things are under a given set of circumstances.

The active or non-passive component of biological activity, in general, and cognitive functioning, in particular, involves an individual's modification of various aspects of the environment in order that these aspects can be integrated into the organism's over-all biological structure. Piaget terms this active dimension of adaptation: "assimilation".

According to Piaget, every behavioral act is characterized by both of these components (i.e., active and passive biological functioning) to varying degrees. Sometimes such activity is more accommodative than assimilative, and sometimes the reverse is true.

When the foregoing two forms of biological activity are relatively in balance, a biological or intellectual adaptation is said to have taken place. In other words, whenever an individual adjusts to the facets of, say, an object or situation that cannot be changed while also changing -- if so desired -- those aspects of such a situation or object that can be

altered, then the incorporation of the precipitates of these two modes of activity into an individual's biological structure is considered to be 'adaptive' in the sense that such incorporation or integration renders further interchanges between the organism and the environment as being more likely to be favorable to the preservation of the individual organism in question.

Of course, according, to Piaget, one cannot neatly separate adaptation into two components – that is, assimilation and accommodation. These characteristics are abstractions inferred on the basis of observing different aspects of adaptive functioning. Nonetheless, Piaget usually speaks in terms of these two characteristics of functioning in order to help lend clarity to his elaboration of intellectual functioning.

For Piaget, the notion of balance or "equilibrium", is an inherent part of an organism's biological repertoire of directed tendencies. Since there is often an imbalance between accommodation and assimilation (i.e., one adjusts more than is necessary, or an individual attempts to change realities that cannot be changed):

"...the equilibration process is the process of bringing assimilation and accommodation into balanced co-ordinations; and the different equilibrium states which result from this ubiquitous process are the various forms which this coordination takes during ontogenesis. An equilibrium state in Piaget's system always refers to an equilibrated system of relations between subject and object, and hence a relation between assimilation and accommodation."⁵⁵

This process of equilibrium -- together with Piaget's use of the idea of adaptation -- tends to instill an element of teleology in Piaget's conception of development – that is, an organism's tendency to seek out states of equilibrium. As already noted, adaptation orients an organism's activity toward acquiring an integrated, organizational structure that will be favorable to continued preservation. This orientation is an inherent dimension of the biological functioning that arises through the dimension of specific heredity, as well as being an expression of that biological activity that occurs due to the realm of

general heredity out of which cognitive functioning arises. Given that organisms seem to operate in this manner, Piaget assumes there is some inherent mechanism that ensures, to a certain extent, that this operational orientation will be maintained and, consequently, will be capable of stabilizing any disequilibrium that might occur ... if not immediately, then over a period of time.

Just as there is empirical evidence indicating the existence of biological servo-mechanisms that maintain homeostasis for various organs such as the heart, stomach, liver, and so on, Piaget assumes there also is a homeostatic-like principle at work in cognitive functioning. As previously noted, cognitive functioning is, for Piaget, only a specific -- albeit special -- case of general biological functioning.

Related to Piaget's aforementioned teleological accenting of the developmental process are his ideas concerning intellectual motivation. Essentially, intellectual activity is postulated by Piaget to be moved or energized by the intrinsic need of assimilatory activity to perpetuate functioning once the latter begins. Thus, a need to function -- as well as the process of functioning itself -- constitutes different sides of the same set of principles that govern all biological activity. Piaget's:

"...position is simply that there is an intrinsic need for cognitive organs or structures, once generated by functioning, to perpetuate themselves by more functioning. Schemas are structures, and one of their important, built-in propositions is that of repeated assimilation of anything assimilable in the environment. It is the very nature of assimilation that it creates schemas which, once created, maintain themselves by assimilating functioning."⁵⁶

Evidently, it is the nature of organisms to pursue their innate ideal of equilibrium on the basis of an equilibrating process that itself is innate. The need for structures, created by assimilation, to perpetuate themselves and, thereby, give rise to repeated assimilations is the means by which such directed functioning eventually can approach the ideal of equilibrium between accommodation and assimilation that Piaget has posited as the goal of all development.

Meaning-structures are another fundamental, characteristic dimension of cognitive functioning. Meaning-structures form the overall organization of one's adaptations and provide the underlying coherency that directs the manner in which the individual goes about accommodating and assimilating with respect to lived experience.

On the other hand, Piaget believes these organizational meaning structures would not be possible were it not for the underlying biological mechanisms involved in adaptive functioning. Adaptive functioning provides the stimulus information (i.e. the content), the methods of adjusting to (if necessary) and modifying (if possible) such sensory information, whereas, meaning-structures organize this content and the organism's functional responses to that content into structures, some of which Piaget called schemas.

In brief, meaning-structures are both created and, over time, are modified by cognitive functioning. Yet, between the point of being created and the point of being modified, meaning-structures organize and direct various aspects of interaction with the environment.

A schema can be described, roughly speaking, as:

“... a cognitive structure which has reference to a class of similar action sequences, these sequences of necessity being strong, bounded totalities in which the constituent behavioral elements are tightly interrelated.”⁵⁷

However, a schema is not just series of particular sequences of action. It also represents an organized disposition to act in certain characteristic manners.

As Flavell points out:

"A schema is a kind of concept, category, or underlying strategy which subsumes a whole collection of distinct but similar action sequences. For example, it is clear that no two grasping sequences are ever going to be exactly alike; a grasping schema -- a "concept" of grasping -- is nonetheless said to be operative when any such sequence is seen to emerge. Schema, therefore, refers to classes of total acts, acts which

are distinct from one another and yet share common features. Although the terms schema and concept are not completely interchangeable, Piaget has recognized a certain similarity between them: "The schema, as it appeared to us, constitutes a sort of sensorimotor concept, or more broadly, the motor equivalent of a system of relations and classes."⁵⁸

Thus, organizational structures provide the organism with both a common theme for categorizing a number of related actions, as well as a predisposition to use this group of related actions when interacting with the environment. Some of these structures operate on a relatively simple sensory-motor level (i.e., schema), and others are more intricate, involving a matrix of relations and classes that predispose certain aspects of an organism's activity toward complex manipulations of objects, events, and so on.

According to Piaget, schemas -- and meaning-structures in general -- are not static entities but are dynamic in as much as they are almost constantly being modified by accommodative and assimilative functioning. This is especially true of assimilative functioning since assimilative activity often reorganizes the existing schemas and, in various ways, integrates different schemas with one another. Such reorganization and integration extends the capacity of the organism to make further accommodations during interchanges with the environment. This accommodative activity, in turn, 'challenges' the assimilative facets of adaptation to integrate, if possible, such accommodative functioning into existing meaning-structures.

In order to meet such challenges, Piaget postulated there were a number of factors that characterize an assimilatory meaning-structure once it was created by cognitive functioning. He termed these factors: repetition, generalization, and differentiation-recognition assimilations respectively.

'Repetition' -- that is, repetition assimilation -- referred to reproductive or functional assimilation and concerned an organism's tendency to repeat assimilative structures over and over again. Secondly, 'generalization' -- or generalization assimilation -- encompassed the process of extending existing assimilation to novel objects. Finally, 'differentiation-recognition' assimilation involved the

gradual differentiating of objects, one from another, and the consequent recognition that emanated from such judgments.

The foregoing three classes of activities are, for Piaget, the fundamental characteristics of assimilation. He believed these activities to be largely responsible for keeping assimilative capacities abreast of new accommodations.

However, there was an additional characteristic of assimilation that could integrate two or more schemas that previously had had separate developments. Piaget called this process 'reciprocal assimilation'. It was an organism's method for bestowing a totality of meaning on a large number and variety of experiences, thereby allowing more extensive and complicated accommodations.

The term "challenge" that was used several paragraphs ago is quite appropriate in relation to the foregoing. Since there is, for Piaget, a certain teleological directionality to the biological activity of an organism, such agents are working toward producing meaning-structures that will establish an organizational basis for the equilibration processes ... according to Piaget, one of the underlying drives of all biological activity. Consequently, trying to fit, for example, a newly accommodated-to object into an organism's meaning-structure so that the object can be assimilated to that structure tends to be a considerable challenge for an organism.

In the event that such 'fitting-in' does not occur, the new feature will be unassimilated and, therefore, will remain outside of an organism's existing organizational structure. The result, according to Piaget, is an imbalance between that which can be accommodated-to and that which can be assimilated.⁵⁹

Under such circumstances, there is not only considerable pressure on assimilative functioning (as characterized by processes of repetition, generalization, differentiation-recognition and reciprocation) to modify the existing meaning-structure and keep in phase (i.e., balance) with newly accommodated-to features, there also is considerable need to assimilate new features and allow accommodation to extend further into the environment. If, on the other hand, an organism is able to accomplish these two tasks – namely, assimilation and accommodation -- then reflected in that accomplishment is Piaget's basic paradigm for development:

accommodation----->disequilibrium----->assimilative equilibration-
--->equilibrium----->development----->accommodation----->
disequilibrium

With each instance of equilibrium and, therefore, adaptation, comes development. At the same time, development opens new vistas that return the organism to a state of disequilibrium between accommodation and assimilation.

Generally speaking, Piaget's conceptual framework is divisible into a number of major developmental stages called periods, and there are three major periods: (1) the period of sensory-motor intelligence (0-2 years); (2) the period of preparation for, and organization of, concrete operations (2-11/12 years), and (3) the period of formal operations (12-13 and up). With the exception of the first part of the period of sensory-motor intelligence, that:

"...shows little other than a few uncoordinated, reflex-like activities..."⁶⁰

the stages or periods describe an evolutionary sequence of biological and, therefore, intellectual development.

"In Piaget's system, the panorama of changing structures in the course of development is conceptually partitioned into stages whose cumulative similarities and differences serve as conceptual landmarks in trying to group the process."⁶¹

Although a good deal of time could be devoted to investigating the transition from period to period in Piaget's theoretical framework, only some of the basic changes that characteristically differentiate the major developmental periods have relevance to laying a foundation for further discussion of cognitive activity and the general theory of abstraction that is to be proposed in this section of the present essay.

The sensory-motor period represents the first major facet of development and introduces the infant into the world. One of the most

fundamental undercurrents of this period is Piaget's belief that an infant has at her or his disposal a number of motor and imagistic mechanisms that enable an infant to represent and perform, on a limited basis, various internal, symbolic manipulations concerning the objects and events encountered in the environment. In Flavell's words:

"According to Piaget, actions performed by the subject constitute the substance or raw material of all intellectual and perceptual adaptation. In infancy, the actions in question are relatively overt, sensory-motor ones: the infant groups and sucks objects, makes visual searches, etc. With development, intelligent actions become progressively internalized and covert. At first ... the internalization is fragmentary and over-literal: the child seems to do little more than replicate in his head simple concrete action sequences he has just performed or is about to perform. As internalization proceeds, cognitive actions become more and more schematic and abstract, broader in range, more ... reversible, and organized into systems which are structurally isomorphic to logico-algebraic systems ..."⁶²

In short, later concrete and formal operations are, essentially, interiorized actions that do not manifest themselves externally. That is, there is an absence of the impulses necessary to discharge the internal actions and thereby give expression to them externally. Described in this fashion, particular cognitions are to be equated with a corresponding set of actions, and, consequently, whether the cognition is the result of direct motor-sensory representation or whether the cognition stems from an abstraction with respect to such action -- as is supposedly true of more complex forms of intellectual organization (i.e., concrete or formal operations) -- actions become the 'raw data' of development.

According to Piaget, formal operations symbolize the crowning achievement of intellectual development and the state of equilibrium toward which intellectual development has been directed since infancy. Moreover, the major feature characterizing this formal period -- but that is largely absent from the previous period (i.e., the period of preparation for, and organization of, concrete operations) -- concerns 'consideration of the possible', rather than 'preoccupation with the

actual'. This is the difference between, on the one hand, depending on what is immediately present and, on the other hand, thinking of possibilities that might relate to and explain whatever is immediately given.

Flavell describes this aspect of Piaget's perspective when he says:

"Unlike the concrete operational child, the adolescent begins his consideration of the problem at hand by trying to envisage all the possible relations that could hold true in the data and then attempts, through a combination of experimentation and logical analysis, to find out which of these possible relations in fact do hold true. Reality is thus conceived as a special subset within the totality of things that the data would admit as hypothesis; it is seen as the 'is' portion of a 'might be' totality, that portion it is, is the subject's job to discover."⁶³

Consequently, formal operations do not consist of a specific pattern of behavior as much as they constitute a general orientation towards problem solving in general. Just as schemas predisposed an individual toward certain sequences of sensory-motor behavior action, formal operations predispose or orient an individual toward a general approach to problem-solving. This orientation entails special modes of: organizing data; isolating and controlling variables; hypothesizing various possibilities, and embedding the overall set of exploratory, cognitive process in various forms of logical justification and proof.

Flavell compares Piaget's depiction of the possessor of formal operations with Piaget's understanding of a preoperational and concrete operational individual in the following way:

"The preoperational child is the child of wonder; his cognition appears to us naive, impression-bound, and poorly organized ... Anything is possible because nothing is subject to lawful constraints. The child of concrete operations can be caricatured as a sober and book-keeperish organizer of the real and a distruster of the subtle, the elusive and the hypothetical. The adolescent has something of both ... Unlike the concrete-operational child, he can soar; but also unlike the preoperational child, it is a controlled and planned soaring, solidly

grounded in a bedrock of careful analysis and painstaking accommodation to detail.”⁶⁴

Piaget’s differentiation of the concrete operational and formal operational child focuses on the idea of possibility. Piaget often gives expression to this qualitative difference in cognitive activity in terms of a ‘concrete-abstract’ continuum.

For example, the cognitive structures of a sensory-motor child are characterized by schema representing sets of observable actions. This predisposes the infant-child toward certain types of activity, but such activity is poorly organized and largely stimulus-bound. The concrete-operational child -- although more organized and somewhat less naive than children ensconced in the previous period -- is only a “book-keeperish organizer of the real and is, as well, distruster of the subtle, the elusive and the hypothetical.”

The cognitive structures of a child in the formal period of operations, however, are described by Piaget as a kind of interiorized schema in which certain aspects have been abstracted from actions that are usually discharged through sensory-motor activity. Consequently, this child -- unlike children of previous periods -- can enter, and methodically explore, realms of subtle and elusive possibilities that are derived from the formal abstractions that occur during this period.

Piaget’s tendency to describe development as a series of periods (or stages) -- which extends from: an infant’s being embedded in the immediacy of experience, to: the formal operational child’s capacity to cognitively transcend that immediacy -- gives expression to a relatively long-standing tradition among many students of psychological development. Apparently, until the capacity for abstraction is either somehow acquired or inexplicably emerges during the course of maturation, individuals are left to struggle within a concrete, impression-bound dimension of development in order to be able to accomplish the initial differentiation of themselves and their environment.

However, if one were to redirect this emphasis on “abstraction” and “concreteness” away from their noun forms – which, respectively,

'removes one from' or 'links one to' the immediate, tangible world – and focused, instead, on the verb form of the idea of abstraction, one alters Piaget view of cognitive development considerably.

'To abstract' refers to a mode of relating to one's 'Being-in-the-world'. Although neither Boss nor Heidegger discussed such a process per se, one might assume that the activity of abstraction might allude to Dasein's modality of attunement to 'Being-in-the-world' at any given instant of time.

More specifically, 'to abstract' is a form of cognitive functioning during which one is able to entertain different values at a common junction point and to extract from the juxtaposition of such values a common theme. However, this description of abstraction is only a preliminary sketch and must be given more detail so that its meaning can be woven into a more nuanced notion of cognitive development.

The *Webster New World Dictionary of American Language* defines "theme" in a number of ways, one of which is:

"a short, melodic series of notes constituting the subject of a musical composition as a phrase upon which variations are developed."⁶⁵

Among other possibilities, the same dictionary gives the following definition of "common":

"... belonging equally to, or shared by, everyone or all."⁶⁶

Considering the latter definition first, one might want to keep in mind that whether, or not, two (or more) things are said 'to share', say, an attribute depends on what criterion one uses for the idea of sharing. For instance, is the criterion in question to be construed in the sense of sharing a sundae, a bed, or a piece of bread ... or, is the criterion for sharing something to be construed in the sense that two things are 'red' and, therefore, share in the participation of the class of red things ... or does the criterion for sharing allude to a sense of being contiguous, e.g., sharing the same general spot in "space-time' co-

ordinates? Or, does the meaning of 'to share' involve some other sense of this phrase?

Whatever the nature of the criterion that is chosen for the idea of commonality or sharing, the underlying theme has to have been existentially encountered (i.e., experienced) in some way -- either through behavioral interactions, emotional connections, cognitive processes, or by linguistic interactions. In a way this resonates with something Sullivan said, and that was noted in the first part of this essay -- namely, that:

"Experience is anything lived, undergone, or the like."⁶⁷

Leaving aside, for the moment, the notion of "common", let us consider the idea of "theme". Given the definition of "theme" cited several pages earlier, if one were to remove that definition from the musical context in which it was immersed at that point of things, one would get something similar to the following result:

A short series of _____ constituting the subject of a _____ composition upon which variations are developed.

There are a number of words here such as "series", "subject", "composition" and "variation" that are quite crucial to the eventual meaning of the definition being constructed. Furthermore, there are several important gaps that must be filled-in and clarified before the definition can be said to be, in any sense, minimally adequate.

In the context of this essay, the first blank is fairly easy to fill in. For instance, the term "existential encounters" might fit in quite well.

The foregoing term -- that is, "existential encounters" -- together with the word "series" -- which is construed to mean a conglomeration of events or entities that are not necessarily characterized by logical or causal connections -- relates the concept of "theme" to the notion of "common" that already has been briefly outlined. As previously indicated, at a bare minimum, in order to be "common", a given series of existential encounters must have been experientially engaged in

some sense of the word (e.g., physically, emotionally, cognitively, and/or spiritually).

In other words, suppose one has a list of 'possible' experiences (e.g., taking a boat trip, going to a baseball game, buying a Rolls Royce, and writing a book). Although all of the members of the foregoing list constitute a series of existential encounters (namely, possible ones) nevertheless, the terms do not necessarily have anything in common with one another -- even if one has experienced them or read about them or been told about them (except, of course, that they all have been experienced in some way). Moreover, unless one knows, in some sense, the meanings of the words involved ... meanings that often are learned in circumstances that are experiential and ostensive in nature -- then the bases for establishing some sort of commonality among such experiences seems to be rather limited.

The next important word following the first blank noted earlier is: "subject". In the present context, this word could be construed to mean 'focal concern' ... something to which one's attention is drawn regardless of other contingent circumstances and that results in, or produces, a directed attending to some aspect of such circumstances.

Thus, if one is, for some reason, attuned to the color red and first sees a red object and, then, a different red object, one's attention might initially be drawn to the redness-aspect of such an experience rather than the form, texture, and so on of the objects being considered (although, naturally, there is a sense of difference presence with respect to the recognition that one might be dealing with different objects, but this difference is horizontal relative to, in the present case, the aspect of redness) . Of course, once one's attention is drawn to a particular characteristic of Dasein's field, one might come to focus on other characteristics that are contingent to, or in some sense related to, the initial focal concern. However, the emphasis here is on the aspect of an existential encounter to which ones' attention is initially drawn (i.e., redness) ... yet, the use of "drawn" should not necessarily be interpreted as meaning causally determined in the sense that one can do nothing else but look at the indicated quality.

The idea of being 'drawn' is more analogous to being addressed by one's name. When one's name is called out, it is an attention getter. Initially, it draws one's attention because of one's own existential

preparedness, so to speak, to be receptive, for whatever reason, to such a quality or focal concern and, then, one is free to continue the interchange or leave it for other interests.

If one were not properly receptive in the first place – for whatever reason – to being ‘drawn’, the theme in question, in and of itself, could not necessarily force one to attend to it. In this case, one is drawn toward something both because of what might be going on in one at the moment and/or because of what has gone on within one in the past, as well as because the theme in question resonates, in some way, with one’s interests (either innate or derived) ... as such, there is a dynamic between the two in which the locus of causation in relation to ‘being drawn’ cannot, strictly speaking, be located entirely in the ‘object’ or entirely within the individual.

The second blank appearing in this working-definition for “theme” could be filled-in by the word “conceptual”, and this word, in conjunction with the word that succeeds it – “composition” -- refers to the cognitive products of “concept formation”. ‘Concept’ is not to be restricted to just categories of, for example, objects or events. It also includes ‘conceptual approaches’ that are epistemological and hermeneutical modes of interacting with, and toward, one’s existential encounters ... or, in the terminology of an earlier section of this essay, such approaches are modes of attuning Dasein to a particular pitch of openness and closedness to ‘Being-in-the-world’.

‘Approach’ concepts are different than ‘group’ or ‘category’ concepts in that the former represent an orientation with respect to existential encounters that often are purposive, intentional, goal-oriented, and so on, while category concepts label entities, events, and even conceptual approaches on the basis of rules and principles that -- depending on the characteristics that are ascribed to objects and events in relation to such rules or principles -- assign different entities, events, actions, etc., to particular classes composed of members said to have met the rules of assignment for that class/category. Perhaps, a more accurate manner of phrasing the foregoing distinction is to assert that categories label or code the focal concerns that conceptual approaches structure or organize into modalities of interacting with the various dimensions of ‘Being-in-the-world’.

Thus, for example, 'science as an approach' is a mode of interacting -- or a complex of such modes -- with, and toward, one's existence. This basic modality of attunement not only guides one's interaction with the phenomena encountered, it influences one's attitude toward those phenomena ... in other words, the approach orients, colors, or organizes one's activity.

'Science as a category', on the other hand, is a label that designates all the modes that can be said to meet the requirements of a rule (or rules) of assignment concerning that category. Thus, one could say that the main difference between the two (that is, science as an approach" and science as a category) is that the former does what one names, while the later names what one does.⁶⁸

A conceptual approach does not have to be as sophisticated as some form of science. A conceptual approach can also characterize a very basic level of interaction involving nothing more than what is commonly referred to: as 'approach and avoidance'.

As indicated several pages ago, the fact that one is drawn or attuned to, say, movement, color or pattern does not mean that one is forced to attend to this preferred area of focal concern. It simply means that there is a higher probability that, given 'appropriate' circumstances, the individual will attend to such focal concerns rather than others because those focal concerns are somewhat differentiated from other aspects of the environment due to one's being, in a sense, primed to notice such features of one's existential encounters.

For example, Robert Fantz has conducted a number of interesting studies concerning the origins of certain facets of perception. In general terms, one of the questions he wanted to address was the long-standing 'nature vs. nurture' controversy.

More specifically, given that babies seem to be able to perceive various forms, he wanted, to determine the conditions under which infants begin to use such a capacity. Fantz reasoned that since people were extremely important in the infant's life, perhaps the infant's response to varying patterns, including facial patterns -- which he considered to be the most distinctive and reliable dimension of an individual's appearance -- would uncover selective patterns of an infant's perceptual interaction with the environment. After conducting

a number of experiments concerning an infant's pattern preference, Fantz concluded:

"From these few examples there can be no question of the importance of visual pattern in everyday life. It is therefore reasonable to suppose that the early interest of infants in form and pattern in general, as well as in particular kinds of patterns, plays an important role in the development of behavior by focusing attention on stimuli that will later have adaptive significance."⁶⁹

Fantz's findings have implications with respect to the postulated need for ontological security discussed earlier in this essay. For instance, one easily could imagine that being attuned to certain preferred areas of focal concern could, in time, come to represent an individual's way (conceptual approach or coping strategy) of meeting part of the individual's need for ontological security since it will be one of the initial ways in which 'Being-in-the-world' can begin to become epistemologically and, therefore by implication, ontologically stable ... even though all levels of 'stability' that are available to humans (whether in infancy or in grown-ups) tend to be colored by ontological insecurity since, due to epistemological limits and lacunae, the preponderance of our existential encounters tends to be weighted in favor of a sense of ontological insecurity relative to a sense of ontological security.

Human beings are never likely to know enough to assure that one's 'Being-in-the-world' will be ontologically secure. The most for which we might hope is the opportunity to develop some degree of rootedness while 'Being-in-the-world', and perhaps the most important initial component in generating such rootedness would be to develop something analogous to what Erikson terms a sense of "basic trust":

"...an attitude toward oneself and the world derived from the experiences of the first year of life. By 'trust' I mean what is commonly implied in reasonable trustfulness as far as others are concerned and a simple sense of trustworthiness as far as oneself is concerned. When I

say 'basic', I mean that neither this component nor any of those that follow are, either in childhood or in adulthood, especially conscious."⁷⁰

There are, however, several modifications to Erikson's position that should be made in order to convey, more exactly, the meaning of being rooted that was alluded to above. For example, "trust" -- or what is here termed ontological security -- does not involve just people ... even though people are an integral part of one's acquiring such rootedness. Trust or ontological security involves, as Erikson first indicated in the foregoing quote, the whole world.

Coming to trust people without an accompanying feeling of trustworthiness toward the rest of one's environment will impair one's chances of feeling at home in the non-human aspects of 'Being-in-the-world' (the reverse is, of course, also true). Furthermore, although an individual very likely does not consciously remember the series of early encounters that led to one's sense of trust (or mistrust), the conceptual approaches derived from these encounters remain a part of one's conscious interaction throughout life.

Naturally, the approaches developed on the basis of such encounters are subject to change over time. Nonetheless, the sense of trust or ontological security that might arise out of those encounters is extremely important in orienting the individual toward different aspects of the individual's field of Dasein and whether, or not, that orientation is characterized as interactive, non-interactive, or, to varying degrees, both.

The foregoing comments parallel some remarks made by Erikson in a footnote that accompanied his discussion of basic trust and mistrust in *Identity and the Life Cycle*:

"One of the chief misuses of the schema presented here is the connotation that the sense of trust (and all the other positive senses to be postulated) is an achievement, secured once and for all at a given stage. In fact, some writers are so intent on making an achievement scale out of these stages that they blithely omit all the negative senses (basic mistrust, etc.) which are and remain the dynamic counterpart of the positive sensed throughout life...."

“What the child acquired at a given stage is a certain ratio between the positive and the negative which, if the balance is toward the positive, will help him to meet later crises with a better chance for unimpaired total development.”⁷¹

Generally speaking, because needs are like they are (i.e., without the means of directed determinateness to fill themselves) and because interaction with preferred areas of focal concern is found to fill such needs, then one begins to build-up a backlog of experience ... some of which concern needs ... some of which are a result of one's preferred, innate focal concerns ... some of which are a result of 'derived' focal concerns (i.e., from experience) ... and some of which are an incidental result of being concerned with the other three -- all of which serve as the foundations out of which conceptual approaches or coping strategies, as well as various systems of categorization⁷², arise.

Of course, not all experiences have equal 'drawing' power. Indeed, the short excerpts from the Frantz article cited earlier indicate that although an infant might show a preferred interest in patterns, as opposed to, say, a blank piece of colored cardboard, nevertheless, there also were particular patterns (e.g., the facial patterns) that appeared to captivate or draw the attention of a child more than did other patterns. Facial patterns, moreover, are only one of the many components of the psychosocial dimension that come to 'draw upon' an individual's attention.

Furthermore, there also are various aspects of the psychosexual dimensions involving different erogenous zones that -- even if one contends, as I have done previously in this essay, that they are not part of any innate drive mechanism (although they do give expression to certain innate capacities) -- nonetheless, due to their potential for generating conflict in relation to cultural norms and taboos, tend to draw attention to themselves and, in the process, color experience in characteristic ways. Each of these dimensions (psychosocial and psychosexual), as well as other dimensions of 'Being-in-the-world' (for example, interacting with non-human aspects of existence), produce an enormous supply of stimuli with 'drawing power' that not only provide a backlog of coded (in some biochemical, bioelectrical, neural-physical, and/or mental manner) but provide a storehouse of

experiential encounters that share a certain sense of commonality with human-related experiences in as much as the former might impinge on, or draw, an individual's focal concern at the same time as human-related experiences occur.

However, one should not infer from the foregoing that an infant immediately is able to perceive that different facets of experiential encounters that occur together are necessarily related in some underlying way. Rather, since various aspects of such experiences impinge on or engage an individual at the same time (for example, the infant's tactile experience of nipple-in-lips occurring in conjunction with a mother's feeling anxious and transmitting this to the infant), such different facets of experiential encounters might be more likely to be coded (i.e., a 'judgment in abstraction' is being made) as part of a theme of commonality -- and, thereby, subsequently become part of an integrated focal concern -- than might be the case for existential encounters involving various experiences, no two of which were judged or felt (through a process of abstraction) to hold some quality in common to a sufficient degree that they might be coded in a similar or common manner and, thus, eventually be dealt with as all belonging to one focal concern or theme of commonality.

Needs and various other felt stimuli involving pain and pleasure often do have a felt constancy or 'taste' about them. However, this might not be so much a reflection of the regularity of the world as it is a reflection of the tendency of human beings to 'regularize' their worldly experience. In any event, it is the experiential sense of disparity between, on the one hand, those aspects of experience that, over time, are judged -- rightly or wrongly -- to belong together and, on the other hand, those facets of experiences that are judged -- rightly or wrongly -- not to have any sense of commonality to them that tends to form the heart of conceptual approaches or coping strategies through which an individual engages life and around which experiential encounters are oriented in the form of focal concerns or preferred ways of engaging experience.

The foregoing brings us to the final, crucial word in the working definition of 'theme' -- namely, 'variation' -- which is being constructed and that has been my focal concern for a number of pages. Variation is

related to concept formation in that the concepts one forms are creative variations on the existential encounters one has.

The 'conceptual composition' referred to previously involves a process of limiting one's intentional orientation toward, or way of interacting with, various aspects of the environment ... a composition that produces many of an individual's focal concerns. However, there are not only natural focal concerns -- such as the kind that Fantz sought to draw our attention -- but there are 'derived' focal concerns, as well, and these derived focal concerns are the product of cognitive functioning. 'Variation operations' encompass all the things that can be cognitively done with any existential encounter.

In many ways, these operations are like a process of carpentry. The mind (which might, or might not, be the same thing as the brain) has the capacity to: open oneself up to different aspects of experience by focusing on them or closing oneself off to such facets of experience by disregarding them or selectively inattending to them. Or, one can add pieces of experience, according to one's inclination and needs, from one's encoded backlog of experiential encounters. Or, one can seek to make various experiential encounters fit together in jigsaw fashion through various processes of integration, irrespective of whether, or not, such encounters are experientially contiguous with, or juxtaposed to, one another. Or, one can try to smooth out anomalies by refining, extending or elaborating one's repertoire of conceptual approaches and categories, and so on.

Furthermore, the tools the mind uses in the foregoing ways give expression to its own innate capacity as a cognitive carpenter. To this extent, although the basic idea of operant conditioning – which was touched on earlier in this essay -- is appealing and has heuristic value for understanding certain aspects of human functioning, the concept seems too restricting to capture the creative dimensions of the mental carpentry that appears to go into the generation of conceptual approaches or coping strategies 'Concept formation' carries with it a flexibility and richness that seems to transcend the principles of operant conditioning ... however important these latter processes might be with respect to shaping various aspects of human functioning.

To sum up, through the sort of 'variation operations' or mental carpentry outlined in the foregoing discussion, concepts are formed. The raw data for such formation are the existential encounters that become – through individual choice, natural inclination, and perceived need -- the focal concern of processes of cognition that vary such concerns in different conceptual directions.

This capacity of an organism to perform mental carpentry – a capacity that revolves around the process of extracting a common theme from ontologically contiguous or non-contiguous possibilities (i.e., the coding of -experience) – is the process to which the term 'abstract' might appropriately be applied. "Abstract" in its verb transitive form means:

"to think of (a quality) apart from any particular instance or material object that has it ... to form (a general idea) from particular instances."⁷³

To abstract does not necessarily mean that one cognitively removes oneself from a given concrete situation. To abstract might mean that one is orienting oneself toward what is concretely at hand in a particular way ... or some variation thereof.

This capacity to abstract by orienting oneself toward experiential encounters in various ways tends to form one of the fundamental aspects of what can be called the psycho-conceptual dimension of 'Being-in-the-world'. It is a process that often is responsible for representing other dimensions within the field of Dasein (including the psychosexual and psychosocial).

However, given the foregoing discussion concerning abstraction, it should be reasonably obvious that the psycho-conceptual realm is not just a passive recipient of existential events occurring in other dimensions of experiential encounters (e.g., the psychosocial or psychosexual). The realm of the psycho-conceptual also acts, to varying degrees, on those other dimensions of experiential encounters, by structuring, organizing, and altering them.

To take just one example, Sullivan's "self-system" has been described as a function of the imperfect observations of present

circumstances correlated with early and later instances of felt anxiety in interpersonal relations. Yet, the self-system could just as easily be understood to be a product of mental carpentry through which an individual has cognitively structured an experiential set of circumstances in terms of conceptual approaches and categories that give expression to varying modes of openness and closedness (as a function of different focal concerns) to on-going experience ... of which anxiety is but one component -- albeit an important one.

The so-called 'Cambridge School of Thought', usually identified with Jerome Bruner, takes a position similar to that of Piaget with respect to its ideas concerning the concrete/abstract dimensions of development.⁷⁴ Therefore, a great deal of the thinking of that school is embedded in a vocabulary of concept formation and concept attainment.

For example, since one initially perceives 'Being-in-the-world' as:

"... composed of a tremendous array of discriminably different objects, events, people impressions"⁷⁵

then, one solution to this overwhelming barrage of impinging stimuli is to categorize and treat the things around one that are discriminably different as being equivalent in terms of certain rules governing such process of categorization. Categorization is a way of responding to the perceived similarities of various objects and events rather than emphasizing their uniqueness.

To convey the idea of what is meant by a criterial attribute, Bruner, Goodnow and Austin use the following example involving an apple:

"In so far as changes in the values of any particular attribute do not produce changes in the probability of being called an apple, we call that attribute non-criterial. Any attribute that when changed in value alters the likelihood of an object being categorized in a certain way is, therefore, a criterial attribute for the person doing the categorizing.

Obviously the extent to which an attribute's values affect the likelihood of categorization is a measure of its degree of criteriality."⁷⁶

This general idea of an "attribute that when changed in value alters the likelihood of an object being categorized in a certain way" is also, as the foregoing authors point out, characteristic of defining attributes. The main difference between criterial and defining attributes, however, is that criterial attributes concern the particular similarities selected by an individual or a group of individuals to represent a given instance of categorization. Defining attributes, on the other hand, refer to the "official" (institutional or cultural) standard(s) by which one adjudges class membership.

Although criterial attributes might eventually become defining attributes when official sources adopt some given individual standard, criterial attributes usually refer to idiosyncratic ways in which a person categorizes life experiences. As such, these idiosyncratic ways of classifying things tend to differ from the accepted standard for such instances of classification or categorization. Bruner, Goodnow and Austin point out that:

"The distinction between defining attributes is essential ... For it permits us to think of categorizing as a process of achievement: discovering the defining attributes of the environment so that they serve with their proper values as the criteria for making judgments about identity."⁷⁷

Much of the spirit of the foregoing distinction is implicit in the manner in which those authors emphasize and de-emphasize certain ideas. For example, this is quite evident when they distinguish between 'concept formation' and 'concept attainment'. According to them, concept formation involves the creation of a set of classes that is directed toward ordering the diversity that one encounters, whereas:

"Attainment refers to the process of finding predictive defining attributes that distinguish exemplars from non-exemplars of the class one seeks to discriminate."⁷⁸

Although the aforementioned authors do acknowledge that concept formation is the first step on the way to attaining a concept, their emphasis is clearly on the attainment aspect of cognitive activity. Moreover, what interests them is not just any attainment. They are particularly interested in the manner in which individuals attain defining attributes.

This emphasis on concept attainment, however, is not indigenous to the thinking of just Bruner, Goodnow, and Austin. That emphasis also is carried over into other work emanating from the Cambridge Center for Cognitive Studies. Thus, in a relatively recent book entitled *Studies in Cognitive Growth* Bruner et al apply the basic ideas outlined above to some research that investigate various aspects of cognitive growth in different cultures.

Moreover, fundamental to many of the studies being alluded to in the foregoing work is the idea that the superordinate/subordinate scale is, more or less, analogous to the abstract-concrete scale. According to such thinking, the degree of access that a person has with respect to superordinate terms is an index of that individual's level of abstraction. Similarly, one's use of subordinate terms in place of superordinate terms indicates the degree to which one is stimulus- and impression-bound with respect to superficial characteristics and, therefore, tied to the immediacy of a given concrete experience.

By superordinate, the aforementioned authors refer to grouping structures that are based on one or more attributes common to all the items included in a given test. More specifically, in the article "On Culture and Equivalence: II", Greenfield, Reich and Oliver write:

"Not all arrays of equivalent things reflect a superordinate or 'true' concept. Superordinate groupings result from correctly applying a rule. This rule states the criterial attribute(s) that distinguish members of the group from certain other things in the domain. In logical terms, this rule defines the intensive properties of a class. If the concept is truly abstract, in the sense that the defining property is superordinate to and removed from its exemplar, irrelevant attributes of particular objects will not affect the grouping. Objects will be classed solely according to the stated criterial attribute ... we might say that the presence of a 'true' or superordinate concept is indicated by

the correct recognition of its particular instances. The universe of such instances constitutes the extension of a concept. As Inhelder and Piaget point out, intension logically implies extension, and vice versa. This is so because a statement of criterial attributes defines, deductively, the universe of exemplars, whereas the enumeration of the universe implies its common properties through induction. In a 'true' concept, then, intension (criterial properties) and extension (domain of exemplars) are perfectly coordinated, so that one defines the other."⁷⁹

One might conclude from the foregoing that subordinate referred to any non-superordinate strategy of classification. If a given instance of categorization did not 'capture' the attribute(s) that all the test items had in common -- such as color, shape, and function -- and only formed a "complexive" grouping that is based on several different characteristics -- some common to all the test items -- then the grouping was subordinate to and less inclusive than the rule generated by the superordinate categorization. Furthermore, subordinate categories were considered to be bound to the test item and, therefore, considered to be of a concrete nature, whereas, superordinate categories (whether indicated intensively or extensively) were considered to be removed from the particular exemplars involved and, therefore, abstract.

Although one might agree that intension logically implies extension, it also seems to be fairly obvious that different intensions do not necessarily imply similar extensions or vice versa.⁸⁰ Yet, this seems to be the working assumption of the authors in question.

A child is said to have a superordinate category if he or she can present either the intensive criterial attributes or the extensive exemplars thought to be characterized by a given array of test items. If the child manifested knowledge of the superordinate rule, this knowledge was used as the criterion for referring to that child's thinking as being abstract since the authors felt this required being able to intellectually remove oneself from the immediate array of objects and, then, proceeding to switch to a level that was beyond the immediacy of the particular, concrete exemplars. If, on the other hand, a child was not able to offer the intensive attribute or the extensive

exemplars considered to be characteristic of the test objects, then that child's thinking was said to be concrete in nature, and, as a result, the child was considered not to have attained a superordinate or abstract level of cognition.

This emphasis on superordinate categorization is so strong in the Cambridge School of Thought that its proponents often do not seem to be able to see the conceptual forest through the categorical trees, and this blindness extends back to that school's decision to emphasize concept attainment and de-emphasize concept formation. The advocates for that school have become so completely absorbed in superordinate modes of structuring and approaching data, that they sometimes seem to forget that these methods are themselves conceptual inventions necessitated by a world that has become more complex and differentiated than ever before ... mental inventions that have gradually evolved during human history to serve as various kinds of conceptual approaches or coping strategies as human beings pursued a quest for knowledge ... a quest that often tends to haunt us.

There are, I believe, a number of reasons why using the foregoing ('Cambridge School') approach as a means of distinguishing between the abstract and the concrete is misleading and camouflages the actual nature of a child's cognitive activity. Perhaps, the problems that seem to be inherent in the 'Cambridge' position might best be introduced by a distinction between learning and concept formation.

Learning can be said to involve an organism's "accommodation" to the environment. As such, learning is a modification of an organism in order to be able to adapt to a given set of environmental circumstances. Concept formation, on the other hand, refers to an individual's activity involving the modification of some aspect of one's engagement of that environment and, as such, might more appropriately be referred to as "assimilation". Concept formation involves attempts at assimilating the world to one's own ends, means, goals, needs, or manner of engaging the world.

To the extent that one's cognitive activity focuses on the coding and storing of, say, a linguistic label (i.e., a category), it gives expression to learning and constitutes a concrete operation. To the extent that one's cognitive activity concerns the invention of a 'category' or an 'approach' (through the extraction of a common theme

from mentally juxtaposed experiential encounters), this gives expression to concept formation and, as such, constitutes an abstract operation.

Labels and category names are convenient ways of encoding information and storing various, concrete features of experiential encounters. Such categorization, of course, also can be – and is -- done on pre-linguistic levels but this latter process is, probably, quite limited in its capacity to categorize.

The labels provided by language are what enable individuals to encode a great deal of experience that probably might not be mentally codable in the absence of a language. Indeed, one of the great potential advantages of linguistic coding versus pre-linguistic coding is that the former offers one a more complex, nuanced way of organizing, structuring, differentiating and engaging a backlog of experiential encounters than does pre-linguistic coding.

Once learned, words become focal concerns that can attune one to certain aspects of the environment in various ways. That is, words come to have a demand characteristic or 'drawing power' with respect to directing attention just as do certain aspects of the aforementioned psycho-sexual and psycho-social dimensions.

Nonetheless, similarities and equivalences are not determined by labels or categorizing, per se, but by an underlying process that produces the concepts to which labels can be attached. Therefore, if learning is to have anything more than referent capacity (i.e., the possession of a list of characteristics that are considered to serve as the criterial attribute(s) for a given category and, as such, constitutes an index, of sorts, for that category) what one learns must be conceptually reformulated or recast in terms of one's own capacity for concept formation.

In other words, if one is to correctly apply, say, a set of mathematical operations that are 'learned by rote', one will have to do more than learn the set of criterial attributes that constitute, for instance, multiplication, factoring, integration, and so on. At some point, one will have to re-formulate the concept that is at the heart of each of these processes all over again ... as if one were inventing the essential idea involved for the very first time. In order to understand or comprehend what one learns (for one can learn something without

understanding it), one has to be able to conceptually re-work all, or many, of the steps involved by means of one's capacity for the abstract processing of experience.

In short, concrete operations provide an initial coding of experience (in terms of both pre-linguistic and linguistic labels). However, the precipitates of abstract operations or concept formation are what enable one to re-restructure, structure, organize, manipulate, and vary such concrete coding.

One category is not more superordinate than another category unless one accepts both the conceptual basis of categorization for the two categories, as well as the mental relationship that underlies that manner of categorization. Without such acceptance, the categories remain labels, names or referents.

In other words, unless one uses or accepts the rule(s) underlying a given superordinate category as a mode of approaching, or of being predisposed toward, 'Being-in-the—world', then the category remains just a name involving certain focal concerns. The defining criteria that Bruner emphasized are conventions and not logical and empirical necessities.

For example, if one took the Newtonian view concerning the nature of light and argued that light consisted of tiny particles (corpuscles) traveling at enormous speeds, then in relation to the two categories – namely, 'light energy' and 'matter' -- matter would be a more superordinate way of categorizing electromagnetic phenomena such as light because the idea of matter represents the rule that defines the intensive properties (criterial attributes) of the phenomena being studied ... that is, 'light energy' would be a 'complexive grouping' (cf. the Cambridge perspective) unable to take into account many of the elements common (according to Newton) to all such phenomena – namely, their corpuscular-like properties under a variety of circumstances. On the other hand, if one were to assume that Christian Huygens was correct in his contention that light consisted of tiny waves of energy, then matter is no longer being considered as a superordinate category since the idea of matter does not seem to define the intensive properties of wave-phenomena.

As it turns out, modern physics considers matter and waves to be, more or less, equivalent categories. As a result, the physical world has

come to be understood in terms of a form of superordinate categorization of phenomena that originally was believed to be divisible into two classes or categories: matter and energy.⁸¹

Depending on an individual's conceptual orientation or attunement to experiential encounters, different modes of categorization might become superordinate or subordinate. Nevertheless, one still might hesitate – for example as in the context of the foregoing discussion concerning the material or wave-form nature of the universe – to claim that a given form of superordinate classification within a certain conceptual approach was necessarily an index of such a category's abstractness or degree of being divorced from the immediacy of some experiential exemplar (or set of them).

Instead, to contend that one is always stuck or rooted in the concrete givens of one's experience seems a more correct, if not heuristically valuable, way of approaching such issues. Conceptually speaking, one merely alters the character of the ratios of openness and closedness through which one engages such experiential encounters – and the process of altering the character of such ratios gives expression to abstraction.

In changing one's orientation to such ratios, one is neither divorcing oneself from, nor further immersing oneself, in the tangible experiential context through which one engages 'Being-in-the-world'. Rather, one is becoming open and closed – or attuned, and selectively inattending -- to various possibilities with respect to such experiential encounters.

The superordinate and subordinate categories one might use are neither more abstract nor more concrete, respectively, with respect to each other. Both facets of things (that is, the superordinate and the subordinate) are the result of a process of abstraction that forms conceptual approaches or coping strategies that differ in their capacities and modes of openness and closedness to on-going experiential encounters as well as a backlog of encoded encounters.

Like a computer, the human being can accomplish an array of amazing feats (indeed, the human mind is the most amazing computer known to human kind). However, also like a computer, the mind is: (1) only as good as its basic hardware design and software capabilities

allow it to be, and (2) dependent upon the quality of information that it is fed.

If a given mind's memory banks do not have the information necessary to solve a problem, such a mind is not likely to produce the correct solution regardless of its capacities. If, on the other hand, an individual has not programmed herself or himself to be able to consider certain alternatives, then all the information in the world -- no matter how accurate it might be -- might not be able to help such a person solve certain kinds of problems.

This is why both the encoded (learned) backlog of information, as well as appropriate conceptual approaches (i.e., software or coping strategies) that will attune one to the possibilities of such information, are necessary. Furthermore, in the event one currently has neither an appropriate conceptual approach nor the requisite information, then if one has the requisite hardware, one needs to develop the sort of conceptual approaches or coping strategies that might permit one to have a chance of becoming properly attuned to the experiential data that is streaming while "Being-in-the-world".⁸²

If an individual is, eventually, able to form such an approach or acquire the requisite information, that information becomes open to certain aspects of experiential encounters to which the individual previously was closed. Such an individual has been able to conceptually work through the issues involved – that is, engage the experiential encounters through processes of abstraction (as outlined previously) -- and, thereby, form a rule or principle (i.e., conceptual approach) which allows the person to use that approach to cope with this or that problem ... but much depends on that to which one becomes open and that to which one becomes closed.

From time to time, cognitive life is characterized by varying degrees of closedness. This is true even in relation to the mental processes of an adult.

In part, such closedness is caused by the tendency of most of us to believe that we are somehow special and above the rest of 'Being-in-the-world' ... that we are superordinate with respect to them ... that our thinking is somehow more advanced and beyond the grasp of one's intellectual inferiors (subordinates) ... that one's perspective is something more than a mere conceptual orientation, but, instead, and

in some way, has a corner on a truth market that is believed to reflect the nature of reality.

Evidently, it is something of a slap to the conceit of some adults to consider the possibility that the only advantage an adult might have over a child is that the former has a broader and deeper backlog of encoded experiences, together with a time factor during which the adult has had an opportunity to make a great many mistakes – some of which led to learning of a kind -- with respect to the experiential encounters that a child is just beginning to explore. Bruner, et al, have so emphasized the importance of attaining the concept of particular sorts of category (i.e., superordinate ones) as being at the heart of the notion of abstractness that they appear to have overlooked a crucial aspect of cognition ... which is the nature of the activity itself.

More specifically, abstraction is the process of orienting oneself to various aspects of concrete experiential encounters, and it has nothing to do with removing oneself from such concrete, lived experience. Abstraction is a process of orientation and not the product of such a process.

The importance of an individual's creative use of criterial attributes in forming concepts (and creativity is inherent in all acts of concept formation) has been overshadowed by Bruner, et al, giving emphasis to the relationship of defining attributes with respect to concept attainment. Unfortunately, because those individuals assume that concept formation presupposes concept attainment, any child who cannot attain a given concept is not capable of concept formation. However, as indicated during the prior discussion, not all concept formation necessarily involves concept attainment in Bruner's sense of the term. Individuals – both young and old – are constantly generating and using criterial attributes to construct categories and approaches that represent the individual's orientation (ratio of openness and closedness) toward the things and events encountered in life and not necessarily some institutional or cultural notion of those events and things.

Simply because such individual approaches might be different from the sort of superordinate-oriented mode of approach in which Bruner et al were interested, there is no reason to suppose that a child's approach to concept formation is less abstract relative to the

approach pursued by Bruner. To be sure, for whatever reason, an individual might not have accepted, or might not have the necessary experiential background through which to be able to attain to, the type of superordinate category in which a researcher might be interested, or an individual child might be governed by a conceptual approach whose ratio of openness or closedness to experiential encounters precludes such concept attainment.

However, whatever the reason might be as to why an individual fails to attain a given concept, one should not suppose this constitutes conclusive evidence for demonstrating a developmental progression from concrete considerations to an abstract perspective. Rather, it takes time to become exposed to the array of experiential encounters (that is, being able to extend one's existential horizons), that are needed to create opportunities for generating new categories and conceptual approaches consisting of alternative ratios of openness and closedness to 'Being-in-the-world' to the sorts of ratios that previously governed one's conceptual approach to life. This time-lag between experiential encounters and the generation of alternative conceptual approaches should not necessarily be construed as indicative of a developmental progression from the concrete to the abstract as much as it might reflect the ease or difficulty (i.e., individual variation) with which a given person cognitively handles a backlog of encoded material, together with the quality of the conceptual orientation such a person has available to her or him through which to engage such material.

Similarities and differences in the development of individuals cross-culturally, as well as within a culture, might also be understood in terms of the perspective being outlined in this essay. More specifically, all cultures tend to have any number of conceptual approaches that often share similarities with one another and that might have similar demand characteristics, or drawing power, for individuals living in such cultures.

In other words, to the extent that certain ideas or conceptual approaches are consistently emphasized in such cultures and, therefore, tend to draw (or compel) an individual's attention in relation to such ideas, then these those categories and conceptual approaches become focal concerns of development for an individual ...

just as various aspects of the psychosexual and psychosexual realms constitute overlapping sets of cross-cultural focal concerns with respect to development. Such cross-cultured similarities tend to show up as developmental concerns with which, all children might be observed to have to contend.

If, due to social pressure, a child learns and attains these concepts, then it seems only logical to suppose that such concepts will tend to become focal concerns of development whenever and wherever they are emphasized. If children are weaned, toilet trained, socialized, morally educated and so on, according to the same schedule and set of general methods, then children are going to be confronted with the same type of problems at about the same time. Moreover, given individual variation in the rates at which different individuals receive relevant information (for example, through direct experience or language) and/or is able to process that information -- and, then, abstractly process such information -- one is likely to observe individual differences against a backdrop of developmental similarities.

Furthermore, if the learning and concept attainment required of an individual not only includes the demands of a culture but the proffered solutions as well, then one is likely to observe a sort of standardization of development in such areas of solutions as well. These similarities, however, might not so much be indicative of innate stages of development as they might be evidence of a sequence of conceptual approaches that a culture has, over time, invented through this or that mode of concept formation and that engage individuals in that culture as they develop during the course of 'Being-in-the-world'.

Thus, when Piaget argues that the similarities that can be observed in development across cultures gives expression to a particular sequence of biological stages through which everyone is required to go, he might be underestimating the capacity of purely psychosocial and psycho-conceptual dynamics -- that are not, strictly speaking, just expressions of genetic unfolding ... dynamics that are able to draw attention to themselves in ways that not only affect the rate of developmental progress but, as well, might shape the order and type of stage sequences as well. In addition, the transitions from sensory-motor-to concrete and, finally, to formal operations is not

necessarily a reflection of a genetically determined process through which thinking allegedly unfolds over time but, instead, might reflect the manner in which a society transmits its repertoire of conceptual approaches and coping strategies to the people of such a society⁸³ and that play off against an individual's idiosyncratic manner of emotionally, socially, and conceptually responding to such transmissions.

To the extent that the ratios of openness and closedness that characterize an individual's range of conceptual approaches to experiential encounters are often reflections of the openness and closedness that characterize the conceptual schemas that are being socially/culturally transmitted to an individual, then to this extent will there be similarities and commonalities in the character of development among the individual members of such a society or culture. These similarities and commonalities will have the appearance of genetically rooted stages but are, in fact, culturally generated sequences of development that take various genetically given capacities and impose a directional order on those capacities ... an order that is not inherent in such capacities in and of themselves.

What is inherent in individuals is a capacity to be drawn and pushed in different social and individual directions. To be sure, genetics will establish degrees of freedom and constraint within which such drawing and pushing might be done, but the qualitative character of such developmental sequences is more a function of the sort of conceptual approaches that cultures and individuals bring to the developmental table than they are reflections, strictly speaking, of genetic givens.

Connected with the foregoing criticism of Piaget's conception of development as a biologically fixed sequence of stages is his belief that cognitive development proceeds along a continuum running from concrete to abstract ... from sensory-motor schemas to the possibility of formal operations ... from exterior action to interiorized, inhibited pathways of motor activity. As has been explicitly and implicitly indicated, throughout this essay, I have assumed that very early after birth (within a matter of months, or even weeks and days in some instances) most individuals are capable of abstract processes of one kind or another. Ensuing development concerns the directions in

which this process of abstraction leads one as it plays-off against, and is shaped/colored by, the existential encounters one has while Being-in-the-world ... including psycho-social and psycho-conceptual encounters.

Moreover, arguments have been offered in this essay that attempt to point toward the inadequacy of, and confusion caused by, those attempts that seek to root the realm of the 'concrete' to purely tangible realms of existence while the 'abstract' is associated with 'intangible realms' that are, somehow, removed from concrete experiential encounters. This distinction seems to camouflage the nature of Dasein's 'Being-in-the-world' and the manner in which Dasein becomes attuned to various dimensions of this field through the ratios of openness and closedness of different conceptual approaches that are formed or acquired through development.

Finally, when the present theory of cognitive abstraction is integrated with the sort of approach to motivation that was outlined earlier in this essay, then the differences between my position and that of Piaget -- as outlined at the beginning of this essay -- seem fairly obvious. More specifically, Piaget contends that there is an innate driving force behind cognition. According to Piaget, the essence of this driving force concerns the disequilibrium-equilibrium dialectic between accommodation and assimilation -- the goal of which is to generate intelligent adaptation ... i.e., a balance of the two sides of adaptation that leads to development through determinate stages and periods.

With respect to the perspective being offered here, however, I am postulating that there are no innate drives per se. All drives are derived.

Thus, the cognitive dimension -- as is characteristic of all biological activity -- does not function for a purpose. Instead, it is because cognition occurs that purposes are possible -- not as a causal precipitate but more like a car that needs to be in working order in order for a trip to a given destination to be even possible ... but the working order of the car does not determine what that destination will be.

What innate, directed structures there are in human beings tend to exist as simple reflexive structures that, for the most part, help

individuals to survive until various forms of conceptual abstraction begin to occur – in limited ways at first due to the limited nature of experience -- and, then, in most but not all cases, those reflexes disappear or become quiescent. From this point onward, most of these reflex-structures fade into the background and the individual is on her or his own while engaging, and being confronted by, a bewildering, perplexing, mysterious world of unknowns.

Consequently, one of the major motivating themes (though there are others) of cognition is a derived need concerning the search for ontological security and the concomitant attempt to escape an ongoing sense of ontological insecurity that, because of the epistemological limitations of Dasein, is an inherent part of Being-in-the-world. Whatever cognitive balance or equilibrium emanates from this initial and continuing condition of human beings with respect to the poles of ontological security and insecurity, is likely to be due more to the contingencies of various forms of abstraction processes (both cultural and individual) in relation to experiential encounters than such balance is because of any form of innate, biological design.

Footnotes

1.) Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry*, edited by Helen Swick Perry and Mary Ladd Gawel, New York 1953, page 27.

2.) Ibid, page 27.

3.) Ibid, page 38.

4.) Anxiety is introduced here not to initiate discussion of anxiety per se but to show how this notion fits into the general trend of Sullivan's thoughts and its emphasis on the interpersonal relationship (i.e., the psycho-social dimension).

5.) Mullahy, Patrick, "A Theory of Interpersonal Relations and the Evolution of Personality", *Conceptions of Modern Psychiatry*, Harry Stack Sullivan, Washington, 1947, page 8.

6.) Harry Stack Sullivan, op. cit., page 41.

7.) Ibid, page 198.

8.) Mullahy, Patrick, op. cit., page 130.

9.) Ibid, page 9.

10.) Harry Stack Sullivan, op. cit., page 103.

11.) Ibid, page 104.

12.) Mullahy, Patrick, op. cit., page 123.

13.) Harry Stack Sullivan, op. cit., page 110.

14.) Ibid, page 111.

15.) Ibid., pg 190.

16.) Erik Erikson, *Identity and the Life Cycle*. Psychological Issues Monograph, International Universities Press, Inc., New York, 1959, pages 114-115.

17.) Ibid, pages 20-21.

18.) Although only Sullivan, is discussed here, it is my belief that the present position could be demonstrated in relation to other theorists who give emphasis to psychosocial forces.

19.) William Barrett, *Irrational Man*. Garden City, 1958, page 297.

20.) Maynard Boss, *Psychoanalysis and Daseinsanalysis*, New York, 1963, page 34.

21.) Ibid, page 94.

22.) Barrett, op. cit., page 219

23.) Boss, op. cit., page 41.

24.) Barrett, op. cit., page 221.

25.) Boss, op. cit., page 41.

26.) Ibid, page 92.

27.) Ibid, page 52.

28.) Barrett, op. cit., pg 276

29.) Of course, there might be some absolute sense of truth, but if there is, I don't believe that individuals have any way of knowing that one knows that such is the case and, therefore. One could assume that one is right and close oneself off to the possibility of being wrong, but it seems better to acknowledge the possibility of absolute truth but act as if there were not the case -- at least not in the sense of an absolute truth that human beings are capable of circumscribing. Within the context of this essay, the latter approach to things seems to open one up to more possibilities than if one were to merely assume that one had a corner on the truth market.

30.) One should note that in the present essay I am, not concerned with explaining how specific conceptual approaches per se arise. My concern here is, instead, directed toward the idea that human beings do, in fact, produce such approaches through processes of abstraction.

31.) Quantitatively, one might become simultaneously open to more possibilities while still being more closed than before in overall terms.-

32.) Langan, Thomas, *The Meaning of Heidegger*, New York, 1959, page 21.

33.) Norman O. Brown, *Life Against Death*, New York, 1959. page 137.

34.) Ibid, page 143.

35.) I find it difficult to determine whether, or not, Brown is referring to all forms of socialization or to just the aspects related to sublimation. If it should be the former, then I would tend to disagree with him for Freud has given a number of explanations of superego

development that is part of the socialization process. It seems more reasonable to assume, therefore, that socialization in this context should be construed in a narrower context involving just sublimation.

36.) Brown, op. cit., page 138.

37.) Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry*, edited by Helen Swick Perry and Mary Ladd Gawel, New York, 1953, page 193.

38.) Ibid, page 194.

39.) J. McV. Hunt, "Experience and the Development of Motivation: Some Reinterpretations", *Readings in Child Development and Personality*. Paul Mussen, John Conger, and Jerome Kagan, New York, 1965, pages 155-156.

40.) Kurt Goldstein, *Human Nature in the Light of Psychopathology*. New York, 1963, pages 210-211.

41.) George Miller, *Psychology: The Science of Mental Life*, New York, 1962, page 226.

42.) Fred. S. Keller, *Learning: Reinforcement Theory*, New York, 1954, pages 6-7.

43.) The parenthetical note is my addition given for purposes of clarification.

44.) Hunt, op. cit., page 158.

45.) Harry Harlow and Robert Zimmermann, "Affectional Responses in the Infant Monkey", *Readings in 'Child Development and Personality*, Paul Mussen, John Conger and Jerome Kagan, New York, 1965, page 123.

46.) R. D. Laing, *The Divided Self*, Baltimore, 1965, page 66.

47.) Ibid, page 41.

48.) Ibid, pages 41-42.

49.) Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry*. Edited by Helen Swick Perry and Mary Ladd Gawel, New York, 1953, page 190.

50.) As I will attempt to show in another essay in this book, the security that one seeks in interpersonal situations need not always be

due to one's attempting to escape from the type of anxiety that Sullivan envisioned.

51.) Most of the material on Piaget has been taken from Flavel's book: *The Developmental Psychology of Jean Piaget*, New Jersey, 1963.

52.) Ibid, page 42.

53.) Ibid, page 43.

54.) Ibid, page 45.

55.) Ibid, page 239.

56.) Ibid, page 78.

57.) Ibid, pages 53-54.

58.) Ibid, page 54.

59.) It is not necessarily always the case that assimilation is unable to keep up with accommodation. Sometimes accommodation is the aspect that cannot keep up with on-going lived experience. Piaget referred to cognitive functioning in which accommodation is subordinated to assimilation as instances of 'imitation', while assimilation that occurs largely in the absence of accommodation as instances of 'play'.

60.) Flavell, op. cit., page 89.

61.) Ibid, page 19.

62.) Ibid, page 82.

63.) Ibid, pages 204-205.

64.) Ibid, page 211.

65.) This definition is taken from the *Webster New World Dictionary*, page 1510.

66.) Ibid, page 295.

67.) Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry*. Edited by Helen Swick Perry and Mary Ladd Gawel, New York, 1953, page 27.

68.) This way at looking at things assumes that one is attempting to differentiate a process from the category that labels such a process or set of processes. Categories, of course, can refer to objects as well as processes.

69.) Robert L. Fantz, "The Origins of Form Perception", *Readings, in Child Development and Personality*, Paul Mussen, John Conger, and Jerome Kagan, New York, 1965, page 83.

70.) Erik Erikson, *Identity and the Life Cycle*, Psychological Issues Monograph, International Universities Press, Inc., New York, 1959, pages 55-56.

71.) Ibid, page 61.

72.) The eight month old infant's ability to distinguish mother from non-mother is such an instance in which at least two categories are formed (i.e., mother and non-mother). Consequently, there is no obvious reason why one also could not imagine a number of other categories being formed even though such a child is without benefit of the linguistic code necessary to label such categories. It does seem, therefore, that a child does have at least a limited coding system that helps in such instances long before the child acquires the more efficient coding system of the culture.

73.) This definition is taken from the *Webster New World Dictionary*, pg. 6.

74.) They tend to disagree on specifics, however, as well as on a number of general considerations -- for example, that development must occur in fixed sequences or stages that cannot be affected culturally.

75.) Jerome Bruner, Jacqueline J. Goodnow and George Austin, *A Study in Thinking*, New York, 1965, page 1.

76.) Ibid. page 31

77.) Ibid, page 30.

78.) Ibid, page 22.

79.) Jerome Bruner, et al, *Studies in Cognitive Growth*. New York, 1966, pages 284-285.

80.) In the terminology used throughout this essay, different orientations do not necessarily imply similar focal concerns.

81.) The history of science, as well as the history of philosophy, is replete with such instances in which a paradigm shift involved a fundamental re-orientation with respect to interpreting the available data. This new mode of representation was not necessarily a higher

level of abstraction – although it might be a ‘better’ theory in some sense of the term ‘better’ – but, rather, simply involved different rules and principles for structuring and organizing such data ... both approaches would be expressions of abstraction processes in action. Human beings, considered as a whole, like individuals, have their own forms of intellectual development. The stages of this intellectual development are not necessarily innate aspects of human evolution, but might reflect the similar problems that have confronted human beings at one time or another and, strangely enough, are similar to the problems that tend to confront children.

82.) The openness and closedness of one's conceptual approach determines, to a large extent, the sort of topical issues that can become focal concerns for cognitive consideration. To the extent that one's conceptual approach is closed toward certain possibilities, either this approach cannot change (i.e., it is stagnant in the same sense as Sullivan's self-system is often stagnant) or it must be replaced by means of other approaches that are more open and with which the closedness overlaps to varying degrees.

83.) Similarly various types of superordinate categories are the conventions used by a culture to approach certain problems. It seems fair to assume that people, on their own, invent methods of categorizing very early in life. Nonetheless, particular methods of categorizing that are based on various principles or superordinate rules might not be a natural consequent of thought as much as they might be transmitted to the individual by a culture.

There is no innate principle of development that necessitates that individuals respond with the particular superordinate categories that are of interest to a given society. However, if an individual does respond with the desired type of superordinate categorization, this might be because that person has been induced or coerced or seduced into encoding a given category in a particular way and, then, eventually, the individual might cognitively rework such a category so that the concept is attained by the individual with some degree of insight and understanding.

The articles that appear in *Studies in Cognitive Growth* -- especially those that concern the equivalence studies -- are based, I believe, on a number of dubious assumptions. For example, they seem to hold that a

young child's language behavior is able to accurately reflect the actual quality and content of a child's cognitive activity. They also tend to assume that because certain results are obtained with respect to the categorization of objects (providing that one accepts their arguments in the first place), then the same results will be characteristic of other dimensions of existence as well. This issue is extremely important simply because those studies fail to investigate the aspects of life in which one might expect to discover the most frequent use of superordinate categories, perhaps, even among children ... for example, the researchers did not investigate the use of language categorization with respect to mythology, folklore, religious beliefs, morality, philosophy, etc.

Chapter 4: Developmental Potential

The debate between nature and nurture has been going on for some time. Over the last 30 years, or so, that debate has come to be colored, to varying degrees, in hues of plasticity (i.e., the ability to change as a function of experience) and fixed potentials (the degrees of freedom – or absence thereof -- inherent in genetic givens).

Irrespective of the precise character of, and extent to which, an array of environmental influences might be considered to have in conjunction with human development, the ability of the environment to affect the way maturation unfolds depends on the capacity of an organism to be receptive to those sorts of influences. Without the capacity to change – that is, without the presence of some degree of plasticity – an organism will tend to manifest a set of predetermined properties that are relatively fixed and somewhat independent of what is transpiring in the environment.

Moreover, a growing body of experimental research indicates that the foregoing dimension of developmental plasticity cannot be reduced to merely being a function of a human being's receptivity to environmental influences. In addition, plasticity is about the capacity of human beings to be able to chart their own course through an array of environmental and biological currents that flow through their lives.

A natural question to ask with respect to the foregoing considerations is this: If we accept as given that human beings have a capacity for some degree of plasticity, what makes that capacity possible? The modern answer to the previous question tends to be clothed in the language of evolutionary theory, but as will be discussed in somewhat greater detail throughout the remainder of this chapter, approaching the issue of plasticity in such a fashion tends to entail a variety of conceptual problems (and for a more expansive critical exploration concerning the theory of evolution, please read my book: *Evolution Unredacted*).

Alison Gopnik, a psychologist who specializes in developmental issues – as well as related philosophical questions -- concerning the processes of cognition, maintains that one of the most consistent aspects of being human – both individually and collectively – is our ability to change. She is interested in exploring the human capacity for change without having to resort to some form of – to use her word –

“mysticism”, and one of the way she seeks to accomplish her stated intention is to orient the process of development within an evolutionary context.

However, filtering the foregoing kind of an exploratory process through the lenses of evolutionary theory might be just as obfuscating as trying to engage those issues through some sort of mystical set of lenses. Furthermore, I’m not entirely sure that Dr. Gopnik knows what she is saying when she dismisses the notion of mysticism in such an off-the-cuff manner.

Rejecting mysticism is one thing. Being able to provide defensible reasons for doing so might be quite another matter.

In any event, Professor Gopnik claims that: “The great evolutionary advantage of human beings is their ability to escape from the constraints of evolution.”

One wonders what constraints she is alluding to. Moreover, even given those kinds of constraints, one wonders – in terms of a step-by-step process -- how the capacity for escaping the constraints that evolution supposedly placed on human beings came into existence.

Dr. Gopnik contends that human beings are able to learn from their environment, and, in addition, human beings are capable of imagining contexts that are different from the environments that, currently, might be present and, as well, she believes that human beings are capable of translating the products of imagination into lived realities. However, she never explains the evolutionary details of how the capacities for learning and imagining came into being in the first place.

She claims that her books – *The Philosophical Baby* and the *Scientist In The Crib* – give expression to an account of how children are capable of acquiring minds that can change the world in a variety of ways. Nonetheless, rather than providing evidence to demonstrate that the foregoing sort of capacity is a function of evolutionary processes, she tends to assume that this is the case.

For example, according to Professor Gopnik, children and adults are different species of human beings. More specifically, she indicates that while both children and adults have minds and brains that are

quite complex and powerful, their respective cognitive capabilities tend to serve different evolutionary functions.

Dr Gopnik maintains that the evolutionary task of children is to learn and imagine, thereby, activating or realizing the capacity for plasticity that exists as a potential within human beings. On the other hand she believes that the evolutionary task of adults is to help nurture and protect the foregoing capacity.

Yet, she doesn't explain how children acquired the capacity to learn and imagine. Furthermore, she doesn't explain how adults acquired the capacity to help nurture and protect the foregoing sort of capability.

One could assume that the capacity of children to learn and imagine is a variation on previously established systems of learning and imagining that might have arisen in earlier species of hominids, just as one might assume that the capacity of adults to help nurture and protect the opportunity of children to learn and imagine is derived from the capacity of earlier species to nurture and protect their young. Nonetheless, such assumptions do nothing to actually provide a step-by-step account for how rudimentary forms of those kinds of abilities initially came into existence with respect to earlier species or explain how those sorts of abilities gradually became more complex and powerful in human beings.

Everything is assumed in that regard. Nothing is actually explained.

Dr. Gopnik contends that the brains of babies and young children who are less than five years old tend to exhibit a greater degree of neural connectivity than is present in the brains of adults. However, according to Professor Gopnik, as we progress in years, less used neural pathways become pruned, while neural pathways that are used more tend to persist.

None of the foregoing explains how, for example, awareness, reason, or understanding determines the significance of -- or, alternatively, is a function of -- any given neural pathway. Moreover, there seems to be nothing present in the perspective of Professor Gopnik that accounts for how choices are made -- or are possible -- that identify, or are generated by, the neural pathways that are to be used

in any given set of circumstances ... that is, nothing is said about why certain pathways get selected for use while other pathways fall to the wayside.

Why do children hold on to some facets of learning that arise through experience, while rejecting or de-emphasizing others kinds of information that are impinging on the individual? The issue is not just a matter of whether neural pathways are used or discarded, but, rather, one needs to know what neural pathways signify and why some of those pathways are retained while others are jettisoned.

Why are children able to imagine some things, but not others? What factors shape the process of imagination?

Professor Gopnik contends that scientists have discovered certain prefrontal areas of the brain that are responsible for the human ability to reason in strategic ways and control how that reasoning will be applied to on-going events. This might, or might not, be true because what scientists have not discovered is how neurons, glial cells, neurotransmitters, electrical currents (in the form of action potentials), and so on are able to interact to generate, or give expression to, thought, imagination, awareness, or logic.

What scientists have discovered are different kinds of correlational relationships between the functioning of various facets of the prefrontal cortex and certain kinds of thinking, reasoning, and awareness. Whether that kind of neural functioning is actually causally responsible for the process of thinking, reasoning, understanding, imagining, awareness, and so on has not, yet, been demonstrated.

Part of the evidential basis for Dr. Gopnik's foregoing claim that scientists have discovered areas of the prefrontal cortex that are responsible for cognitive functions such as thinking, awareness, and reasoning is because when psychiatric patients in the 1950s experienced the pleasures of prefrontal lobotomies – surgical procedures that directly compromised and undermined the functioning of the prefrontal region – those patients were observed to exhibit deficits in their cognitive capabilities involving the ability to think, plan, make decisions, or reason effectively. However, one can compromise the functioning of a radio or television set by removing or damaging its components, but this does not prove that those

components are responsible for the content of the programming that is being given expression through that set.

According to Professor Gopnik, one of the primary functions of the prefrontal cortex region of the brain involves the process of inhibition. More specifically, when the prefrontal cortex operates in an inhibitory fashion, experience, thinking, and behavior are all constrained, framed, oriented, and filtered in certain ways that lend specific focus to cognitive activity. The foregoing perspective tends to raise the following question: What determines the nature of any given inhibitory process?

In other words, one can constrain, limit, frame, feature, filter, and orient experience in any number of ways. What establishes the criteria that will be used, selected, imposed, or chosen to shape the process of inhibition in one manner rather than another?

Does one choose the modes of inhibition that will be used to organize thinking? If so, what is the nature of the dynamic that will give expression to those kinds of choices, and how did the capacity underlying that dynamic come into being?

Are the aforementioned modalities of inhibition learned? If so, what are the properties in any situation that determine why a person learns one kind of inhibitory pathway rather than another in those situations, and how did the capacity for learning come into existence?

Alternatively, one could inquire into the role that emotions might play in determining the character of any given form of cognitive inhibition. If so, then one might question why a particular set of emotions (consisting, say, of fear and anger) rather than another combination of emotions (e.g., joy and love) come to influence the form that an instance of cognitive inhibition assumes in a given set of circumstances, and, in addition, one might wonder how the capacity for different kinds of emotion became possible.

Finally, one could wonder about the extent to which certain patterns of inhibition are imposed on an individual irrespective of how the latter person might wish to proceed. To what extent do conditions of undue influence (such as indoctrination, propaganda, coercion, or abuse) affect the selection of the inhibitory patterns that shape the way we reason, organize, and behave?

Dr. Gopnik contends that the prefrontal cortex is the most active region of the brain during childhood since the cognitive activities of children are constantly undergoing change as a result of processes involving inhibition, learning, play, and imagination. Consequently – and as one might anticipate -- the experiences that are being processed through one cognitive process or another across the years of childhood have a considerable impact on the character of the properties that characterize the adult mind.

The process of play – which was mentioned in passing above -- tends to have a prominent role in the lives of children. Yet, according to Professor Gopnik, play serves no specific purpose.

For example, she indicates that play offers little, or nothing, to help realize such evolutionary goals as procreating, eating, fighting, or escaping. Nonetheless, both childhood forms of play (imagination, fantasy, creativity, exploration) and its adult counterparts (art, literature, music, dance) seem to have considerable value in the lives of human beings.

Notwithstanding Professor Gopnik's foregoing perspective concerning evolutionary goals, nevertheless, strictly speaking, evolution has no goals. Even if one accepts the theory of evolution, capacities involving procreating, eating, fighting, or escape did not arise to serve an evolutionary purpose or goal, but, instead, the aforementioned capacities arose because they were the product of a series of random, chance events that led to the emergence of certain kinds of functionality that were compatible with – and, therefore, “selected” by -- prevailing environmental conditions.

Therefore, irrespective of whether, or not, one adopts an evolutionary perspective, the origins of play are as much a mystery as are the origins of the capacity to eat, fight, move, sense, and procreate. We do not know the step-by-step processes that led to the emergence of the foregoing capabilities and, consequently, we do not necessarily know what purposes – if any -- are served by the foregoing set of qualities.

All we know is that such qualities are present. The rest is speculation.

Professor Gopnik indicates that processes involving play, imagination, learning, and change are dependent on the presence of loving adults who are willing to provide youngsters with a protected environment within which the latter can engage learning, imagination, play, and change in a constructive fashion. Unfortunately, many children have to make their way through life without the support of presence of parental love, or do so despite the presence of a very sub-optimal form of love, and, presumably, this means that the character of learning, imagination, play, and change that occur during the childhood of those who grow up in the absence of love or under conditions of sub-optimal forms of love will reflect, in various ways, the relative absence of that kind of support.

According to Dr. Gopnik, human beings don't live in the real world. She describes the real world as being a function of what actually transpired at some point in the past, or gives expression to what really is taking place in the present, or will take place in the future.

Instead, Professor Gopnik believes that human beings live in an array of possible or contrafactual worlds – that is, worlds that are contrary to the actual nature of things. These worlds are a function of the expectations, dreams, beliefs, concerns, hypotheses, and speculations that people adopt or generate during the course of lived experience but that do not necessarily reflect the way the real world actually is.

The epistemological situation of human beings might not be as bifurcated as Dr. Gopnik seems to suppose is the case. In other words, human understanding does not have to be trapped within a realm of contrafactual possibilities forever separated from reality as it actually is.

To a certain extent, human beings live in a world that requires us to try to differentiate between the real and the possible. However inviting the realm of possibility and contrafactual notions might be and irrespective of whether, or not, we care to acknowledge the extent to which actuality is present in our lives, the real world impinges on us and continues to affect us in a variety of ways quite independently of what we might imagine, believe, dream, or hope.

One cannot explore what is possible unless one has some idea of what is real. Real possibilities are about the nature of the degrees of

freedom and constraints that exist as potentials within the fabric of reality, whereas false possibilities give expression to potentials that distort or ignore the nature of reality.

As a result, one of the primary epistemological tasks with which human beings are confronted is trying to figure out which of our ideas, beliefs, feelings, and so on are least -- or most -- reflective of (i.e., least or most capable of accounting for) what seems to be transpiring in the real world. When cognitive functioning is operating effectively, we tend to engage possibilities through an array of questions, tests, reflections, analyses, and so on in a process of critical engagement that explores possibilities and contrafactual conditionals in an attempt to distinguish the real from that which is not real.

In other words, we need to live in an interstitial world that seeks to establish bridges of understanding that link the possible and the actual in viable ways. Imagination, play, reasoning, belief, speculation, and so on have value to the extent that they offer tools for realizing effective epistemological and hermeneutical pathways between awareness and the real world.

Possible worlds, contrafactual conditionals, and hypotheses are engaged or, explored in order to generate experiences through which information can be gathered that – once properly vetted -- might help to shed light on the nature of our relationship with Being. The constraints (i.e., inhibitions) and degrees of freedom through which our cognitive processes operate are a function of the world that reality permits us to inhabit, and if reality had established a different set of capabilities, then, the way we engage experience would be different.

There is a direct line of communication between reality and human understanding. However, to borrow an idea from an artist who once indicated (and although Michelangelo is sometimes credited with having come up with the idea, the actual provenance of the following idea appears to be unknown) that a finished sculpture was the result of removing whatever did not belong, human beings have to be able to see what doesn't belong in the process of communication between reality and understanding and, then, proceed to eliminate whatever is considered to constitute unnecessary material.

“Affordance” is a term coined by the psychologist James J. Gibson (see: *The Senses Considered as Perceptual Systems*, 1966, and *The*

Ecological Approach to Visual Perception, 1979) to refer to the special character of the relationship between a given environment (i.e., reality) and perception (understanding/interpretation). Truth is an affordance of the environment, and the task of human beings is to learn how to identify the nature of the affordance of truth that is being offered to our perceptual faculties through reality.

Consciousness is the medium through which human beings become aware of the affordances that reality is extending to us. The capacity to understand is an affordance that intelligence extends to consciousness.

The theory of evolution doesn't provide a step-by-step account that explains how human beings – or other species – acquire the capacity to identify and grasp the significance of this or that affordance of reality. For the most part, such capacities are assumed to be a function of evolutionary forces that are not demonstrated -- in any sort of step-by-step fashion -- to have actually generated the capacities that are being assumed.

In any event, up until the last 2-3 decades, Professor Gopnik contends that the theories of psychologists such as Sigmund Freud and Jean Piaget dominated a great deal of the way many researchers thought about cognitive activity in children. According to that manner of thinking, children, for the most part, were believed to be immersed in a world that was tied to on-going sensation, and, therefore, largely preoccupied with the here and now.

Dr. Gopnik points out that the foregoing model concerning cognitive activity in children is contraindicated by a wealth of experimental data. She claims evidence has been accumulating for quite some time showing that even very young children exhibit a capacity to distinguish between what is real and what might be possible.

Consequently, young children are able to imagine a variety of possible scenarios in relation to the past, the present, and the future. In other words, young children are not stuck in the here and now as psychologists such as Piaget and Freud seemed to suppose.

In short, children provide ample evidence that they are capable of generating effective models, theories, and maps about how they

believe reality works. In addition, children are capable of imagining how the world might have been different in the past and could be different in the future.

According to Professor Gopnik, human beings tend to care as much about possible worlds as they care about the real world. Perhaps, however, her foregoing claim should be modulated somewhat in light of the considerable historical evidence that exists indicating the multiplicity of ways in which human beings often tend to care more about possible, imaginary, contrafactual worlds than they care about the real world.

Human beings are very susceptible to delusional thinking. In informational processing terms, human beings are often inclined to confuse or conflate noise with message.

As a result, human beings tend to eliminate the wrong kinds of materials during the epistemological activity of sculpting their conceptual models concerning the nature of reality. In the process of doing so, the affordance of truth being offered through the environment is lost, missed, or distorted.

Dr. Gopnik mentions, in passing, some of the research conducted by the Nobel Prize winning psychologist, Daniel Kahneman, concerning the way in which people cognitively engage certain kinds of circumstances. For example, in one experiment, subjects were asked to imagine a situation in which two people are both desperate to arrive at the airport in time to make their flights but, unfortunately, due to problems of one kind or another, are not able to board their respective planes before the latter take off, and, then, subjects are required to judge which of the two, foregoing, imaginary individuals might be most upset by the foregoing turn of events.

More specifically, one imaginary individual in the experimental setting arrives at the airport only to discover that his, her, or their flight left a half-hour earlier. A second, imaginary individual reaches the airport and discovers that the departure of his, her, or their plane was delayed by half an hour but, nevertheless, the person still misses being able to board the plane and is only able to watch the plane taxi down the runway before it takes off.

Both imaginary individuals have missed their flight. However, is one of the two characters in the aforementioned set of scenarios more likely than the other to feel greater unhappiness concerning their respective situations?

Many subjects in the experiment believe that the second individual – the one whose flight was delayed but who was only able to watch the plane take off – is likely to be most upset. Apparently, the fact that the flight was delayed and, yet, the person still missed the flight and only could watch helplessly as the plane lifted off the ground, tends to lead to feeling that things easily might have been other than the way they turned out and, as a result, such a possibility is perceived to be more vexing than if one had merely had not been able to arrive at the airport in time to catch one's flight.

Professor Gopnik claims that counterfactual thinking enables one to change the future. She maintains that counterfactual thinking serves an evolutionary purpose because it allows human beings to see the possibilities inherent in events and, as a result, provides us with opportunities to work toward realizing certain potentially advantageous possibilities rather than becoming entangled in problematic possibilities.

According to Dr. Gopnik, the evolutionary success of human beings is predicated on our ability to consider an array of possibilities. Such counterfactual thinking permits us to alter our circumstances and revise our plans for engaging those circumstances.

Having the capacity to engage in counterfactual thinking concerning possibility is one thing. Using that capacity in constructive and productive ways might be quite another matter.

Professor Gopnik feels that the ability to enter into counterfactual thinking about the past, along with the human tendency to be caught up in the emotions of “what might have been” -- such as is illustrated, somewhat, in the aforementioned Kahneman experiment -- is merely the price we have to pay for being in a position to be able to apply such counterfactual thinking to planning for the future. Nonetheless, there is no guarantee that the human capacity for counterfactual thinking will be used effectively in any given case.

For example, let's return to the aforementioned Kahneman experiment. Instead of asking about which of the two imaginary characters in the missed flight scenario might be likely to be most upset with the situation, let's inquire into which of the two imaginary individuals might be most likely to learn from their respective experiences and, as a result, change her, his, or their way of coping with those kinds of circumstances in the future.

Will the person who barely missed making his, her, or their flight due to the delayed departure of the scheduled flight be more, or less, likely to learn from that experience than the person who missed making the flight by half an hour? Will either of the two, imaginary individuals be more likely, or less likely, to alter the way they go about making arrangements to get to the airport in time to make their, her, or his flight in the future?

Obviously, we don't have enough information to be able to answer the foregoing questions with any degree of insight. People don't always learn from experience, and, moreover, people are not always prepared to alter the way they go about doing things if that process of alteration requires them to change the way they think about themselves or the world.

According to Dr. Gopnik's description of the Kahneman experiment, each of the characters was "desperate" to get to the airport. What prevented them from doing so?

Was the taxi driver incompetent? Was traffic to the airport unexpectedly slow?

Did the individuals fail to allow for an adequate amount of time to reach the airport in time for their respective flights? Were the two individuals entangled in circumstances that prevented them from being able to start their trip to the airport sufficiently early, and to what extent were those individuals responsible for those entanglements?

Irrespective of why a person was not able to get to the airport in time to catch a flight, one has a choice. One can accept what has happened and use that experience to help fashion a better coping strategy for dealing with future events, or one can become caught up

in the emotions of what might have been and leave oneself vulnerable to going through a similar experience yet again at some point later on.

There also are other ways of thinking about the missed plane scenario. What if the plane one missed crashes with the loss of life of all who were on board, or what if one were served a meal on board the plane that was contaminated and, as a result, one fell sick and died, or, what if the plane had been hijacked?

What if -- while making plans to catch another flight – one meets one's future spouse? Or, what if one makes an important business contact while waiting for the next flight to leave?

How is one to interpret the significance of having missed a given flight? What are the criteria that are to be used to evaluate the situation?

For example, the Persian mystic Hafiz once indicated that one should not worry about the outcome of events because the One Who is looking after your affairs is already busy looking after your affairs, and, consequently, worry adds nothing to a person's affair but worry. In a similar vein one might say that counterproductive, contrafactual thinking adds nothing to one's affair except counterproductive, contrafactual thinking.

We do not necessarily know what is in our best interests. We do not necessarily know what ramifications current events will have for our future.

Having the capacity to think in counterfactual ways does not indicate how such a capacity should be utilized. Counterfactual thinking might open up all manner of possibilities to consider, but such cognitive activity doesn't necessarily tell us which possibilities might be the best way through which to engage reality.

Professor Gopnik tends to filter the issue of counterfactual thinking through the lenses of what constitutes evolutionary success. Nevertheless, one might switch the focus of counterfactual thinking toward such a perspective and consider the possibility that success might be a function of considerations that are rooted in human potentials that are not evolutionary in nature.

In other words, our relationship with Being might not be a function of evolutionary processes. Perhaps our relationship with the

nature of Being might either transcend those evolutionary possibilities – whatever these might be -- or is independent of them.

There are many possibilities to consider. The challenge is to identify which of those possibilities – if any – best reflect the nature of reality.

Dr. Gopnik and her colleagues conducted a number of experiments that led to results indicating that somewhere between 15 and 18 months, babies tended to demonstrate a capacity to engage their environments through processes of counterfactual thinking in which different possibilities were explored and choices were made from among those possibilities that were capable of resolving various challenges, puzzles, or problems which were confronting the baby. What the foregoing experiments did not demonstrate was the precise character of the process through which a baby came to identify what possibility to select in order to solve a given problem.

A problem gives expression to a certain kind of relationship between an organism and the environment. Solving the problem requires the organism to be able to – as the previously mentioned psychologist James Gibson might say -- grasp the nature of the affordance present in the environment that allows the problem to be solved.

We tend to say that intelligence, in one sense, or another, is what permits an organism to grasp the nature of the environmental affordance that will solve a given problem. However, we know very little about what makes such a capacity possible or how that capacity works.

Professor Gopnik maintains that the foregoing sort of capacity arises through an evolutionary process. However, since she is not able to produce the set of step-by-step biological events that generates such a capacity (nor, at the present time, can anyone else successfully accomplish this), one has to look at her explanation as merely an exercise in counterfactual thinking in which the idea of evolution constitutes only one of the possibilities to consider [along with other possibilities such as, for example, panspermia (i.e., life on Earth originated from extra-terrestrial sources) or some modality of creationism in the search for the character of the affordance or

affordances present in reality that makes a capacity like intelligence possible.

According to anthropologists, the ability to make and use tools, as well as the ability to formulate plans for engaging various aspects of existence, played central roles in contributing to the evolutionary success of human beings. Making tools, using tools, and planning are all variations on an underlying theme of counterfactual thinking in which possibilities are generated, reflected upon, and, then, implemented in one way or another.

Yet, all too frequently human beings seem to be oblivious to the presence of possibilities that are capable of undermining our constructive use of tools and our ability to make plans. Human beings have reached a stage in their collective development in which tools (in the form of: (1) Nuclear, chemical, and biological weapons; as well in the form of (2) an array of commercial processes (e.g., fracking, GMOs, plastics, chemical manufacturing) that are destroying the environment and helping to bring about the possibility of a 6th extinction; as well as (3) in the form of various modalities of artificial intelligence that are capable of surveilling, controlling, oppressing, enslaving, marginalizing, and destroying human beings) have the potential to undo whatever anthropologists believe has been accomplished over thousands of years.

Problematic emotions such as: Greed, anger, hatred, jealousy, arrogance, fear, revenge, lust, and selfishness give expression to possibilities that are fully capable of affecting which tools are created and how they are used as well as what plans are pursued. The realm of counterfactual thinking is not always a matter of exploring constructive possibilities, for clearly there is considerable historical evidence to indicate that human beings are often engaged in exploring the dark side of counterfactual thinking.

Given the nature of the potential inherent in the dark side of human nature, then, perhaps, talking about the evolutionary success of human beings – as Dr. Gopnik appears inclined to do -- is a little premature. Moreover, we might want to keep in mind that, for one reason or another, 99 % of all species that have ever existed on Earth have become extinct and, unfortunately, human beings have more than enough character flaws to be able to push our species into the

extinction column should the wrong set of possibilities be engaged through our capacity for counterfactual thinking.

Professor Gopnik indicates that despite David's Hume belief that a person could never really know whether, or not, one event caused another event, many modern day philosophers have followed the lead of David Lewis and, as a result, tend to pursue the idea of causality with the understanding that there is a working relationship between causal knowledge and counterfactual thinking. More specifically, by varying the possibilities associated with a given set of events (i.e., exercises in counterfactual thinking), one often is able to develop an understanding about how those events might be causally related to one another.

In other words, one makes changes to a set of variables or makes changes in conjunction with a given set of circumstance, and, then, one observes what follows when those kinds of changes are introduced into that set of circumstances. On the basis of the foregoing considerations, one develops hypotheses that predict how things will unfold in the future as a result of one, or another, sort of change.

Even if one never actually pinpoints the ultimate nature of causality in any given set of circumstances, one often is able to gain insight into the nature of various conditions and properties that seem to be closely tied to the causal dynamics associated with a particular phenomenon. For example, the discoveries of quantum physics have enabled scientists to be able to predict the likelihood that certain kinds of events will occur under various sets of circumstances, and, therefore, scientists have acquired some degree of insight into the nature of the conditions and properties that are associated with causal events even if scientists don't fully understand the nature of the dynamics that are reflected – to some degree -- in the probabilities that have been calculated for those sorts of events.

Dr. Gopnik believes that counterfactual thinking depends on being able to grasp the nature of causal understanding. However, in light of what has been said during the last three paragraphs, one might be closer to the truth if one were to say that the nature of our causal understanding depends on the process of counterfactual thinking.

More specifically, whatever we understand about the causal dynamics of a given set of circumstances, that understanding often is

acquired through the process of counterfactual thinking. We consider possibilities and, then, try to determine how altering those possibilities will affect the way that set of circumstances will manifest itself.

By acting on the world of conceptual possibilities within us, we are able to change various aspects of external circumstances. As a result, we derive some direct degree of understanding concerning the nature of causality by observing how different circumstances are modulated through our thoughts and actions.

We might not know how various conceptual possibilities within us came into existence, or how and why those possibilities bubbled to the surface of consciousness when they did, or what makes consciousness possible, or why we choose to pursue one set of possibilities rather than another set of possibilities. Nonetheless, once the foregoing sorts of ideas do emerge, we can observe how some of those ideas are selected as a means of bringing about change in a given set of circumstances, and, therefore, experience gives expression to different kinds of affordances that provide opportunities to acquire insight into the nature of causation.

Professor Gopnik contends that counterfactual thinking is a deeply evolved part of human nature. However, she fails to provide the set of causal steps that demonstrate how the capacity for counterfactual thinking came into being and, then, evolved over time.

She does point out that Piaget's manner of exploring whether, or not, young children have grasped the concept of causality is somewhat flawed. Among other things, Piaget tended to ask children questions about causality that fell beyond the parameters of the sort of knowledge with which they were familiar.

For instance, Piaget would ask preschool children about the causal nature of physical events involving, say, the movement of clouds or why it got dark at night. For the most part, the foregoing kinds of questions required children to provide answers that depended on an understanding of the world that they hadn't, yet, acquired, and, therefore, the answers that were forthcoming from them in relation to Piaget's questions seemed to indicate that young children didn't possess a concept of causality or had confused ideas concerning the nature of causation.

Nevertheless, children as young as two years of age are able to offer reasonable, intelligent, and appropriate answers to questions about causality if one makes the effort to investigate issues about which children have some degree of familiarity. If, for example, one asks young children why someone would open the refrigerator, they are capable of giving a causal analysis of why events might have unfolded in the way they did.

The explanation they give might be correct or incorrect. However, based on their responses, there can be little doubt they have an understanding of the idea of causality and how its dynamics might work in various circumstances.

Professor Gopnik notes that the tendency of young children to ask “why” is intimately related to their attempt to develop an understanding concerning the nature of causality. They want to know why things are the way they are ... they want to know what causes various situations, processes, objects, phenomena, and experiences to have the properties that they do.

Some children are satisfied with the answers they receive in response to their why-queries. Other children are not so satisfied and continue to press for additional explanations.

In addition, the concept of causality can be seen playing an active role within the games of pretense in which children often engage. In other words, the process of pretending is regulated by an array of rules and reasons that give expression to, among other things, the woof and warp of the causal principles governing a given world of pretense.

The same is true with respect to the realm of fantasy. In other words, however strange such a realm might appear to be, fantasy operates in accordance with various rules and principles of causality that are understood, in an intimate manner, by the child.

One might even say that many of the conflicts between parents and children come down to competing theories of causality. Children filter the world through one set of causal premises, and adults filter events through an alternative set of causal premises, and the two perspectives often collide in a clash of cultures.

Children – just like adults -- generate theories concerning life, death, other people, the future, the past, family, friendship, technology, physical events, and so on. Just as is the case with adults, some of the theories that are generated by children might be right to varying degrees, while other theories are problematic or wrong to varying degrees.

According to Professor Gopnik, the process through which children generate theories is largely unconscious in nature. Notwithstanding the foregoing perspective, something within the child certainly is quite aware of the nature of various experiences and actively reflects on those experiences in order to try to understand their character and organize them into models and theories concerning the nature of reality.

The foregoing processes might take place outside of what we consider to be normal, waking consciousness and in that sense could be considered to be unconscious. Nonetheless, those processes – however and wherever they take place – seem to be activities that involve awareness, insight, intelligence, reason, judgment, and other cognitive capabilities (e.g., intuition).

Dr. Gopnik does not provide an account of how unconscious thinking takes place. She is not able to offer an explanation for how a set of unconscious processes is able to be aware of, reflect on, and generate various conceptual possibilities concerning the nature of a given experience or how that experience relates to other experiences – both actual and possible.

Furthermore, although Professor Gopnik believes the foregoing process of unconscious thinking is deeply rooted in evolutionary history, nevertheless, at no point during her two books – *Scientist in the Crib* and *The Philosophical Baby* -- does she offer an account that itemizes the set of step-by-step sequential, mutational events that would have made such a process of unconscious thinking possible. In short, she neither seems to understand how unconscious thinking is possible nor does she appear to understand how such a capacity came into being.

Indeed, how do the capacities arise that underwrite the ability of children – and adults – to make maps, models, and theories concerning the nature of experience or reality? How are we able to prune

experiences so that we are able to grasp the structural character of individual objects contained in the rivers of information along which we are traveling during life's journey?

Dr. Gopnik notes in passing that many animals – not just human beings – are capable of making mental maps that exhibit varying degrees of complexity, sophistication, and accuracy. Yet, as is the case with respect to human beings, despite her presumption that such abilities arose through evolutionary processes, she is not able to provide a step-by-step account concerning how animals acquired their capacity for generating those kinds of cognitive maps.

She does refer to some evidence indicating that the foregoing sorts of maps might reside within the hippocampus. For instance, when researchers remove the hippocampus from the brains of rats, then, the latter organisms lose their ability to navigate a maze.

Nevertheless, we can remove various components in a radio or television set that will prevent those devices from being able to give expression to the cognitive maps that are inherent in radio and television programs. However, this does not mean that those electronic components generate the programs that are no longer being manifested in the absence of the aforementioned electronic parts.

Even if one were to accept the idea that the hippocampus contains mental maps, we know almost nothing about how those cognitive maps operate to generate, organize, encode, and store information as a function of gene expression and cellular biochemistry. Furthermore, we know even less about how those sorts of genomic and cellular systems were made possible through the process of evolution ... if that is the means through which they actually came into being.

One can agree with Dr. Gopnik that cognitive maps are an effective medium through which to entertain different possibilities concerning the nature of reality. But, scientists like Professor Gopnik tend to blindly thrash about when it comes to being able to successfully navigate their way through explaining how such capabilities came into existence or how cellular activity and various modalities of gene expression make consciousness, reasoning, logic, understanding, memory, intelligence, counterfactual thinking, judgment, and so on possible.

We know that processes involving reasoning, insight, understanding, and logic are real phenomena, and we know the foregoing sorts of processes are present in children to varying degrees. Unfortunately, we just don't know much about the actual origins and dynamic properties of those phenomena.

Professor Gopnik mentions that -- based on the 1990s work of individuals such as Judea Pearl at UCLA and Clark Glymour at Carnegie Mellon University -- an area of research began to emerge that led to the development of mathematical techniques for describing a process of model building that enabled researchers to utilize counterfactual thinking to be able to accurately predict how various kinds of causal processes might unfold over time, and, therefore, opened up the possibility for intervening in, and altering, those dynamics to bring about alternative ways of engaging on-going events. This area of research is known as 'causal graphic modeling' and has played a formative role in the development of certain facets of artificial intelligence.

Do human beings – and other animals -- operate through innate capacities rather than learned techniques involving various kinds of causal-graphic-like models that enable them to build cognitive maps of various dimensions of reality? Do human beings – and other animals – possess inherent systems of mathematics that enable human beings to generate mental maps in order to navigate through the events of everyday life, or are such mathematical systems learned?

If the foregoing kinds of systems are learned, how did human beings – and other animals – acquire the capacities that made learning possible? Furthermore, how did human beings acquire the capacities needed to be able to invent the sort of mathematical systems that could be learned?

If there are innate systems rooted in processes involving causal graphic modeling, how did those systems come into existence? If the answer is assumed to be evolutionary in nature, then, what were the set of step-by-step mutations that led to the formation of functional systems of causal graphic modeling, and how did the mathematical properties that characterize those systems come into being?

Human beings and animals (each through their respective modalities of cognition) might use analogs of causal graphic models to

solve problems involving causal inference and counterfactual thinking. Such analogs might be able to generate results that are equivalent to, or similar to, what can be accomplished through the use of causal graphic models, but the former are not necessarily rooted in mathematical considerations as causal graphic models are

Causal graphic models, themselves, might just be one of the products of an underlying capacity to be able to understand, have insight into, reason about, reflect on, organize, question, analyze, run through different counterfactual considerations concerning, and evaluate various experiential issues. Consequently, having a mathematical system that permits one to describe certain aspects of counterfactual thinking in conjunction with the process of causal inference is not necessarily the same thing as the capacity that makes such a system of description possible even though the two (i.e., the capacity to invent mathematical systems and the capacity to learn them) seem to be intimately related to one another.

Remarks similar to the foregoing can be made in relation to the computational theory of mind that dominates some of the thinking that takes place within cognitive science. In other words, the fact one can specify a set of computational steps or algorithm that is capable of describing and resolving certain problems does not necessarily mean that such an algorithm is, itself, the expression of a computational process within the mind since, among other things, we do not know how the individual steps (biochemically, evolutionarily, or otherwise) that make up a given algorithm were conceived or come into being.

In other words, are those steps the result of some set of mathematical computations? Moreover, if they are, what are the properties of those computations, and what were the specific mutations that led to the set of DNA sequences that made those mathematical computations possible?

Human beings are capable of generating all manner of algorithms or computational sequences. We just don't know how we are able to accomplish this.

Similarly, we can generate an indefinite number of causal graphical models. Nonetheless, we do not know how we are able to do so ... that is, we do not know how we are able to conceptually generate

those kinds of possibilities or organize them in ways that accurately reflect various aspects of experience.

Insight and understanding orient awareness. Yet, we do not know what made those kinds of insights and understandings possible – either in terms of cognitive functioning or in terms of the origins of those functional capacities.

Dr. Gopnik points out that up until relatively recently many individuals were of the opinion that imagination and counterfactual thinking were in conflict with, or in opposition to, the process of knowing. In other words, many people were inclined to believe that knowledge was about things that were factual and true, whereas imagination and counterfactual thinking were about things that were not true or not factual, and, as a result, knowledge and imagination seemed to be at odds with one another.

However, a great deal of research – some of which is related in Dr. Gopnik's two books: *The Philosophical Baby* and *The Scientist in the Crib* – suggests that, on the one hand, imagination (together with counterfactual thinking) and, on the other hand, knowledge are intimately connected to one another. Indeed, according to Professor Gopnik, knowledge serves as the source of imagination's creative capacity because only when one understands how something is causally structured, does one become able to explore alternative possibilities concerning the causal relations that govern or are made possible through a given phenomenon.

While it might be true that understanding how something causally works could help one to leverage the processes of imagination and counterfactual thinking, nonetheless, there seem to be at least two kinds of capacities that are present in the foregoing which appear to be independent of one another. Both knowledge and imagination involve a capacity to grasp the character of the affordances present in some aspect of experience or the reality that makes experiences of such character possible, but the affordances in which knowledge is rooted reflect, to varying degrees, the actual character of what is being grasped, whereas the affordances to which imagination and counterfactual thinking are linked concern possibilities that might, or might not, be a function of the potential present in some facet of reality.

In many ways, we explore the possibilities of imagination or counterfactual thinking in order to try to struggle toward discovering the nature of the facts or truth that might be governing a given situation. We sort through the possibilities presented by imagination or counterfactual thinking (by means of processes that are not well-understood) and search for properties and features (by means of processes that are not well-understood) that appear to best reflect the structural character of a given object, event, dynamic, or phenomenon, and, as a result, help to establish knowledge or true understanding (by means of processes that are not well-understood) concerning whatever is being engaged or experienced.

Alternatively, however, we often use the process of imagination and counterfactual thinking to test the viability of a given understanding that we think might give expression to some form of knowledge. In other words, we test what we purport to know by using imagination and counterfactual thinking to vary relevant conditions in order to determine if our current understanding of the “facts” will permit us to predict where the foregoing kinds of changes will lead.

If our current understandings of a situation permit us to make accurate predictions concerning the dynamics of that set of circumstances, then, we tend to treat that understanding as possessing the capacity – to varying degrees -- to be able to reflect certain aspects of reality. If, on the other hand, our current understanding of a situation does not permit us to make accurate predictions concerning the behavior of a given set of circumstances, then, we tend to treat that understanding as being inconsistent, in some way, with the actual character of that set of circumstances.

Nonetheless, the capacity to grasp the nature of a given object, event, process, relationship, dynamic, and so on appears to be quite different than is the capacity to vary conditions in an array of ways in order to bring about, or explore, possible results. Determining what conditions to vary or how to vary them or envisioning where those variations might take one conceptually seems to involve a creative process of conceptual visualization that takes one beyond what is and into a realm of what might be.

Grasping the nature of what is seems to constitute a different way of orienting oneself to reality than grasping what might be does. The

process of knowledge seeks to constrain one's relationship with reality in determinate ways, whereas the process of imagination or counterfactual conditioning seeks to expand one's relationship with reality in unanticipated, surprising, interesting, and, possibly, aesthetically pleasing ways.

In addition, Imagination and counterfactual thinking don't have to be completely true or factual to have value (e.g., the world of literature). On the other hand, if a given understanding purports to capture the character or properties of some aspect of reality but does not accurately reflect the nature of that facet of reality (i.e., if the understanding does not give expression to actual knowledge), then, such an understanding tends to be problematic since the person harboring that kind of understanding is subject to delusional thinking (i.e., believes something that is not true or operates on the assumption that something is true which is not).

Professor Gopnik notes that Plato did not feel poets and playwrights had much, if anything, of value to offer to society. According to Plato, not only do poets and playwrights tend to give expression to a variety of false statements, but, as well, those kinds of individuals seek to induce other people to accept as true, that which is false.

One wonders about what the nature of the difference is between what Plato is trying to accomplish through his writings and teaching and what poets and playwrights are trying to accomplish through their own teachings and writings. Plato, of course, is assuming that he knows how to differentiate between the false and the true in ways that poets and playwrights are not able to do, but confidence in one's way of thinking (on either side of this divide) does not necessarily constitute evidence that one's way of thinking is correct.

If a person were to cast the foregoing difference of opinion in the language of today, such an individual might describe the hermeneutical struggle between, on the one hand, Plato, and, on the other hand, poets and playwrights as being about the issue of "fake news". The problem – then, as now – is, first, to figure out the nature of the criteria that determine what constitutes fake news, and, then, to apply those criteria in a critically rigorous fashion to the writings of Plato as well as the works of the poets and playwrights to whom he is

alluding in order to try to establish just who – if anyone – is guilty of being purveyors of the philosophical counterpart to “fake news”.

Dr. Gopnik indicates that while a person might have little difficulty understanding why establishing the truth is important to enhancing one’s chances of being able to survive in the world, she feels that most people might be less likely to understand why evolution could have wired human beings not only to be able to explore the realm of fiction and falsehood but, as well, to be inclined to do so under a variety of circumstances. However, the capacity to filter experience through fictional possibilities rather than through “facts” might actually be part and parcel of the process through which individuals seek to discover the truth.

In other words, at the beginning of one’s epistemological exploration into the nature of some aspect of reality, one entertains a variety of possibilities. If a person, then, exercises due diligence, that individual tries to determine which of those possibilities are factual and which of them are counterfactual in nature.

In order to discover the truth of things, one has to entertain a variety of possibilities and treat them as if they might be true, and, then, a person uses his, her, or their capacity to conceptually vary those possibilities (i.e., employs one’s capacity for counterfactual thinking) in ways that permit one to generate the sorts of experiences that will contain information that might help an individual to either confirm or reject those possibilities as being, respectively, true or false. Consequently, what, subsequently, might be discovered to be counterfactual or fictional in character begins its epistemological life as a legitimate candidate of uncertain potential.

Therefore, we don’t always know whether the propositions being entertained are true or false. Irrespective of whether propositions are true or false, we often evaluate them in terms of the value that those ideas have for us in trying to discover the nature of our relationship to Being.

As such, counterfactual thinking is a heuristic process. In other words, counterfactual thinking (i.e., the process of critically reflecting on possibility ... that is, reflecting on things that are not necessarily true) helps an individual to struggle toward discovering various kinds of truths concerning the nature of reality by eliminating possibilities

that do not seem to reflect or are inconsistent, in some way, with the character of experience.

In terms of the imagery mentioned earlier, counterfactual thinking is a form of conceptual sculpting. It is a process that takes away what doesn't seem to belong in one's model of reality.

Sometimes, the foregoing process doesn't work well, and one's sculpted rendition of that which makes experience of a given character possible gives expression to a variety of epistemological deformities and missteps. On other occasions, counterfactual thinking helps to remove material that obscures the truths contained in one's version of reality.

Many young children (between the ages of 2 and 5) become engaged in a serious exploration of counterfactual thinking, possibility, and causality (especially in relation to developing theories of mind concerning why people do the things they do) through a world of imaginary companions. Marjorie Taylor, a psychologist, gathered data on the foregoing issue by asking children a series of questions concerning their experiences, if any, with imaginary companions

She found that 63 percent of the children she interviewed seemed to be involved -- or had, at some time, been involved -- with one, or more, imaginary companions. Moreover, the reliability of the foregoing sorts of reports were not only independently confirmed when Dr. Taylor interviewed the parents of those children and discovered that the descriptions of the parent's concerning their children's imaginary companions matched the descriptions given by the children, but, as well, the reliability of the children's descriptions were also confirmed by asking them various questions concerning imagery companions on a number of different occasions and receiving responses that were consistent with previously given answers concerning those matters.

One wonders about the 37 percent of the children who were interviewed that did not report having imaginary companions. Why do some children – a majority if Marjorie Taylor's research holds for children beyond her study – have imaginary companions while others do not?

Dr. Taylor's research indicates there were some small statistical differences between children who had imaginary companions and

children who did not have imaginary companions. For example, she discovered that imaginary companions were more likely to be found among normal children rather than children who were gifted in some manner or who were emotionally disturbed in some way.

Furthermore, children who spent a lot of time watching television or reading books were less likely to report having had imaginary companions than were children who spent less time reading books or watching television. In addition – and, perhaps, somewhat counter-intuitively -- children who were extroverted were more likely to report having imaginary companions than were shy children.

However, Dr. Marjorie Taylor considers the presence of imaginary companions to be a sign of social competence rather than a psychological mechanism to compensate for shyness or loneliness. She found that children who have imaginary companions tend to be more adept than children who do not have imaginary companions when it comes to being able to predict how other people are likely to behave, feel, or think, and, in addition, children with imaginary companions appear to be more inclined to think about, and reflect upon, other people when the latter individuals are not present than are children who do not have imaginary companions.

Dr. Taylor also notes that the children who reported having fictional companions were well aware of the imaginary nature of their companions. In other words, those children could differentiate – at least as far as imaginary companions and actual people were concerned -- between what was real and what was not.

According to Professor Gopnik, imaginary companions most frequently occur between the ages of two and six. As she subsequently points out, this also happens to be the age range when children begin to develop causal theories concerning the manner in which beliefs, emotions, motivations, and values are woven into theories concerning the nature of the mind that are used to understand, predict, and influence the behavior of other people.

People act differently from one another because they have minds that are different from one another. While some children come to understand – at least to a degree -- the foregoing sorts of differences through reading books, and/or watching television, and/or observing people, the majority of children (63%) seem to explore -- in part –

differences in mental functioning through the realm of imaginary companions, and, as noted above, the latter sort of children (i.e., the ones with imaginary companions) seem to develop better coping skills in this respect than do children who do not have imaginary companions.

Counterfactual thinking – that is, the exploration of possibilities that are not necessarily true (such as might occur in conjunction with an imaginary companion) – constitutes a way of learning how to navigate one’s way through various circumstances in order to better understand the degrees of freedom and constraint that might be present in those situations. Consequently, a child comes to develop – and, then, use – the foregoing kinds of understanding to organize various kinds of ways of engaging, and orienting oneself in relation to, different facets of life.

Following the foregoing considerations, Dr. Gopnik describes an experiment she conducted with 14-month old and 18-month old children. The children were presented with two bowls.

One bowl contained broccoli. The other bowl contained Goldfish crackers.

Both the 14-month and 18-month old children liked the crackers and disliked the broccoli. However, if the experimenter tasted a sample from each bowl but expressed dislike for the crackers while displaying approval of the broccoli, children from the two age groups responded differently.

More specifically, when the experimenter asked the children if they would give the experimenter something from either of the two bowls, the 14-month old children would offer the experimenter crackers, while the 18-month old children took into consideration what appeared to be the likes and dislikes of the experimenter and offered what the child thought the experimenter would like – namely, the broccoli – despite the child’s own preference for the crackers. Clearly, at some point during the 4-month period between 14 and 18 months, the manner in which information is processed appears to have changed.

The younger children seemed to have difficulty considering any possibilities other than ones that were compatible with their own

sensibilities concerning likes and dislikes. On the other hand, the older children apparently had acquired the ability to understand that not all minds think alike and adjusted their behavior accordingly.

The older children were able to entertain the possibility that other people had likes and dislikes that were dissimilar from their own likes and dislikes. The younger children did not seem to have mastered the same kind of flexibility when it came to considering possibilities concerning crackers and broccoli.

However, one has difficulty knowing, for certain, what might actually have been taking place in the minds of 14-month old children. For instance, is it possible that younger children actually did consider the possibility that the experimenter might not perceive the world in the same way those children did but, nevertheless, decided to help the experimenter find his, her, or their way back to the 'right path' by offering the obviously more delicious cracker instead of the repugnant broccoli?

Or, perhaps, the younger children were testing whether, or not, the experimenter was really serious about preferring the broccoli to the cracker. In other words, rather than being concerned about what the experimenter actually wanted – even though the younger children could have been aware of that possibility -- the child might have been more interested in re-affirming her, his, or their own view of the world and wanted the experimenter to validate that view by accepting the cracker (the process of consensual validation often plays an important role among human beings).

Irrespective of what might, or might not, be taking place within the minds of 14-month old children in the foregoing experiment, one is confronted with the following question. What enables a child to begin to actively explore counterfactual thinking with respect to the possibilities associated with lived experience?

The previously mentioned findings of Dr. Taylor concerning imaginary companions indicate that, at a minimum, children between the ages of two and six have the ability to explore possibility and counterfactual thinking to various degrees. Furthermore, the experiments of Dr. Gopnik involving crackers and broccoli appear to push the foregoing minimum back another six months to the age of 18 months.

Is the capacity for counterfactual thinking present from the beginning (that is, at least from birth) but takes time (for example, 18 months) to begin to develop some degree of sophistication to enable a child to be able to engage different experiences and circumstances through the filters of possibility? If so, then, what is the nature of the dynamic or process through which children develop the foregoing sort of sophistication?

Or, does the capacity for counterfactual thinking only emerge at a certain point in development. If this were the case, then, what triggers the emergence of such a capacity at one point in time rather than another?

Furthermore, aside from the issue of when counterfactual thinking begins to manifest itself during development, one wonders what makes such a capacity possible. Is it innate or learned, and in either case, are the underlying dynamics a matter of – as Professor Gopnik supposes is the case -- evolutionarily caused gene sequences that are being expressed or is something else – something beyond chemistry and physics – involved?

Our difficulty in even conceiving what the latter sort of phenomena might entail is not necessarily an argument against the reality of such possibilities as much as it is an indication of the potential extent of our ignorance concerning that kind of topic or as much as it is an indication of the degree to which our biases and presuppositions limit and shape what can be understood. Like children, our ability to exercise counterfactual thinking is often limited by the degrees of freedom and constraints that are present in the conceptual or hermeneutical manner through which we tend to engage and understand a given subject.

Those who, for example, wish to reduce the capacity for counterfactual thinking down to being a function of physics, chemistry, and evolutionary processes are limited by the array of possibilities – physical, chemical, and evolutionary -- that can be entertained to account for such a capacity. If – as currently is the case -- the present state of physics, chemistry, and evolution is not capable of accounting for how consciousness, intelligence, reason, logic, insight, judgment, creativity, and so on are possible, then, one has to consider, at least, two alternatives.

One possibility is that there will have to be some reworking and expanding of the principles of physics, chemistry, and evolution that will be capable of accounting for such phenomena in a more rigorous fashion than is presently the case. Another possibility is one might have to begin to consider the possibility that such phenomena as intelligence, reasoning, logic, consciousness, and so on, might be much more subtle and elusive than physics, chemistry, and evolution – despite their respective degrees of sophistication – would seem to indicate.

To whatever extent physics, chemistry, and evolution might, or might not be, involved in phenomena such as: Consciousness, intelligence, reason, logic, understanding, interpretation, counterfactual thinking, creativity, and judgment, those phenomena do not appear to be a function of, or caused by, the dynamics of physics, chemistry, and evolution. In fact, we might be much closer to understanding what those phenomena are not than what they are.

Professor Gopnik indicates that children begin to learn techniques for exercising self-control between three and five years of age. To help lend support to the foregoing claim, she refers to some experiments during the 1960s that Walter Mischel, a psychologist, conducted with preschoolers.

More specifically, in the aforementioned experiments, young children were required to sit down near two chocolate chip cookies. In variations on the same sort of experimental design, the subjects were required to sit near two toys or two marshmallows rather than two chocolate chip cookies.

The children were told they would be permitted to have – depending on what was used in a given experimental setting -- both of the cookies, toys, or marshmallows if the children would be willing to wait for the experimenter to leave, and, then, return to the room a few minutes later. Once the experimenter left the room, the children were observed to go through a variety of behaviors (squirming, sitting on their hands, and shutting their eyes) that suggested they were trying to struggle against the desire to take whatever had been placed before them.

Many of the youngest children in the experiment (less than three years of age) were unable to successfully resist the temptation to eat a

cookie/marshmallow or pick up one of the toys while the experimenter was out of the room. Older children (between three and five), on the other hand, tended to exhibit better executive control.

Nevertheless, greater will power – to whatever extent it was present -- was not necessarily the primary reason why the older children were more successful than the younger children with respect to resisting temptation. Instead, the older children appeared to have developed better coping strategies for resisting temptation.

For example, the older children used humming and singing to distract themselves from the temptation that had been placed before them in the Mischel experiment. They had learned techniques to constrain and modulate what was going on within them.

According to Dr. Gopnik, the ability to entertain or consider different, possible ways of behaving and, then, use thought (in the form of coping strategies) to shape how one will act in a given set of circumstances is a powerful evolutionary mechanism. While one can agree that the foregoing process of counterfactual thinking is a powerful tool, the source of that capacity might not necessarily be a function of evolution ... certainly, Professor Gopnik has not put forth any evidence to demonstrate the existence of a set of step-by-step evolutionary events that would have made such a capacity possible.

Development, learning, and education all seem to revolve about capacities that enable an individual to construct parallel and overlapping and interacting conceptual, emotional, social, causal, moral, and physical maps of existence. With respect to each of the foregoing realms of epistemological possibility, a person (whether young or old) is faced with the task of trying to differentiate between reality and non-reality through the use of contrafactual thinking processes that help an individual to identify what seems to enhance one's understanding of some given set of circumstances as well as to eliminate what does not seem to belong and, therefore, constitutes a source of distortion.

Moreover, counterfactual thinking processes enable children to acquire insight (both with respect to themselves and in relation to others) concerning the way in which different starting points, assumptions, beliefs, values, and understandings are likely to lead to different kinds of conclusions, perspectives, judgments, and behaviors.

In other words, counterfactual thinking processes tend to generate an array of possibilities for parsing reality and differentiating between what is factual and what is counterfactual.

Chapter 5: Human Nature

Steven Pinker, a cognitive psychologist, is someone who has explored the dynamics through which hereditary and environmental influences affect human development. While Professor Pinker has no wish to deny the idea that environmental factors often have substantial roles to play in shaping the lives of human beings, nonetheless, he also wants to argue against the idea that there is no such thing as human nature.

In other words, he would like to draw attention to the fact that human beings are not blank slates (that is, without any inherent structural and dynamic properties) upon which the environment imprints its messages. According to Dr. Pinker, heredity has a great deal to do with establishing the degrees of freedom and constraints that engage (and are engaged by) the environment and which, in turn, play off against one another and, thereby, help shape the process of development.

The doctrine of the Blank Slate maintains that all feelings, thoughts, and behaviors arise out of some combination of learning, experience, and socialization. The Blank Slate perspective maintains that differences among human beings are a function of variations in what is learned, experienced, or the manner in which we are socialized.

Professor Pinker contends that the 'Blank Slate' approach to mental functioning has assumed a status within modern intellectual life that is akin to being like a secular religion. As a result, many people believe that due to the allegedly blank character of human nature, we are malleable to an indefinitely great degree, and, as a result, the principles of the Blank Slate religious-like system often are used to impose all manner of social engineering projects and political interventions on the members of society.

However, rather than ignore the reality of human nature -- as he believes the Blank Slate model tends to do -- Professor Pinker wishes to promote a balanced and realistic portrait of human beings. Consequently, he would like to work toward bringing about a form of humanism that is biologically informed so that it reflects, and makes use of, the discoveries in evolution, genetics, and cognition that have emerged during the twentieth century.

Before beginning to delineate his own theoretical position in the pages of *The Blank Slate: The Modern Denial of Human Nature*, Dr. Pinker outlines several other notions with which he takes exception and that he feels often are allied with the Blank Slate perspective. One of the ideas to which he is referring concerns the belief that human beings, in their native state, are considered to be ‘noble savages’ who, supposedly, are predisposed toward being peaceful, selfless, and without cares, while the other idea to which Professor Pinker objects and which often is associated with the Doctrine of the Blank Slate involves the notion of a ‘Ghost in the Machine’ in which the mind (i.e., the Ghost) operates according to a non-material and non-physical set of dynamics that occur in conjunction with, but not as a result of, the physical/material processes to which the body (the Machine) gives expression.

Collectively, and independently, the three foregoing doctrines – that is, The Blank Slate, the Noble Savage, and the Ghost in the Machine -- seek to minimize, if not eliminate, the possibility that principles of biology might play formative roles in the development and behavior of human beings. According to the perspective of the foregoing conceptual triumvirate, learning was considered to be the result of the connections, associations, conditionings, and rewards that were associated with the stimuli impinging on human beings.

Using ideas drawn from anthropologists and sociologists such as: Franz Boas (1858-1942), Albert Kroeber (1876-1960), Emile Durkheim (1858-1917), Ruth Benedict (1887-1948), Margaret Mead (1901 – 1978), Leslie White (1900-1975), Ashley Montague (1905-1999), Clifford Geertz (1926-2006), and others, a model emerged in the late 19th century and gained influential ascendancy during the 20th century. The foregoing model largely ignored and de-emphasized the roles that instinct, heredity, as well as innate human nature played in human development and, instead, assigned primary developmental roles to the impact that society and culture had on individuals.

According to the above model, human beings were highly malleable and largely, if not entirely, the product of various social/cultural forces, practices, and institutions. Social facts were the progenitors of psychological phenomena rather than the latter being due to the idiosyncrasies of individual beliefs or mental states, and,

consequently, proponents of this model tended to argue that culture creates instinct instead of vice versa.

In other words, the anthropological-sociological model claimed that society and culture were natural laws unto themselves. Therefore, although social and cultural phenomena were independent of human beings, nonetheless, the dynamics of culture and society left their indelible shaping imprint on all who came within the sphere of influence of those laws.

However, running in parallel with the foregoing revolutions in anthropology and sociology was another revolution that also was rooted in the empiricist tradition of the Enlightenment. In the beginning, this alternative approach to empirical matters seemed to carry few implications concerning human nature, but its potential began to unfold toward the latter part of the 1900s.

More specifically, starting with Newton's unification of celestial and earthly dynamics, and, then, branching out through the contributions of individuals such as: William Harvey, John Dalton, Michael Faraday, James Maxwell, Charles Lyell, Friedrich Wöhler, Charles Darwin, Gregor Mendel, as well as James Watson and Francis Crick (if not Rosalind Franklin) – along with, of course, the contributions of many other individuals -- physics, chemistry, geology, biology, and evolution were woven into a set of natural laws that appeared to carry many implications for understanding – at least potentially – human nature.

For example, Professor Pinker notes that research in cognitive science led scientists to combine ideas concerning information, algorithms, recursion, and feedback to form a computational theory of mind. Supposedly, this theory permits scientists to be able to provide explanations for such mental phenomena as: Thinking, reasoning, knowing, believing, remembering, imagining, and intending that are not dependent on the activities of a mythical 'ghost in the machine'

According to Dr. Pinker, the process of computation gives expression to qualities of intelligence and rationality. In other words, computations consist of a sequence of transformation involving information that not only obey laws governing logic, mathematics, and causal relationships, but, as well, are capable of generating accurate

predictions concerning the nature of the dynamics that characterize various systems of behavior.

Nevertheless, irrespective of however helpful a computational theory of mind might be, what that theory does not actually explain are the origins of the capacities that exhibit intelligent and rational properties. Intelligence and rationality are not just a sequence of transformations but, instead, allude to an underlying set of capacities that are able to envision what transformations to perform on which information and in what order and under what circumstances and why.

The existence of a sequence of transformations involving information might indicate that intelligence and rationality are present in some way. Nonetheless, such sequences of transformations tend to be the product of intelligent and rational processes rather than the processes per se.

What were the dynamics that led to – i.e., envisioned and organized -- the emergence of a particular set of transformations, recursions, and feedback loops that give expression to a computation? Was this envisioning and organizing activity a computation of some kind, and, if so, what were the components of that computation and what governs the dynamics of those components?

Are the foregoing components biological in character? That is, are those components a function of, say, some combination of: Action potentials, neurotransmitter exchanges, and glial cell activities, and if so, what, precisely, is involved in such a process?

Or, are the causal agents that are responsible for the emergence of a certain sequence of transformations, recursions, and feedback loops due to some other set of non-biological processes? And, if this is the case, then what is the nature of those non-biological processes?

Professor Pinker claims that the computational theory of mind has the ability to explain how rationality and intelligence are able to arise out of a set of mindless, physical processes. However, at no point does he actually demonstrate how a mindless set of processes is able to generate rationality and intelligence.

Supposedly, according to Dr. Pinker, learning, knowing, creating, believing, imagination, and other cognitive phenomena are all forms of

information processing. Yet, the precise nature of the processing that makes learning, knowing, creating, imagining, believing, and so on possible are never really specified.

In other words, at no point in *The Blank Slate* does Professor Pinker demonstrate how a specific combination of neurotransmitters, action potentials, and glial dynamics produces consciousness, reason, logic, understanding, insight, imagination, memory, creativity, or intention. At most, correlations are introduced that are devoid of verifiable causal links.

Instead, what Professor Pinker is presenting is a description of sequences of transformations concerning information that are the result or outcome of processes of intelligence and rationality. Consequently, Dr. Pinker appears to be addressing the issues of intelligence and rationality at a meta-level ... that is, he seems to be engaging those issues in a way that is at least one, or more, steps removed from the actual dynamics of intelligence and rationality, and as such, he tries to leverage the presence of the underlying processes of intelligence and rationality without ever actually explaining how these capacities arise from mindless phenomena.

He claims that the computational theory of mind allows scientists to avoid having to rely on will-o'-the-wisp-like phenomena being responsible for the brain's cognitive activity. Yet, his computational perspective still appears to be entangled in as many mysteries (albeit somewhat different in nature) as plague the ghost in the machine approach to mental phenomena.

In passing, Dr. Pinker mentions the response of Gottfried Leibniz to the empiricist meme that 'nothing is in the intellect that was not first in the senses' – namely, "except the intellect itself". Obviously, something within us is capable of being aware of, learning about, reflecting on, analyzing, having insight into, interpreting, and remembering what is transpiring in relation to the sensory capabilities, but no one (neither the empiricists, nor the rationalists, nor the idealists, nor the proponents of the computational theory of mind) seems to know what makes any of the aforementioned sorts of hermeneutical and epistemological activity possible or how those capabilities came into being.

For example, consider language. Professor Pinker notes that the paradigm shift that emerged due to Noam Chomsky's notion of generative grammar (in which a finite set of syntactical rules is capable of being used to generate an indefinitely large number of sentences) appears to presuppose the existence of some kind of innate Universal Grammar that consists of a core set of principles from which different languages derive their individual ways of organizing syntactical possibilities.

However, Dr. Pinker points out that although there are 128 ways to arrange possible combinations of common forms of head (e.g., verbs or prepositions) and complement (e.g., noun phrases) syntactic structures, 95% of the world's languages exhibit just one of two possible forms of head-complement arrangements – namely, linguistic structures in which the head component comes first (such as in English) and forms in which the head element comes last (such as in Japanese). In fact, according to the research of Mark Baker, all of the roughly 6,000 languages that exist in the world give expression to the same underlying set of linguistic principles but are modulated in accordance with certain modes or parameters (e.g., the head-first or head-last arrangement) that are about ten in number.

No one knows how the principles that are inherent in the Universal Grammar came into being. No one knows how and why various syntactic parameters were introduced into different communities that were capable of modulating the Universal Grammar in certain directions rather than in other possible ways.

Furthermore, no one seems to know how children – without any instruction – are able to identify, as well as grasp, either, on the one hand, the aforementioned head-complement syntactic arrangements or, on the other hand, any of the ten parameters of modulation alluded to earlier that exist in the local languages to which they are exposed. During the learning of a language, there is a complex, dynamic dance that is transpiring between the child and the surrounding environment that tends to point beyond the notion that language is merely a matter of being exposed to, and learning, the right set of stimuli, and, moreover, no one knows how the underlying capabilities came into being that make such language learning possible.

According to Professor Pinker, the mind is a modular set of functions that interact with one another to generate thoughts, emotions, judgments, values, and behaviors. However, he does not provide a step-by-step account that explains how modular capabilities involving: Language, mathematics, spatial orientation, tool usage, creativity, and other modalities of intelligence came into being.

Furthermore, Dr. Pinker does not offer an account that explains how human beings are able to organize the way in which different modular components will be used to perceive, interpret, analyze, evaluate, or solve different kinds of problems. Although both of the following processes require intelligence, using a ready-made algorithm is not the same thing as being able to construct algorithms from scratch (that is, through a step by step process) in a manner that enables one to use the finished algorithm to generate functional solutions to life problems, and Professor Pinker does not offer any insight into how human beings are able to grasp a given situation sufficiently well to be able to generate algorithms that are capable of solving real-world problems.

In addition, Dr. Pinker does not explain how awareness is generated. Is it a modular process, or are different modalities of consciousness made possible through some other process?

How does one account for the fact that different kinds of intelligence appear to have access to forms of consciousness that enable those modes of intelligence to have the sort of awareness that is needed for cognitive activity to be able to give expression to intelligent activity even though the so-called normal, waking mind does not seem to be directly aware of the specific character of that activity. For instance, answers to various kinds of word puzzles and problems often seem to pop into waking consciousness rather than having been worked out in a visible manner on the screen of normal, waking consciousness, and one wonders (because Professor Pinker does not adequately answer such questions) what makes either normal, waking consciousness or deeper sorts of awareness associated with intelligent activity possible and one wonders how the two levels of consciousness communicate with, and understand, one another.

Professor Pinker claims there is an overwhelming amount of evidence indicating that all forms of cognition are a function of the

physiological dynamics that take place in and around the different cells of the brain. Yet, he isn't able to explain – in a step-by-step fashion -- how any given set of physiological events is able to generate intelligence, language, logic, awareness, understanding, specific emotions, creativity, or intention, and, consequently, there seems to be a rather sizable disconnect between what Professor Pinker claims and what he can actually demonstrate.

While it might be true, as Dr. Pinker states, that every thought, idea, belief, or feeling generates a set of various kinds of physiological signal, nonetheless, this does not demonstrate that such thoughts, ideas, beliefs, or feelings are caused by those physiological signals. Unless Professor Pinker can provide a detailed account that fully explicates how physiological events generate consciousness and other cognitive functions, he would seem to be open to the charge that he is confusing, if not conflating, correlation with causation.

The computational approach to cognition might be able to simulate – that is, generate similar solutions to problems – that are produced through innate (natural) forms of intelligence. Nonetheless, there is little or no evidence to indicate that innate forms of intelligence actually use various modalities of computation in order to understand, analyze, reflect on, evaluate experience.

According to Professor Pinker, a person ceases to exist when the brain dies. However, if the essence of a person were non-physical or non-material in nature (whatever that might involve), then how would Dr. Pinker prove that, in point of fact, a person does cease to exist if the brain dies since his perspective does not permit him to look for, or to be able to detect, what cannot be reduced down to his physical/material way of filtering experience.

Dr. Pinker might be right that a person disappears when the brain dies. However, his claim is rather circular in nature because it requires one to presuppose (i.e., he certainly cannot prove his assumption) that all Being is a function of material or physical phenomena anymore than a Tox-screen can demonstrate the non-existence of substances for which it has not been set up to detect.

Not only does Professor Pinker maintain that the person ceases to exist when brain functioning is no longer present, but, as well, he argues against the existence of a self that is, somehow, independent of

brain functioning. In an attempt to lend credibility to the foregoing position, he describes the transformation that occurred following a work-related accident involving a 19th century railroad worker by the name of Phineas Gage

More specifically, prior to the worker's accident, those who knew Gage considered him to be a sociable, pleasant, reliable, and well-motivated individual. However, when a metal rod he had been using to tamp down some explosive powder generated a spark that ignited the powder, the metal rod was forcibly propelled back through the ventromedial prefrontal cortex of his brain located just above his eyes and, as a result, seemed to bring about a variety of changes in his personality.

For example, although Gage had been considered to be a pleasant individual prior to the accident, after that event, he became rude, surly, and argumentative. Moreover, whereas prior to his accident, he was considered to be a reliable, motivated individual, following the accident he appeared to become shiftless and lacking in ambition.

According to Dr. Pinker, evidence exists indicating that the ventromedial prefrontal cortex is responsible for, among other things, reasoning about one's relationships with other human beings, and cognitive scientists such as Professor Pinker believe that the same region of the brain is responsible for not only an individual's ability to predict the consequences of one's actions, but that area also enables a person to identify courses of action that are consistent with one's purposes and intentions. From the perspective of Professor Pinker, when the metal tamping bar penetrated the ventromedial prefrontal cortex of Phineas Gage, the latter individual's capacity to reason in certain ways was disrupted.

Dr. Pinker contends that the ventromedial prefrontal cortex is responsible for the ability to be able to reason about other people, and, In addition, that area of the brain is thought to be responsible for forms of reasoning that can predict the consequences of one's actions as well as give expression to a capacity to identify actions that can help realize one's purposes or goals. However, he doesn't offer a step-by-step account that indicates just how the physiology of brain functioning generates the foregoing kinds of reasoning processes.

For example, he doesn't specify what the foregoing sorts of predictions are based on or how brain functioning (i.e., the activity of neurons, action potentials, glial cells, neurotransmitters, and so on) causes judgments and evaluations to be made in conjunction with the predictions that are allegedly emanating from the ventromedial prefrontal cortex. Furthermore, Professor Pinker doesn't indicate how processes involving brain physiology enable an individual to identify actions that are consistent with, and are capable of serving, an individual's goal.

Consequently, one is not really sure in just what way, and at what point (or points), the aforementioned tamping rod disrupted the process of reasoning. In addition, one is somewhat – if not entirely -- unclear about how any of the foregoing considerations undermine the notion of a self.

On the one hand, experiences impact awareness. On the other hand, intelligence, reflection, analysis, interpretation, and judgment impact the experiences that are manifested in awareness.

Experiences often lead to changes within us. These changes are sometimes due to the way the world imposes its presence on us, and, on other occasions, the foregoing sorts of changes are due to the way we respond to what is being imposed upon us by the world.

Were the changes in personality that took place in Phineas Gage following his accident a function of a condition that was imposed on him as a result of the destruction of brain matter that occurred when the tamping bar penetrated his skull? If so, just how did that damage affect functioning in the ventromedial prefrontal cortex of Phineas Gage?

Did the damage to his brain disrupt reasoning? If so, what was the precise character of the disruption process?

Did the damage to his brain make certain kinds of reasoning processes impossible? Did the brain damage leave reasoning intact but undermined his ability to act in accordance with reasoning?

One can damage the components of a television or radio set, and as a result, that damage will affect the proper functioning of those devices. Nevertheless, the dysfunctional character of those components has nothing to do with the quality and character of the

signals that are impinging on those electronic devices, and, similarly, damage to the brain could affect the capacity of that organ to receive or process signals without necessarily directly interfering with processes of reasoning that might – to varying degrees -- occur independently of brain functioning (i.e., reasoning might not be caused by brain functioning ... although brain functioning could experientially orient and color the process of reasoning in different ways.

If one were to consider the Gage injury from an alternative point of view, one might wonder to what extent – if any -- the changes in personality exhibited by Gage could have been the result either of (a) choices he made or (b) coping mechanisms he adopted as a way of engaging what had happened – and was happening -- to him. For instance, did he become rude, quarrelsome, and unsociable because specific pathways in the brain that normally processed signals concerning reasoning about sociability and pleasantness had been destroyed and no longer functioned, or did he become rude, quarrelsome, and unsociable because his normal way of interacting with other individuals had been compromised in some fashion, and the rudeness, quarrelsomeness, and diminished sociability were his way (maladaptive though those behaviors might have been) of trying to protect himself in, or trying to cope with, a perplexing set of conditions?

In other words, were the rudeness, quarrelsomeness, and lack of sociability displayed by Gage, the direct result of damage to the brain and, therefore, imposed on Gage as the new – though deformed – default position for interacting with others? Or, were those sorts of behaviors expressions of Gage's attempt to cope with a set of circumstances (maladaptive though those attempts might have been) that had thrown his life into disarray in a number of ways?

When we are sick, we often tend to be irritable. Did the sickness cause the irritability, or is the irritability a maladaptive response to not feeling good and not possessing the energy that is needed to successfully cope with life under trying circumstances?

To be sure, having one's brain impaled by a tamping bar is likely to have some sort of problematic impact on one's ability to function in a normal way. However, until one knows exactly what the nature of that impact is, one can't be entirely sure whether changes in behavior

are a direct and automatic result of the damage caused by such an impact or whether those changes in behavior are a maladaptive coping response in relation to whatever damage actually has occurred.

Irrespective of whether the changes in behavior were the direct result of damage inflicted on the brain of Phineas Gage or, instead, were the result of maladaptive responses to his injured condition (or were due to some combination of the two foregoing possibilities), can one really conclude that the Gage example constitutes evidence that there is no self? Does the fact that the character and quality of behavior changes following an accident an indication that the self does not exist?

We experience things and change. We learn things and change.

What is changing? Has the self changed, or has the understanding changed through which the self engages, frames, and filters life?

Choices occur in conjunction with what is experienced. Choices take place in relation to what is learned?

What makes those choices? What determines the nature of those choices?

Isn't it possible that an entity that is referred to as the "self" (a phenomenon of which we all are aware and in relation to which we all have had experience) makes choices about what is experienced and learned? Isn't it possible that the self chooses how to change understanding in response to what is experienced and learned?

Therefore, just because understanding changes – that is, one's way of relating to, or one's way of being existentially oriented with respect to, what is taking place changes – this doesn't necessarily require us to conclude there could be no underlying self that is making choices concerning how one understands what is experienced and learned? In fact, the sense of self that most people have is one that seems to be deeply involved in undergoing changes (some of which are selected and some of which are imposed) throughout life.

If understanding changes – say, as a result of the ventromedial prefrontal cortex being impaled on a tamping bar – how does this automatically demonstrate there could be no self that is distinguishable from the changes in understanding that take place as a result of the way information can be processed due to damage to

various processing pathways? Does the fact that character traits can change (as was the case with Phineas Gage) demonstrate that the self is non-existent or do such changes merely demonstrate that the self is capable of undergoing various kinds of transitional states as a function of the impact that different forces of experience, learning, development, sickness, and injury have on the self and with respect to which the self makes choices?

Professor Pinker seeks to enhance his position (that began with a discussion of Phineas Gage) concerning the non-existence of the self when he engages in a brief examination concerning the split-brain research of Roger Sperry and Michael Gazzaniga. However, before critically reflecting on that discussion, Dr. Pinker makes a comment as he introduces this latter topic that should be addressed.

More specifically, he claims that the research of Gazzaniga and Sperry gives expression to some of the most compelling data available indicating that the notion of a “unified self” is illusory. Whatever the research to which Dr. Pinker is alluding does, or does not, show, there is nothing requiring that the self – if it exists as something independent of the physiological functions of the brain – must be unified.

As noted previously, the concept of ‘self’ tends to give expression to a capacity that is capable – to varying degrees -- of undergoing changes and transitions in state. The concept of ‘self’ seems to allude to a potential that encompasses certain degrees of freedom and constraints concerning the task of trying to navigate through the contingencies of life and participating, to some degree, in the changes that the self appears to be capable of undergoing during that process of navigation.

The self can be mistaken. The self can make problematic choices.

The self can make choices that are inconsistent with one another. The self can choose to engage life in a given way on one occasion and, then, subsequently, make choices that contradict, nullify, or modify the earlier choices.

The potential of the self might well enable that entity to seek a unified sense of self, and, possibly, to be able to realize that kind of a state if and when such a condition occurs. Nevertheless, the self does

not necessarily start out with a clear – or even unclear -- sense of being unified in one way or another.

Consequently, Dr. Pinker begins his discussion of the split-brain research of Sperry and Gazzaniga in a problematic manner. For, even if he were able to put forth evidence indicating that the aforementioned research is capable of demonstrating that a given sense of a unitary self might be illusory, this does not necessarily prove that there could be no underlying potential inherent in human existence that persists across time and through which an individual experiences a sense of self – unified or otherwise.

As the following discussion tries to establish, the research of Sperry and Gazzaniga might carry implications for a person's sense of self. Nevertheless, that research doesn't necessarily have much, if anything, to do with whether, or not, human beings have a dimension of self, or potential for self, that is related to, but different from, an individual's sense of self.

If the self exists – and I believe it does – it constitutes a capacity for orienting one existentially, hermeneutically, morally, socially, and epistemologically. However, one's sense of self is the result of choices that are made in conjunction with the foregoing capacity as different dimensions of that capacity engage what is being learned, experienced and critically reflected upon.

Notwithstanding the foregoing considerations, let's take a look at some of the split-brain research that explores what happens when certain things happen to the corpus callosum. The latter term refers to a collection of nerve fibers that link the left and right sides of the brain.

There are medical conditions (e.g., certain forms of epilepsy) that are treated by bisecting the corpus callosum. This procedure cuts off various kinds of communication or interaction between the two cerebral hemispheres.

When the foregoing operation takes place, then under certain conditions, various anomalous ways of processing information begin to manifest themselves in the individuals who undergo that surgical procedure. Roger Sperry (initially, but later on he worked in conjunction with Michael Gazzaniga) conducted research concerning the foregoing anomalies.

The two scientists discovered that following the foregoing surgical procedure and under certain conditions set up by the researchers (to be described shortly), clients tended to respond to stimuli differently depending on the cerebral hemisphere to which information was being sent. For example, if the word “Walk” is shown to the portion of a patient’s visual field that communicates exclusively with the right hemisphere, a patient might begin to walk in some given direction, but if that person were subsequently asked why he, she, or they started walking on that occasion, the individual often would confabulate or invent some story (e.g., I wanted to get a drink) that purported to explain why the person had decided to start walking during the foregoing situation rather than indicate that the word “Walk” had been seen, and one was acting in accordance with that word or, perhaps, even indicating that the individual was not really sure why he, she, or they had begun to walk at a certain point in time.

In another experiment, different facets of a patient’s visual fields were simultaneously targeted and exposed to images of a chicken and a snowstorm in such a way that the information involving the chicken would only be communicated to the individual’s left hemisphere while the information concerning the snowstorm would be sent just to the right hemisphere. If the person, then, was asked to use her, his, or their left hand in order to identify the image among a set of possibilities (one of which was a chicken claw) that seemed to be most relevant to what had been seen earlier, the individual would select the chicken claw, but if the patient was asked to use his, her, or their right hand to identify the image among a set of images (one of which was a shovel) that seemed to be most relevant to what had been seen previously, the individual selected the shovel.

The left hand selected an image – namely, a chicken claw – that is relevant to the image of the chicken that was transmitted to the left hemisphere through the visual field. The right hand also selected an image – i.e., a shovel – that is relevant to the snowstorm image that had been communicated to the right hemisphere.

However, if a subject is asked why the image of the shovel was selected, the individual will give a confabulated response. For instance, the person might indicate that the shovel was necessary for cleaning up the shed in which the chicken was living.

Among those individuals who have undergone the split-brain research, a person's understanding is often affected by which hemisphere is dominant for handedness and/or language. Although statistics vary somewhat, as many as 93% of the general population seem to show left-hemisphere dominance in relation to language processing (e.g., among other things, Broca's and Wernicke's areas in the left hemisphere of most people tend to be up to three times as large as those areas are in the right cerebral hemisphere of those individuals).

Consequently, when subjects in the split-brain research are asked about why they selected the image of the shovel, their answer tends to reflect: (a) the likely presence of language dominance in the left-hemisphere and (b) the fact that the left-hemisphere also was the recipient of visual information involving a chicken. As a result, the understanding or interpretation concerning a subject's choice of the shovel image will be chicken-oriented rather than snowfall oriented.

Professor Pinker concludes that the foregoing series of experiments demonstrate that the conscious mind – which he equates with the self or soul – does not appear to have a complete understanding of what is taking place and, as a result, will often invent explanations for behaviors that are due to something other than the conscious mind. Furthermore, various dimensions of the individual will respond in different ways depending on the information that has been communicated to those facets of the individual and depending on the kinds of questions or requests that are made.

Therefore, according to Dr. Pinker, there is no one self. He believes the foregoing evidence indicates that not only does a multiplicity of selves exist, but, as well, that the conscious mind has a tendency to invent various kinds of narratives that allow it to assume responsibility for, and provide an explanation of, behaviors that are actually caused by something other than the conscious mind.

Whether, or not, one should identify the soul or self with the conscious mind, as Professor Pinker appears to be inclined to do, raises some interesting questions. For instance, practitioners of mysticism from a variety of spiritual traditions maintain that the nature of the soul or essential Self transcends the activities of the conscious mind, and, in fact, proponents of mysticism often indicate

that what is normally referred to as the conscious mind tends to obfuscate, if not compete with and attempt to dominate or control, the interests of the actual Self or soul.

Certainly, the tendency of the conscious mind to offer explanations that try to convey the impression that it is responsible for, and in control of, various behaviors -- such as occurs in split-brain research and even though evidence clearly indicates otherwise -- is consistent with the mystical teaching that the conscious mind is not necessarily an honest or reliable broker concerning experience. Split-brain research might have uncovered the existence of a variety of possible pretenders to the self or soul that – each, in its own way – seek to interpret and shape awareness or understanding, but the aforementioned research has not necessarily demonstrated that the idea of a soul or self is false ... although such research does tend to indicate that the soul might be more complicated than many people – including Dr. Pinker – seem to suppose.

Under certain circumstances (e.g., split-brain research) the right hemisphere seems to make one kind of contribution toward helping to shape certain aspects of understanding. Moreover, under certain circumstances (e.g., split-brain research) the left hemisphere appears to offer another kind of contribution that is intended to help orient understanding with respect to certain aspects of experience, and, finally, the conscious mind introduces a further species of contribution that seeks to frame understanding in, yet, another manner.

Why should one suppose that what goes on in the left and right hemispheres or the conscious mind constitutes the sum total of what is possible with respect to consciousness? We all have had experiences in which insights, solutions, ideas, and various kinds of realization suddenly appear in waking consciousness that are not the product of thinking or reasoning that has taken place on the screen of normal consciousness and, yet, seem to give expression to intelligent, informed, logical, rational processes.

Apparently, there is a capacity (or capacities) within us that is (are) capable of generating intelligent responses to on-going issues that would seem to have to be aware of various aspects of experience in ways that normal, waking consciousness does not appear to be. Although the tendency of many scientists such as Professor Pinker is

to suppose that such dynamics are a function of brain activity in one, or both, of the cerebral hemispheres, nonetheless, at the present time, we do not necessarily know what makes the foregoing processes of the “conscious unconscious” possible.

The soul or self, therefore, is not necessarily a function of, or caused by, what goes on in the right hemisphere, the left hemisphere, or the conscious mind. In fact, one might want to reflect on whether, or not, chickens, snowstorms, chicken claws, and shovels – the kinds of topics that emerge in the split-brain research -- have any sort of actual relevance to the concerns of the soul or Self.

Even if one accepts the idea that anomalous sorts of information processing take place in split-brain subjects, just how does this demonstrate that the Self or soul does not exist? Are our modes of interacting with Being necessarily restricted by what transpires in the left hemisphere, the right hemisphere, or the conscious mind? Where – or what -- is the evidence demonstrating that we are necessarily limited to the foregoing modalities of engaging experience?

Is consciousness/awareness capable of being bifurcated and compartmentalized? The answer to the foregoing question is, obviously, “yes” because, if nothing else, the split-brain research demonstrates that, under different conditions and in various ways, consciousness/awareness is susceptible to being bifurcated and compartmentalized.

Nevertheless, mystics from a variety of spiritual traditions indicate that the faculties through which the mysteries of Being can be accessed are not dependent on, or tied to, normal modalities of reasoning, logic, analysis, interpretation, and so on, and, therefore, one isn’t necessarily required to seek answers to the mysteries of Being by means of the activities of the right and left hemispheres or even through the activities of the conscious mind. Consequently, whatever the nature of the vulnerabilities to which two cerebral hemispheres and the conscious mind might be susceptible, this does not necessarily foreclose on – although it might create various problems for – the capacity of human beings to seek essential truths concerning the nature of our possible relationship with Being in ways that are not mediated – to whatever extent this is the case – by the two cerebral hemispheres or the conscious mind.

Cutting the nerve bundles that comprise the corpus callosum might affect communication between the two cerebral hemispheres, and, as a result, lead to a variety of anomalies in the way in which various kinds of information are processed under an array of conditions or in the way in which the conscious mind tries to make sense of what is taking place. However, no one – Including Roger Sperry, Michael Gazzaniga, or Steven Pinker -- has provided definitive evidence that demonstrates how cutting the corpus callosum eliminates, truncates, or suppresses the capacity of a human being to seek, and, possibly, realize, whatever mysteries might exist with respect to the nature of one's relationship with Being.

A set of challenges resides within the mystical path. One of those challenges involves the task of trying to discover the presence and nature of the real Self amidst all of the false selves with which the conscious mind is inclined to identify during various facets of the conscious mind's activities, and, therefore, split-brain research actually resonates with the mystical perspective rather than undermines it.

The left and right hemisphere can be sources of different kinds of information. Be careful ... exercise due diligence!

The conscious mind has a tendency to confabulate and invent stories to explain what is going on. Be careful ... critically reflect on what is taking place!

Consciousness can be bifurcated and give expression to forms of understanding that are shaped by the dynamics that are taking place within different cerebral hemispheres. Be careful ... rigorously examine the provenance of any given conscious state in order to determine what forces are underwriting that state!

The foregoing cautions are relevant to the experiences of individuals who have undergone split-brain research. The foregoing warnings are also relevant to the experiences of individual who have not undergone split-brain research, but who are, nonetheless, vulnerable to various kinds of illusions and false notions of self.

Everyone – whether a split-brain subject or not -- encounters instances in which the conscious self makes up stories in an attempt to account for phenomena and events that exceed, or elude, the ability of

the conscious mind to understand. Spinning such stories – maladaptive though they might be -- is how the conscious mind tries to cope with various events that, among other things, are threatening to spin out of control and, as a result, those stories tend to allay anxieties that swirl about the many unknowns of life.

Professor Pinker believes that, in many cases, conceptual systems involving, for example, anthropology, sociology, philosophy, politics, and religion give expression to stories rooted in various fabrications of the conscious mind as it engages lived experience. Such fabrications often lead individuals to identify with different senses of self that are shaped by, and – to varying degrees – are dependent on, those sorts of fabrications.

However, Dr. Pinker never seems to consider the following possibility. Conceivably, (1) his own reductionistic ideas concerning the physical/material nature of reality, or (2) his belief that the ‘self’ or ‘soul’ does not exist, or (3) his idea that the person disappears when the brain dies, or (4) his presumption that human beings are a function of evolutionary events, or (5) his claim that consciousness, intelligence, reason, logic, creativity, and emotion are due to the physiological activities of the brain are all as susceptible to the tendency of the conscious self (i.e., his own) to fabricate stories or to be confused by the conflicting information arising in conjunction with the activities of his left and right cerebral hemispheres as are the perspectives that he seeks to criticize.

For example, according to Professor Pinker, damage to the frontal lobes of an individual can lead to aggressive behavior in the person to whom such damage occurs. Dr. Pinker says the reason why aggressive behavior takes place in the foregoing individual is because the normal ability of the frontal lobes to exert an inhibitory influence on the stria terminalis pathway that connects the hypothalamus and amygdala has been destroyed, blocked, undermined, or compromised as a result of the damage that was inflicted upon the frontal lobes.

At no point during the foregoing sorts of discussion in *The Blank Slate: The Modern Denial of Human Nature* does Dr. Pinker provide a detailed account of how the frontal lobe acquired the capacity to become aware of and identify the activities of the limbic system as well as to be able to learn how to inhibit the aggressive tendencies of that

system, as well as to be able to understand why such tendencies must be inhibited. Moreover, at no point during the aforementioned book does Professor Pinker offer a step-by-step account of the physiological dynamics that give expression to the foregoing processes of awareness, identification, learning, or inhibitory activity, and, In addition, Professor Pinker does not explain how the stria terminalis came to acquire the capacity to mediate the issue of aggressiveness with respect to the interaction of the amygdala and the hypothalamus.

How do we know that the narrative advanced by Dr. Pinker concerning the relationship of the frontal lobe, amygdala, hypothalamus, and stria terminalis is not just a story spun by his conscious mind in an attempt to explain phenomena that – at least at the present time – might exceed his ability to understand? The fact that damage to the frontal lobe is associated in some manner with activity in the stria terminalis and is also correlated with aggressive behavior in persons to whom this kind of damage happens doesn't demonstrate that awareness, identification, learning, understanding, and inhibitory behavior are a function of brain activity ... although the information cited by Professor Pinker does indicate that, to varying degrees, physiological functioning in the brain does seem to mirror, parallel, reflect, and is, in some unknown manner, related to the phenomenological events involving inhibition and lack of inhibition in conjunction with aggressive behavior.

To be sure, one can accept the claim of Dr. Pinker that, to a considerable extent, genes shape the character of the brain's gross anatomy. In other words, gene expression gives rise to the basic architectural plan of the brain involving the neurological location, shape, properties, development, and connections of an array of regions, fissures, nuclei, circuits, and pathways in the brain. However, even granting the foregoing points, one cannot, therefore, necessarily conclude that awareness, learning, memory, intelligence, reason, judgment, interpretation, and emotion are reducible to the neurological activities that are made possible through the manner in which genes give expression to the architectural dynamics of the brain.

Similarly, one can acknowledge the fact – and Professor Pinker notes this in passing -- that relatively recent studies involving identical and fraternal twins tend to demonstrate there are differences in the

way grey matter is distributed in the frontal lobes of human beings and that such differences are significantly correlated with differences in intelligence. Nevertheless, the foregoing concession does not force one to conclude that: Grey matter, the amount of grey matter, or the manner in which grey matter is distributed is necessarily responsible for generating the property of intelligence.

In order to justifiably claim that intelligence is a function of grey matter, one needs to show how the physiological processes occurring in and around grey matter generate intelligence. In other words, one must be able to show how: Interacting action potentials, dendritic branching, axonal dynamics, and the activity of neurotransmitters give expression to properties of awareness, insight, judgment, evaluation, analysis, understanding, reason, logic, creativity, and so on.

At the present time, neither Dr. Pinker nor any other scientist is capable of putting forth evidence that clearly gives expression to any of the foregoing possibilities. All the available evidence can show is the existence of correlations between brain activity and intelligence, but, as any basic course in statistics tends to remind one, correlation is not necessarily the same thing as causation.

For instance, the electronic components in a television or radio set – along with the distribution of those components within a set -- are significantly correlated with whatever degree of intelligence might be manifested in a given television or radio program. Nevertheless, the components, or their manner of distribution, do not cause the content of the foregoing programs even though those components and their distribution are needed for different programs, of variable intelligence, to be able to be manifested in a visible and audible form.

One can agree with Professor Pinker that such properties as scientific genius, intelligence, or aggressiveness might not be reducible to being a function of culture and learning even though culture and learning often pass on a certain amount of color and orientation to the foregoing kinds of innate properties. Furthermore, one can agree with Dr. Pinker that there are dimensions of innate potential within human beings – and other life forms – that, to varying degrees, are capable of pushing back against, and acting on, both culture and the process of learning.

In short, one can agree with Professor Pinker that human beings are not blank slates upon which the environment writes its messages. Instead, human nature is something with which the environment (physical and social) interacts in variable ways, but, nonetheless, the ultimate character of human nature cannot necessarily be restricted to the degrees of freedom and constraints that are established through the activities of gene expression.

One could endorse the contention of Dr. Pinker that physical and social environments form a context within which gene expression takes place that, simultaneously, can affect, as well as be affected by, various aspects of those environments. However, acknowledging the foregoing point does not obviate the possibility that gene expression, itself, might form a context within which the choices of the Self take place that are capable of affecting, and being affected by, the dynamics of gene expression.

In short, one can agree that something called human nature exists and that while such a nature can be affected by the environment, that nature is not reducible to, or a strict function of, the environment. Notwithstanding the foregoing point, nevertheless -- and contrary to the claims of Professor Pinker -- human nature might involve considerations (e.g., such as the Self or soul) that extend beyond the way in which gene expression manifests itself during maturation or development.

Professor Pinker indicates that the field of behavioral genetics explores the ways in which genes affect behavior. This seems to be an unobjectionable, if not interesting, pursuit.

However, he, then, goes on to argue that the capacities for thinking, feeling, and so on that distinguish human beings from animals are all a function of the DNA that is contained within the fertilized ovum of the mother. Unfortunately, none of the discussions that occur at various junctures throughout *The Blank Slate: The Modern Denial of Human Nature* is able to demonstrate that human potentials involving thinking, feeling, language, and so on are functionally – and entirely – dependent on the contents of our DNA.

Describing differences in behavior as being due to differences in genetic makeup, Dr. Pinker contends that small differences in genes can cause large differences in behavior. For instance, he notes that

although the genetic composition of bonobos and common chimps differ by only a few tenths of one percent, nonetheless, bonobos are among the least aggressive of mammals, while common chimps are among the most aggressive of mammals.

Furthermore, on the one hand, among bonobos, females are dominant, but in chimp society, males are dominant. In addition, bonobos engage in sexual activity for purposes of recreation, whereas common chimps engage in such activity solely for purposes of procreation.

The genetic differences between bonobos and common chimps might well be only a few tenths of one percent. This factor, however, does not prove that those differences are responsible for the aforementioned behavioral differences that distinguish bonobos and common chimps.

In order to prove that the foregoing sorts of genetic differences are responsible for the observed behavioral differences between bonobos and chimps, Professor Pinker would have to show that the few tenths of a percentage point that generically separate the two species were directly responsible for behavioral differences in sexual activity, aggressiveness, and male-female dominance among, respectively, bonobos and common chimps.

However, showing that genetic differences are correlated with differences in behavioral patterns does not really provide much to explain what makes different kinds of aggressiveness, dominance relationships, or sexual behavior possible. Moreover, even if Professor Pinker were able to show that the differences in genetic makeup coded for proteins that played some sort of role in the neurological circuitry and pathways that had something to do with sexual activity, dominance orientation, or aggressive behavior, this still is not enough.

One also must show precisely how those genetic differences bring about differences in behavior. He must demonstrate how differences in gene expression cause particular kinds of sexual, aggressive, or dominance behavior.

Seeking to strengthen his conceptual position, Professor Pinker notes that the best predictor for determining if a given person will be schizophrenic is whether, or not, there is an identical twin who suffers

from schizophrenia. Schizophrenia is strongly concordant among pairs of identical twins who have identical genetic sequences and operate within a largely overlapping set of environmental conditions, but the degree of concordance concerning schizophrenia falls off to a substantial degree when one considers pairs of fraternal twins who operate out of a largely overlapping set of environmental conditions but only hold in common half of their genes.

Despite the fact that the concordance of identical twins with respect to schizophrenia is very high, the concordance is not 100%. Among other things, there seem to be epigenetic factors – that is, nongenetic influences (such as choices made, experiences encountered and relationships established) – that are capable of affecting whether an individual's underlying susceptibility to schizophrenia will, or will not, become active.

Which aspect, or aspects, of the genetic makeup in various pairs of identical twins render them susceptible to the being schizophrenic? No one knows!

How does the aforementioned susceptibility give rise to the symptoms of schizophrenia? No one knows!

Are the genetic factors that render certain pairs of identical twins susceptible to schizophrenia, the same genetic factors that render a smaller number of fraternal twins susceptible to schizophrenia? No one knows!

Genetic factors seem to be implicated – in some unknown fashion - - in the occurrence of schizophrenia. Moreover, epigenetic factors (that is, nongenetic influences on gene expression) also appear to be implicated – in some unknown fashion – in the occurrence of schizophrenia.

Do the choices that people make affect whether, or not, certain kinds of genes are, or are not, expressed that might render one more, or less, susceptible to becoming schizophrenic? Possibly, but no one knows!

Are identical twins caught up in some form of – for example -- quantum entanglement such that when one of two identical twins succumbs – for whatever reason -- to schizophrenia, the property of entanglement serves as a tipping point that sets forces in motion that

drag the other individual into the same condition or state? If so, then, the high rate of concordance for schizophrenia among certain pairs of identical twins might not be, strictly speaking, a function of genetic makeup but, instead, could be due to the dynamics of entanglement.

Of course, quantum entanglement still might be a function of genetic makeup. Alternatively, genetic makeup might be a function of, or reflect to varying degrees, some sort of quantum entanglement phenomenon.

If quantum entanglement – whatever that might entail – is a function of genetic makeup, then, the high concordance of schizophrenia among certain pairs of identical twins could indicate that genes might play some role in a person's susceptibility to schizophrenia. On the other hand, if one of two identical twins begins to exhibit symptoms of schizophrenia, and this drags the other twin into a schizophrenic condition due to, say, processes of quantum entanglement, then, it becomes less clear as to just what role genes are playing in the onset of schizophrenia in the latter twin.

Being susceptible to schizophrenia is one thing. Being susceptible to the currents of quantum entanglement might be a very different kind of phenomenon.

The foregoing ideas might not be correct. However, given that there is so much we don't know about how the mind operates and given that the mind and the brain might be related but give expression to different kinds of phenomena, the foregoing possibilities cannot be automatically precluded from consideration.

Professor Pinker believes that genes play a crucial role in the onset of schizophrenia. However, he isn't able to say precisely what the nature of that role is or how genes cause susceptibility to schizophrenia or how patterns of gene expression constitute causal forces that are able to bring about the symptoms of schizophrenia.

He probably is right that genes affect behavior in some fashion (such as establishing parameters – that is, degrees of freedom and constraints for possible ranges of behavior). Nevertheless, although one might be willing to acknowledge that genes have some sort of modulating impact on behavior, Dr. Pinker has not been able to put forth the sort of definitive proof that would be capable of

demonstrating, in any direct fashion, how genes cause schizophrenic behavior or associated symptoms.

Dr. Pinker continues on delineating his perspective by stipulating that when one identifies a given gene as defective, one also is indicating that a non-defective version of that gene is necessary in order for a human being to operate properly. The problem is, however – as Professor Pinker acknowledges -- one doesn't necessarily know what the role or function of the non-defective gene might be and, instead, one only knows that the defective gene prevents that "normal" role or function – whatever it might be -- from taking place in an effective manner.

For example, Professor Pinker introduces the FoxP2 gene into his discussion in an attempt to lend some degree of specificity to the point he is trying to make. When the aforementioned gene contains a problematic nucleotide, it is implicated in a particular kind of language and speech disorder that occurs in certain people.

More specifically, research has established that all the members of a family being studied who exhibit a particular kind of speech and language disorder possess the defective gene. Furthermore, another person who also suffers from the disorder but is not a member of the foregoing family possesses the defective gene as well.

On the other hand, members of the same family who do not exhibit signs of the speech and language disorder were discovered not to possess the defective gene. In addition, individuals who were unrelated to the family and who were free of symptoms related to the speech and language disorder also did not possess the defective gene.

So, obviously, the defective gene in question would seem to have something to do with the speech and language disorder. Nonetheless, what the nature of that "something" is remains unclear.

The gene that is affected codes for a transcriptase. This kind of molecule has the capacity to activate various other genes.

The working theory is that the normal version of the defective gene is responsible for initiating an array of events that play various roles in helping to organize an aspect of development in the brain that affects speech and language behavior. However, no one is quite sure – at least up until the point in time when the research was conducted –

how the cascade of events that ensues from a transcriptase initiating further facets of gene expression actually organizes speech and language development or behavior.

Like electronic components and circuitry in a television or radio set, the non-defective version of the foregoing gene is necessary for “normal” functioning to be possible because it appears to play some role in language and speech functioning. Nevertheless, the presence of that gene does not necessarily cause certain kinds of language and speech behavior to occur any more than the components and circuitry in television and radio sets cause the content of the programs that those components and circuitry make visible and audible.

Familiarity with the properties of gene expression might be necessary for understanding and explaining certain aspects of behavior. However, contrary to the contention of Professor Pinker, grasping the nature of an organism’s genetic makeup might not be sufficient to permit a person to fully and properly explicate an organism’s behavior or accurately account for whatever phenomenology that might be present and associated with that sort of behavior.

Notwithstanding the foregoing considerations, Professor Pinker, maintains that if different genes are capable of making it more, or less, likely that a person will be: Introverted, happy, aggressive, shy, risk-averse, open, conscientious, and so on, then this constitutes compelling evidence that the mind is not a Blank Slate at birth but something that can be affected by the presence or absence of certain kinds of genes. Unfortunately, at no point during the discussions that appear in *The Blank Slate: The Modern Denial of Human Nature* does Dr. Pinker demonstrate that genes are what make people more, or less likely, to exhibit certain kinds of behaviors.

One could agree with Dr. Pinker that people do seem to exhibit differences with respect to whether they are more or less likely, to exhibit certain kinds of properties and behaviors. One also could agree with Professor Pinker that genes do appear to have something to do with some of the differences that exist among people. Furthermore, one could agree with Dr. Pinker that many of the differences among people are not necessarily a function of environmental factors (physical or cultural) or what is learned.

Nonetheless, the source of the foregoing differences might not always be a function of genes. For instance, one might conceive of the Self or soul as a locus of manifestation for choices that are capable of leading to epigenetic differences in development, personality, and behavior, and, as such, the Self or soul gives expression to an innate capacity that both undermines the notion that human beings begin life as a blank slate as well as argues against the idea that human nature is nothing more than that which arises due to the structure of genetic makeup or the process of gene expression.

The Self or soul -- together with its capacity to choose, at least within certain limits or parameters that might be set by genes and environment -- could be a tertium quid or third dimension of the human being. As such, human nature is neither a strict function of either genes or environment (whether considered individually or collectively) but has, to varying degrees, the capacity to push back against, as well as selectively interact with, the dictates of both genes and environment.

Dr. Pinker moves on to another topic concerning the ways in which biology impacts culture by introducing the idea of 'evolutionary psychology'. This latter term refers to a supposedly scientific process that seeks to explore the ways in which the evolutionary development of various species (i.e., phylogenesis) gives rise to an array of adaptive capabilities in the mind.

Professor Pinker claims that Darwin showed how the illusion of design associated with mental development and adaptive capabilities could be accounted for by natural selection. Actually, Darwin didn't actually show anything of the kind.

Darwin proposed a theory that purported to explain the origin of all species. While that theory might account for the origin of some species, nevertheless, it remains to be seen whether, or not, that same theory actually can be shown to correctly reflect (as opposed to theoretically explain) the origin of the genetic coding contained in various species (for example, prokaryotes, cyanobacteria, Chemotrophs, eukaryotes, anaerobic and aerobic organisms, Archaea extremophiles, fungi, as well as correctly account for the transitions in genetic coding that underlay the emergence of all manner of families, orders, classes, phyla, kingdom, and domains.

Natural selection does have a role to play in the foregoing theory. It identifies those organisms that seem to be more successful than others with respect to being able to leave behind progeny that are more likely than are other organisms or species to be able to continue surviving in a given environment.

However, natural selection didn't generate the foregoing sort of adaptive capacity. Rather, natural selection merely gives its endorsement to those modalities of adaptive capacities that – in an unknown fashion -- come into existence and, consequently, are able to work more effectively in a given existential context than other modalities of adaptive capacity are able to do.

The notion of natural selection does not provide any insight into how the properties and qualities of a given form of adaptive capacity came into being in the first place. Natural selection operates after the fact of developmental or evolutionary innovation and, therefore, plays no role in the actual dynamics – whatever this might entail -- of such an innovative process except to support (i.e., select) or reject (i.e., work against or terminate) the results of that innovative or developmental process.

Dr. Pinker contends that natural selection “is the only process in which how well something works can play a causal role in how it came to be” (page 52). The foregoing seems akin to advancing some sort of bootstrap theory in which natural selection mysteriously brings about whatever adaptive innovations occur and, then, selects the best of what the process of natural selection has brought forth.

Yet, when one examines the alleged causal process of natural selection that, supposedly, explains how something that works well came to be through the process of natural selection, then, that process seems to be rather opaque. More specifically, the dynamics of natural selection that purport to give expression to a causal process that is capable of generating novel adaptive capabilities appear to be rather vague in nature.

Just how does the way in which something works well play a causal role in how that something came to be? Just how did the process of natural selection make possible such an act of evolutionary prestidigitation (i.e., the coming to be of something that works well)?

How – in specific, step-by-step terms -- did natural selection bring about the genetic coding for, say, the initial emergence of some form of lens, retina, iris, and so on that would function – however minimally – as an eye or eye-like structure? How – in specific, step-by-step terms - - did natural selection bring about the transitions in genetic coding that led to improved versions of, the first editions of the retina, iris, and other facets of vision (or the capacity to differentiate between light and dark) that occurred in conjunction with various species?

According to Dr. Pinker, the brain serves as the “raw material for circuitry that computes representation of the external world (page 52). Yet, neither Dr. Pinker, nor anyone else at the present time, is able to identify – in specific terms -- what is organizing, managing, or directing the establishment of those circuits/pathways or what the nature of the computations are that, supposedly, are generating representations of the external world or how such representations are given phenomenological expression or how any of the foregoing capacities for generating circuits, computations, and representations came into being in the first place.

Human beings share 96% of their DNA with chimpanzees who, supposedly, are our closest living relatives. This would seem to imply that the 4% difference between the two species is not only responsible for (a) the differentials in awareness, intelligence, logic, understanding, insight, language, morality, creativity, spirituality, and talent (e.g., musical, artistic, mathematical, mechanical) that distinguishes humans from chimps but, as well, (b) such qualitative differences all emerged within the last six million years, or so, during the rise of the hominids.

Conceivably, however, the 4% differential in DNA sequencing between humans and genes has little, or nothing, to do with the emergence of all of the foregoing mental qualities. But even if that 4% figure does have something to do with the advent of the aforementioned mental qualities, evolutionary psychology is, nonetheless, confronted with a considerable challenge – namely, explaining how and why the foregoing sort of explosion in cognitive capabilities took place within – relatively speaking -- such a short period of evolutionary time.

While debunking the notion of ‘The Noble Savage,’ Professor Pinker makes a few observations and cites a few statistics that he believes lend support to his thesis that genes shape behavior. For example, he indicates that Carol Ember, an anthropologist, put forth evidence in 1978 that not only do 90% of hunter-gatherer societies participate in warfare, but, on average, 64% of those same societies engage in war activities once every several years, therefore demonstrating that not only do most hunter-gatherer societies engage in war, but they tend to do so fairly frequently.

Dr. Pinker, then, mentions the work of Donald Brown (1991 and 2000) in conjunction with the idea of human universals. According to Brown, behaviors involving dominance, conflict, rape, violence, revenge, and jealousy are expressions of human universals that are present in all manner of societies.

Presumably, the existence of the latter human universals might be offered as an explanation why most human societies – including hunter-gatherer groups (which earlier in the 20th century had been considered by anthropologists to consist largely of peaceful ‘Noble Savages.’) – appear to be so inclined toward engaging in war with such frequency. However, during the same discussion, Professor Pinker also indicates that when one looks at the percentage of male deaths that are due to warfare in a variety of societies -- ranging from indigenous peoples in New Guinea and South America to modern societies in Europe and the United States – the percentage of male deaths in America and Europe that are due to warfare are virtually negligible when compared to various indigenous, ‘Noble Savage’-like groups.

The foregoing observations entail several potential problems. To begin with, if rape, violence, dominance, conflict, and jealousy are human universals, then why is there such a difference between the percentage of male deaths due to warfare in indigenous societies relative to modern American and European societies even after taking into consideration the millions of people that died during the First and Second World Wars?

The previous question assumes added significance given that Dr. Pinker is seeking to demonstrate that to whatever extent human universals do exist, then those inclinations and tendencies are, supposedly, either a function of genetic givens or are, to a considerable

degree, influenced by the presence of genes that play key roles in the manifestation of those sorts of human universals. After all, if the aforementioned qualities are human universals that are a function of, or heavily influenced, by certain genes, then, one might expect the incidence of aggression, violence, and hostility to be fairly consistent across societies.

Are there conditions – and, if so, what are they (Conceptual? Moral? Spiritual? Political? Legal? Philosophical? Social?) – that are capable of either triggering or preventing the outbreak of war as a function of the way in which human universals – to whatever extent they exist – are modulated by different kinds of gene expression? What forces – if any --are capable of affecting the way in which, and extent to which, genes are or are not expressed?

Is the percentage of male deaths due to warfare a function of human universals that are, in turn, a function of genes? Or, is the percentage of male deaths due to warfare a function of non-genetic factors?

Alternatively, one might explore the possibility that the percentage of male deaths due to warfare involves a dance macabre between human universals and cultural forces. If so, then, what is the precise character of the dynamics that are entailed by such a dance?

Are such deaths due to a denial of certain facets concerning human nature? Or, are those deaths due to a denial of certain aspects of culture and its institutions? Or, perhaps, those deaths are due to a denial of the nature of the way in which human universals – to whatever extent they exist – interact with various cultural variables.

Even if one accepts the idea that there are particular forms of human universals, one cannot automatically assume that those universals are a function of genes or evolution. One can acknowledge the existence of human universals without necessarily having to conclude that those universals are a product of genetics ... especially given that no one has, yet, been able to work out exactly how – or if -- genes either cause – or predispose a person to -- jealousy, rape, aggression, violence, or conflict and given that no one has been able to establish what role, if any, choice might play in whether, or not, certain kinds of behaviors are manifested, and given that evolutionary theory – despite its popularity among scientists and academics – really hasn't

been able to demonstrate – in specific, step-by-step terms -- that human beings are evolved beings rather than created beings.

One might also note in passing that the statistical manner in which Dr. Pinker has framed the foregoing issue is rather arbitrary. In other words, why use the percentage of males in a given society that are killed through warfare as a basis for establishing how violent a given population of people is?

Professor Pinker gives the impression that what goes on in societies where 20 males are killed during warfare (such as might occur within certain indigenous societies) is, somehow, much worse than societies where millions of people have died due to warfare simply because the latter percentage is based on a much larger population than is true in the case of various indigenous societies. As Mark Twain indicated – borrowing from the British Prime Minister Benjamin Disraeli – “There are three kinds of lies ... lies, damned lies, and statistics, and, surely, what Dr. Pinker has done in his presentation is to, at the very least, obfuscate the fact that statistics can be used to distort one’s understanding of the level or character of the violence that is taking place in a given context.

The percentage of male deaths due to warfare might be higher in certain indigenous societies than occurs in modern American and European societies. However, whenever millions of people die in war (as has happened in World War I, World War II, the Korean War, The Vietnam War, and a series of Gulf Wars) then, irrespective of what percentage of male deaths are due to war, a great evil is taking place and statistics be damned.

Furthermore, if one factors in the number of people in modern societies who die due to automobile accidents, neighborhood conflict, domestic abuse, drug overdoses, suicides, iatrogenic agents, environmental pollution, false-flag psy-ops, and economic injustice (e.g., poverty) – all of which are expressions (to varying degrees) of the perpetual state of low-intensity warfare that tends to exist in societies like America due to the way that those in control create oppressive conditions for those who are not in control -- then the absurdity of the sort of statistic that Professor Pinker cites is his foregoing argument becomes even more obvious. The percentage of people who die in certain indigenous societies might be greater than

the percentage of people who die in modern societies, but the horror, terror, corruption, and perversity that exist in the latter kinds of societies is very pervasive and undermines the quality of life to a considerable degree for both the dead and the living.

Consequently, trying to give the impression – as Dr. Pinker seems inclined to do -- that societies formed by certain indigenous peoples are, somehow, more inclined to act in accordance with the properties of various human universals – to whatever extent such universal exist – than are modern American and European societies seems a rather questionable exercise. More importantly, such an exercise doesn't seem to offer a great deal of insight into what makes human qualities – both constructive and destructive – possible.

I could continue on in the foregoing manner with respect to the remaining 380 pages, or so, of: *The Blank Slate: The Modern Denial of Human Nature*. Indeed, the margins of the foregoing book have been filled with all manner of critical commentary stemming from my engagement of the foregoing book.

However, what has been said in this chapter up to this point tends to provide the reader with the flavor of my position concerning the perspective of Professor Pinker. While I am quite willing to acknowledge his point that there are aspects of human nature which cannot be reduced to being functions of culture or learning and that suggest, therefore, that genetic givens must be taken into consideration when one tries to gain insight into the structure and dynamics of human nature, nevertheless, I feel that Dr. Pinker is as much in denial of certain dimensions of human nature – for example, the Self or soul and its capacity for choice, along with capacities such as intelligence, awareness, creativity, language, talent, understanding, insight, and so on – that cannot necessarily (at least at the present time) be shown to be a function of genetic givens even though one can acknowledge that genes are likely to influence the foregoing capacities in a variety of ways involving both degrees of freedom and constraints.

Chapter 6: Me, Myself, and I

Thomas Metzinger begins the introduction to his book, *The Ego Tunnel*, in a very provocative fashion. He claims that: "... there is no such thing as a self."

Metzinger considers the idea of the "self" to be a term that is intended to refer to some sort of entity that is the subjective locus of awareness or consciousness. The 'self' is supposed to be that in which phenomenal experiences takes place, but according to Thomas Metzinger, "... nobody has ever been or had a self."

For instance, consider the following experiment that was conducted in 1998. Jonathan Cohen and Matthew Botvinick – who were psychiatrists working at the University of Pittsburg – devised an illusion in which subjects came to experience an artificial limb as being part of themselves.

More specifically, one of the hands/limbs of individual subjects was placed on top of a table and was hidden from view, while a rubber hand was placed in view on top of the same table and positioned in a way that could have been how a subject might have placed his or her hand on the table if it had not been hidden. At a certain point in the experiment, both the hidden – actual – hand of a subject and the artificial hand were stroked simultaneously.

After continuing the simultaneous stroking for a minute, or more, subjects came to experience the rubber, artificial hand as being their own, and subjects feel the strokes as if they are emanating from the artificial hand itself. Moreover, subjects experience a connection between their biological shoulder and the artificial hand, and, as a result, subjects sense the presence of a 'virtual arm'.

According to Thomas Metzinger, the feelings, sensations, and so on that are present in the rubber-hand illusion are contents of what he refers to as the 'phenomenal self model' ... or, PSM. The 'phenomenal self model' arises in conjunction with brain activity that creates the phenomenal and experiential sense of being a whole organism.

The emergence of the 'phenomenal self model' is, supposedly, what permits a human being to be able to interact with events that occur outside of, or within, an organism and construct a representation of such events. As such, the 'phenomenal self model' is

a phenomenal representation of an organism's sensory representation of in-coming data.

Metzinger indicates that while most animals have the ability to experience consciousness to one degree, or another, nonetheless, human beings have a brain that has been able to do something that no other form of animal life on Earth has been able to accomplish. Metzinger believes this uniquely human capacity to phenomenally represent sensory data is what enabled biological evolution to initiate cultural evolution.

The foregoing perspective raises a lot of questions. For instance, if the brains of human beings are unique among life forms on Earth with respect to the former's ability to generate a phenomenal representation of sensory data so that we can become aware of the process of being aware, then how did such a capacity come into being?

Furthermore, Metzinger believes the brain is responsible for generating a phenomenal representation of sensory data, but he doesn't really explain how the brain accomplishes this. In addition, if one cannot demonstrate that the brain is responsible for the phenomenal representation of sensory data, then, how can one be sure that such a capacity is due to the activity of the brain rather than something else – say a 'self'?

Just as subjects in the rubber-hand illusion came to believe that the artificial hand belongs to them and is capable of sensation, then, perhaps, Metzinger is operating under an illusion in which he believes that the brain is the locus of phenomenal experience when, in reality, phenomenal representation is due to the existence of an entity known as the 'self' that might not necessarily be a function of brain activity.

A short while later in *The Ego Tunnel*, Metzinger discusses out-of-body experiences (OBEs). He describes an OBE as a state "... in which one undergoes the highly realistic illusion of leaving one's physical body."

How do we know that an OBE is an illusion? Metzinger refers to the work of Olaf Blanke, a neurologist in Switzerland, who has been able to induce an OBE in subjects by electronically stimulating their brains.

An OBE involves the presence of two bodies. One of these bodies is viewed as an object, while the other body is experienced as being the phenomenal medium through which one views the object body and that is separate from the latter body.

When an electrode is used to probe a person's brain and, in the process, generates an OBE, what happens? How does the electronic probe produce the phenomenal content of the OBE?

The fact of the matter is that we don't know how electronically stimulating a part of the brain gives rise to the phenomenal content of an OBE. Moreover, we don't know if an OBE might be generated through other means that do not involve an electronic probe.

Metzinger is assuming that an OBE is an illusion of some kind. However, he can't actually explain how the illusion works or whether every instance of an OBE is nothing more than an illusion.

I do not have an opinion, one way or another, about whether an OBE is real or illusory. However, until one knows how – or if – the brain generates the phenomenal content of an OBE, then, the fact that one is able to trigger such an experience electronically, does not necessarily demonstrate that an OBE is a function of brain activity of some kind but, rather, only indicates that in some unknown fashion, such a phenomenon can be triggered by means of an electronic probe.

Does the presence of the electronic probe open a door to some other realm of reality? Does the use of such a probe somehow activate an aspect of the self?

Currently, we do not have any definitive answers concerning the OBE phenomenon. Consequently, Metzinger is being premature when he concludes that an OBE is an illusion or that the brain is what generates an OBE or that just because some instances of an OBE can be triggered by the presence of an electronic probe, then, therefore, one should assume that all instances of an OBE are generated in a similar fashion.

Metzinger uses the term "Ego Tunnel" to refer to the phenomenological dimension of human experience. The "Tunnel" aspect of the foregoing term is intended to convey the idea that the phenomenological representation to which the Ego gives expression constitutes an impoverished portrayal of existence in which many

details of actual reality have been ignored – perhaps selectively -- during the process of selecting that to which one will attend.

I'm nor really sure how using the term "Ego Tunnel" enables one to jettison the notion of self. After all, a self might be just as capable of determining what to attend to and what to ignore as the "Ego Tunnel" is capable of doing, and, in fact, one can't help but wonder if the whole self/Ego Tunnel issue is more of a terminological difference than a means through which to demonstrate that an entity referred to as the 'self' does not exist.

One of the things Metzinger indicates that the Ego Tunnel achieves is to provide individuals with a point of view ... a sense that the contents of phenomenology belong to "me" or are "mine". Yet, a question that bubbles to the surface in the foregoing context is why the brain couldn't operate just as well – if not better – by engaging experience like a computer does ... that is, through a neutral, non-me oriented perspective in which solutions to issues are worked out free of any sense of 'me' or 'mine'?

The means through which a brain goes about generating a concept of 'me' or 'mine' is not clear. Moreover, the evolutionary pathway that would give rise to such a concept is also unclear.

Metzinger claims that the Ego Tunnel exhibits the property of 'transparency'. What he means by this latter term is that the Ego Tunnel is not aware of the electrical, cellular, and biochemical activities that make the contents of phenomenology possible that are transpiring by means of the Ego Tunnel.

If the Ego Tunnel is not capable of seeing how its contents come into existence, then, the Ego Tunnel is not necessarily in any position to know whether, or not, the contents of its phenomenology are a function of brain activity or a function of the activities of the 'self' or a function of some other dimension of Being/Reality. The relationship between the activities of the brain and the contents of phenomenology are not currently known, and, as a result, the relationship between the Ego Tunnel and the activities of the brain seem to be more a matter of opacity than transparency.

In any event, according to Metzinger, the Ego Tunnel does not see brain functioning, per se, but instead, experiences a representation of

that brain functioning. In other words, when engaging the information processing filters and lenses generated by the brain, the Ego Tunnel generates -- at the behest of the brain -- a phenomenological representation of the information that is being processed by the brain. In addition, the Ego Tunnel is somehow led to conclude that the data and information being processed by the brain belongs to the Ego Tunnel and that the Ego Tunnel is responsible for the appearance of such contents in consciousness.

What enables the Ego Tunnel to come to the conclusion that the contents of consciousness belong to it is unknown. How such a capacity came into being is unknown. How the Ego Tunnel is able to generate a phenomenological representation of brain functioning is unknown.

From the perspective of Metzinger, the Ego Tunnel is not a self because there is no entity present in the Ego Tunnel that can be referred to as a 'self'. The Ego Tunnel consists of phenomenological representations of brain functioning and nothing else.

Phenomenological events occur. For Metzinger, that is the beginning and end of the matter.

Metzinger believes that phenomenological contents are merely a way of organizing, and keeping track of, information that is being processed by the brain. However, there is no self that is organizing the data, and there is no self that is keeping track of such data ... rather, the brain is organizing and tracking everything.

Somehow -- thanks to the amazing, but inexplicable, invention of the brain that was noted previously -- the Ego Tunnel gets the idea that those phenomenological contents belong to it, and, therefore, those contents can be referred to as being "mine" and as giving expression to "me". Unfortunately, as noted earlier, the process through which the brain makes the Ego Tunnel possible, or makes its predilection for "me" and "mine" possible, remains a mystery.

Metzinger maintains that the only way in which thoughts, ideas, feelings, memories, and sensations can be experienced as belonging to the Ego Tunnel -- that is, as being experienced as "mine" -- is because the Ego Tunnel is incapable of penetrating the epistemological curtain behind which brain functioning takes place. In other words, the Ego

Tunnel is unable to grasp that its contents are merely a phenomenological simulation of brain activity and, therefore, incorrectly assumes that the contents of consciousness have been made possible by the functioning of the Ego Tunnel.

The Ego Tunnel might not be able to directly view the activities of the brain, but its inability to do so should not prevent the Ego Tunnel from catching sight of the seemingly somewhat embarrassing realization that the Ego Tunnel really has no idea how thoughts, ideas, feelings, memories, and sensations come to appear in consciousness. Therefore, there appears to be considerable evidence accessible to the Ego Tunnel to suggest that the thoughts, ideas, feelings, and so on that are appearing in consciousness are not necessarily ‘mine’ and do not necessarily give expression to ‘me’ and, actually, seem to be due to the presence of something that exists beyond the horizons of the phenomenology to which the Ego Tunnel gives expression.

In fact, one might suppose that being unable to account for the source or origins of various objects, themes, ideas, feelings, and so on that appear in consciousness might serve as a stimulus that should trigger an investigation into what makes the contents of consciousness possible. Did ‘I’ really generate such ideas, feelings, thoughts, or memories, and, if so, how did ‘I’ do it or why, but if ‘I’ did not generate such ideas, feelings, thoughts, memories, and so on, then what did make those phenomena possible and why ... and what is the relationship of ‘I’ to those phenomena?

What – if anything -- do the contents of consciousness tell me concerning the nature of one’s relationship with Being/Reality? Apparently, with just a little bit of reflection concerning the phenomena of consciousness, one can’t help but stumble into essential questions involving religion when the latter is considered to give expression to the search for the truth about the nature of one’s relationship with Being/Reality.

What do the ideas of ‘me’, ‘mine’ or ‘self’ even mean? Seemingly, the self gives expression to some sort of capacity or potential for reflecting on experience in order to arrive at conclusions concerning what one considered the truth to be in relation to the nature of one’s relationship with Being/Reality.

However, even if the foregoing were the case, this doesn't necessarily make such a capacity or the conclusions that ensue from it 'mine', nor does such a capacity -- or the conclusions that ensue from it -- necessarily give expression to "me" if 'I' -- a locus of consciousness -- am not the one who is responsible for making such phenomena possible. There appears to be a strange sort of relationship between, on the one hand, the contents of consciousness whose origins are unknown and, on the other hand, the presence of a sense of "me, myself, and I" that tends to be inclined to claim ownership with respect to foregoing sort of phenomena even though the only justification for doing so -- if one can call it that -- is the fact that such phenomena and the sense of 'me, myself, and I' share a certain degree of phenomenological contiguity.

According to Metzinger, "We are never directly in touch with reality as such" because unconscious filter mechanisms of the brain "... prevent us from seeing the world as it is." (Page 9) However, in the very next paragraph, he claims that: "... we know the world only by using representations, because correctly representing something is what knowing is."

How does one know that a given representation is "correct" unless one has some means of comparing such a representation with 'that' which it supposedly represents? Presumably, the process of establishing the extent to which a representation can be considered to be correct involves making contact with reality to one extent or another.

It might, or might not, be true that we are unable to see the world as it is in any ultimate sense. Nonetheless, we often see enough to be able to construct systems of representation that -- to varying degrees -- accurately reflect properties and qualities of different dimensions of Being/Reality ... properties and qualities that permit us to be able to successfully navigate through certain regions of the existential waters of life.

Metzinger indicates that the filtering mechanisms to which our sensory systems and brain activities give expression were inherited from our ancestors. However, he does not -- nor, to date, does anyone else -- provide an account of how those filtering systems or other capacities of the brain came into being ... instead, such abilities are,

more often than not, assumed into existence without any real understanding of, or insight into, the origins of those sorts of phenomena.

A page later – i.e., page 10 – Metzinger states: “All evidence now points to the conclusion that phenomenal content is determined locally, not by the environment at all but by internal properties of the brain only.” If such a statement were true, then, one could not argue – as Metzinger does on the previous page of his book – that it is possible to establish whether, or not, any given representation of the world is correct.

If phenomenal content were a strict function of internal properties of the brain, and, as a result, the environment played no role in the structural character of that phenomenal content, then, in effect, one would be forced to conclude that the contents of phenomenal experience were arbitrary constructions that had nothing to do with what is taking place in the world beyond the brain. While some of the constructions that appear in phenomenal space might well be arbitrary in nature, we know that not all of those constructions are of an arbitrary nature because human beings do have – within certain limits – a capacity to interact with different facets of the environment and come away with representations of those interactions that permit human beings to develop understandings – limited though they might be – that appear to accurately reflect how certain aspects of the environment operate.

Undoubtedly, what an individual phenomenally experiences and understands is substantially influenced, shaped, colored, and organized by the sensory filters and other information processing mechanisms that are generated through brain activity. Therefore, in this sense, phenomenal contents are – as Metzinger previously indicated -- a product of local events internal to the brain.

Nevertheless, if this were all there were to the matter, then knowledge of the environment would be impossible, and, since some forms of knowledge concerning the environment are experienced on a daily basis by most human beings, then, obviously, certain dimensions of the phenomenal contents of consciousness necessarily are shaped by the manner in which environmental events affect (i.e., shape and orient) human abilities to process information.

For example, color – per se -- might not exist out there in the environment. However, if the environment did not have -- on both a quantum and macro level -- the physical properties it does, then our sensory filters would not be affected in the way they are, and, as a result, we would not have the experience of color that we do.

In other words, color and the environment are not unrelated or unconnected phenomena. What we experience in phenomenal space is not just a function of brain activity but, as well, that experience is also a function of the manner in which the environment impinges on, and interacts with, human capabilities.

According to Metzinger, “The problem of consciousness is all about subjective experience about the structure of our inner life, and not about knowledge of the outer world.” (Page 11) He goes on to state that the neural correlate of consciousness (NCC) is a function of the minimal set of cellular activities in the brain that are capable of bringing about a given conscious experience.

Metzinger believes there is a specific NCC for every kind of experience that occurs in phenomenological space. According to Metzinger, thoughts, ideas, feelings, moods, attitudes, insights, concepts, and sensory experiences are all functions of a specific NCC or set of coordinated cellular activities taking place in the brain.

The foregoing perspective of Metzinger presumes that consciousness, intelligence, emotion, understanding, sensation, reasoning, creativity, and logic are all caused by brain activity of one kind or another ... that is, such activity can be expressed as a function of some minimal set of neural correlates of consciousness. Metzinger is a proponent of the foregoing view because he can point to a great deal of evidence indicating that by activating or disrupting such neural correlates of consciousness one, respectively, can either cause or prevent certain kinds of experiences from occurring.

Somewhat analogously, however, one can bring about, or stop, a radio program by flicking a switch on a radio. One also can bring about, or stop, a television program by manipulating a remote control device that helps to operate a television set.

Nonetheless, strictly speaking, the original source for either the radio program or the television program is not, respectively, the radio

or the television set. The two electronic devices are required in order to be able to listen or view programs, but those devices are not the source of those programs.

Similarly, one might be able to use an electronic probe to help initiate a certain kind of phenomenological experience (as was done in the previously mentioned issue of out-of-body experiences) or one might be able to show that damage to a certain kind of NCC prevents a particular kind of phenomenological experience from occurring, or disrupts that sort of an occurrence in some manner (as was the case in the University of Iowa four deck, two-color, multiple-value card experiment involving subjects with damage to their ventromedial prefrontal cortex that was discussed in Chapter 13 of the present volume). Nonetheless, such evidence does not necessarily demonstrate that the programming that appears in phenomenological space originates with, or is generated by, such neural correlates of consciousness.

Metzinger believes that the Ego Tunnel – which he considers to give expression to a set of neural correlates of consciousness that are generated through brain functioning – has a sense of “mine and me” that has, somehow, evolved. For Metzinger, the sense of selfhood is caused by some underlying set of neural correlates of consciousness.

Unfortunately, Metzinger cannot provide a verifiable account of how such a neural correlate of consciousness evolved. Furthermore, he cannot provide a verifiable account of how such a neural correlate of consciousness generates the sense of self, me, or ‘I’.

He considers this sense of self – namely, the Ego Tunnel -- to be “the deepest form of inwardness” (Page 12) that is possible in human beings. Yet, given that Metzinger does not know how the sense of selfhood evolved or how such a sense of selfhood is capable of being produced by neural correlate of consciousness, then one puzzles about how he can claim to know that the Ego Tunnel constitutes “the deepest form of inwardness” that is possible in human beings?

What is the metric through which he is measuring his notion of self except his own ideas about what selfhood involves? Why suppose that the truth concerning the nature of one’s relationship with Being/Reality needs to be restricted to the sense of things concerning the nature of the self to which Metzinger is committed?

At one point in *The Ego Tunnel*, Metzinger argues that: “Human beings in certain historical epochs – during the Vedic period of ancient India or during the European Middle Ages, when God was still perceived as a real and constant presence – likely knew kinds of subjective experience almost inaccessible to us today. Many deep forms of conscious self-experience have become all but impossible due to philosophical enlightenment and the rise of science and technology – at least for the many millions of well-educated, scientifically informed people. Theories change social practice, and practice eventually changes brains, the way we perceive the world.” (Page 17)

One can agree with Metzinger that theories can change the way in which people perceive the world. Nonetheless, what truths, if any, those theories disclose concerning the nature of one’s relationship with Being/Reality tend to lead to a variety of questions and problems.

In the foregoing quote, Metzinger refers to historical epochs such as Vedic India and the European Middle Ages and, then, uses the phrase: “... when God was still perceived as a real and constant presence.” What proofs can Metzinger offer that are capable of definitively demonstrating how God might not be real or a constant presence in the world of today?

He indicates that because there are many people today who are philosophically enlightened, well educated, and scientifically literate, then those individuals are unlikely to be able to have the same sort of subjective experiences as individuals who lived in Vedic India or the European Middle Ages. The foregoing contention of Metzinger might, or might not be true, but it doesn’t necessarily have anything to do with establishing the truth concerning the nature of any reality other than the truism that when people permit their understandings to be filtered, oriented, shaped, and colored by theories, then, oftentimes, they can only perceive and experience what such theories permit them to perceive or experience.

Being philosophically enlightened, well educated, and scientifically literate are only of value to the extent that those conditions enable a person to grasp the truth concerning the nature of one’s relationship with Being/Reality. Metzinger appears to believe that being philosophically enlightened, well educated, and scientifically literate gives expression to a commendable set of forces that prevent human

beings from being able to perceive God as “a real and constant presence” ... not because it is necessarily true that God has been proven not to be “a real and constant presence” but because many philosophically enlightened, well educated, and scientifically literate people have – as a function of theoretical principle – removed those possibilities from epistemological consideration.

At the present time, Metzinger can't perceive the self as being anything other than a set of neural correlates of consciousness that, somehow, have given rise to the idea of a self. This is precisely because he is a philosophically enlightened, well educated, and scientifically literate individual whose biases and assumptions prevent him from entertaining the possibility that the origins of the 'self' might come from something other than the activity of the brain. As such, his mode of perception is not necessarily a reflection of the truth concerning the nature of the self as much as it might just be a reflection of the biases and assumptions that he uses to filter the meaning, value, and significance of his experiences.

If – as Metzinger claims – theories alter the way people perceive the world, then, he has to be prepared to accept the possibility that his way of perceiving the world might merely be a function of the theories to which he subscribes rather than being a reflection of the truth concerning the nature of the self. Metzinger dismisses the understandings of, for example, Vedic India not because he actually has been able to grasp what those understandings involve – and whether, or not, they are true – but because he has become perceptually blind to those possibilities as a result of his having become philosophically enlightened, well educated, and scientifically literate.

As if he were living in Jonestown, Metzinger gulps down his homemade batch of Kool-Aid. In addition, he wants to argue that such a concoction is wholly beneficial to human beings ... without the possibility of any toxic side effects despite the fact that he doesn't necessarily understand the properties of all the ingredients that have gone into the making of the Kool-Aid or understand what impact such ingredients might be having on his capacity to seek the truth concerning the nature of his relationship with Being/Reality.

At one point in *The Ego Tunnel*, Metzinger notes that: “Mystics of all cultures and all times have reported deep spiritual experiences in which no “self” was present, and some of them, too, stopped using the pronoun ‘I’. (Page 64)

One should exercise a certain amount of caution with respect to the statements of mystics. They speak from the perspective of a certain understanding of, or insight into, the significance of a given spiritual state, condition, or experience, and people who engage that perspective from the outside, rather than from within, often misunderstand and misinterpret what is being said.

For example, Sufi mystics (and Metzinger does mention them in his book) often distinguish between the conditions of “fana” and “baqa”. Fana is said to occur when an individual is overwhelmed by the experience of Divine Presence and, as a result, the individual loses sight of individuality even as the experience of Divine Presence is filtered through the very nature of that individuality, whereas baqa is said to refer to instances in which a person has been brought into a condition of realization concerning the essential nature of one’s relationship with Being/Reality ... a realization that permits one to be aware of the nature of one’s individual existence as a manifestation that has been made possible by Being/Reality.

Shaykh Ahmad Sirhindi (may God be pleased with him) – who lived in the late sixteenth and early seventeenth centuries – described fana along the following lines. At nighttime, on a clear evening in a rural area, one is capable of seeing the stars in the sky, but when the sun comes up, then even though those stars still are present, one can no longer see them with the naked eye because one’s vision is overwhelmed by the presence of the sun.

Similarly, when the Presence of Divinity is experienced, perception is overwhelmed by the experience of that Presence. The individual is still present, but one is unable to “see”, or be aware of, oneself.

Experience is dominated by the individual’s spiritual perception of Divine Presence. Yet, such perception is actually a filtering of Divine Reality.

In other words, an individual experiences Divine Presence as a function of what his, or her, potential permits. Different individuals with different potentials would have an experience of the Divine Presence that reflects their individual potentials.

The individual is a locus of manifestation for Divine disclosure. During *fana*, the individual loses sight of this reality, and, consequently, there is only the experience of Divine Presence.

In the condition of *baqa*, on the other hand, individuals are brought to a realization that there is no reality but God. At the same time, however, there is a simultaneous realization within such individuals that they serve as so many loci of manifestation that give expression to the Presence of Divinity according to the individual properties of those loci, and, in the process, individuals are permitted to experience both the presence of the Sun while also being able to note the presence of their selves as loci of manifestation of the Divine Presence.

In the vocabulary of *ibn al-'Arabi* (May God be pleased with him) – a Sufi saint of twelfth and thirteenth century Andalusia -- human beings give expression to *'ayn al-thabita*. These fixed potentials – or loci of manifestation -- are brought to life through the dynamic interplay of the Names and Attributes of Divinity that provide those fixed potentials with their natures and, then, induce them to reflect the dynamic interplay of Divine Names and Attributes running through them according to the nature of that fixed potential.

Divine Names and Attributes are particularized ways of referring to the qualities, properties, processes, activities, forces, and phenomena that are made possible through God's presence. One cannot infer anything about the nature of God on the basis of the manner in which Names and Attributes are manifested other than that God has made such phenomena possible.

In the *Qur'an*, there are 99 Names of God that are mentioned. A few of these are: *Qadir* (the One Who is able to accomplish), *Mubdi'* (the Originator), *Hakam* (The Source of rule and judgment), *Ghafur* (The much forgiving One), and so on.

Each Name gives expression to a Divine capacity that can affect Being/Reality and that can be called upon by addressing God through

that Name. Each Divine attribute refers to a quality that is present in Being/Reality and makes the latter possible.

Rabi'a al-'Adawiyya (May God be pleased with her) – a Sufi saint of the eighth-ninth century – once chastised a male colleague. The latter individual had been comparing himself with Muslims in a local community and noting how the Muslims in that community often didn't say their prayers or they didn't fast during Ramadan, the month of fasting, whereas he never missed prayers, and, as well, he not only observed the fast of Ramadan but he also fasted on many other occasions as well. Upon hearing what her male colleague said, Rabi'a (May God be pleased with her) said. "Thy existence is a sin with which none other can compare."

The sin that is being cited in the foregoing anecdote has to do with the man's belief that he has an existence that can be considered independently of God's presence. That belief obscured the Presence of God and gave priority to a false understanding concerning the nature of the relationship between that man and Being/Reality.

We all have an ego. The transliterated, Arabic counterpart to ego is "nafs" ... although nafs is a term that encompasses an array of possibilities that are much broader and nuanced than the qualities that are usually associated with the notion of ego, and some of the possibilities encompassed by the term "nafs" include those tendencies within human beings that are in rebellion against, or denial of, the truth of things concerning the nature of one's relationship with Being/Reality).

In effect, the Sufi path is about assisting individuals to overcome the lower tendencies of nafs and during that process, individuals are assisted, if God wishes, to journey toward a state of being in which, among other things, the condition of fana and baqa might be realized. When one is caught up in the machinations of the lower self or nafs (ego), then one cuts oneself off from discovering more inward, spiritually substantial aspects of the potential of the self.

Thus, broadly speaking, there are three dimensions of the self. One dimension of the self involves the activities of the lower self as it goes about rebelling against, or denying, the truth concerning the nature of one's relationship with Being/Reality and, in the process, attributes all manner of things to itself as being "me" and "mine".

Another dimension of the self involves the capacity – if activated by Divinity – to experience the presence of God while losing sight of one's own presence within such an experience. This is the aforementioned condition of fana.

A third dimension of the self involves the capacity – if activated by Divinity – to realize, in depth, various facets of the meaning and significance of the idea that there is no reality but God. Within the context of such a spiritual station, the individual realizes that one is a locus of manifestation that has a capacity to be self-aware while experiencing the Presence of the dynamic interplay of the Names and Attributes of Divinity.

When mystics issue reports about experiencing a state of selflessness, they are not necessarily saying there is no self that is experiencing such a state. In fact, the very capacity to experience a state of selflessness constitutes a way of engaging the presence of Being/Reality through the filters of human potential.

A human self is present. However, the individual's spiritual condition is such that the individual is not aware of that human presence but is only aware of the Divine Presence.

One needs to make a distinction between the false self and the essential self. When the veils of the false self are removed – God willing – through various kinds of spiritual experience, then one is able to catch sight of the existence of a deeper, more inward, essential sense of self.

One manifestation of that essential self is given expression through the condition of fana when the Presence of Divinity overwhelms one's sense of self. Nonetheless, the self is still filtering such Presence in accordance with the nature and potential of that inward aspect of self even though there is no sense of self-awareness present during such a spiritual state.

The eye cannot see itself during the process of vision, and, yet, the qualities of the eye shape, color, and structure what is perceived. Similarly, during fana, the individual cannot himself or herself but, nevertheless, the qualities of the individual filter the way in which the Divine Presence is experienced.

Another manifestation of that essential self is realized while inhabiting – God willing -- the station of baqa. In this spiritual station, the individual experiences the Presence of Divinity through a modality of self-awareness that perceives the dynamic interplay of Divine Names and Attributes as they are given filtered expression through the nature and potential of one's most inward, essential sense of self.

To build upon the example of the eye used earlier, baqa is somewhat like the eye being able to see itself as it is engaged in the process of vision. During baqa, the Presence of God is experienced, but, simultaneously, awareness is present indicating that something – namely, the self – is actively engaged in such an experience.

In conjunction with the state of fana and the station of baqa, individuals might – as Metzinger previously indicated – abandon use of the term 'I' because only God is entitled to use such a pronominal reference. Nevertheless, there is a self that is present in those instances even if – relative to the Self of Divinity – such a self is wholly derivative from the manner in which the Names and Attributes of Divinity establish 'ayn al-thabita with potentials that are capable of serving as loci of manifestation for the presence of Divinity.

Metzinger hypothesizes that like the aforementioned mystics, there might be many: “ ... simple organisms on this planet” that “may have a consciousness tunnel with nobody living in it.” (Page 64) In effect, Metzinger appears to be arguing that mystics who abandon use of the pronoun “I” are merely coming to the realization of what has been the case since the simplest of organism appeared on Earth – namely, the notion of “self” is nothing more than a myth – and, as well, Metzinger appears to be alluding to the idea that the biological history that runs from: Simple organisms that enjoy a degree of consciousness, to: Human beings who exhibit a more enhanced capacity for consciousness, gives expression to a continuous line of evolutionary development that is devoid of any sort of 'self' entity that inhabits consciousness.

Unlike Metzinger, I'm not going to speculate about what does, or does, not take place within simple organ: -- namely, simple organisms have their own relationship with Being/Reality.

The degree to which such organisms – or any organisms other than human beings – are aware of the nature of that relationship is

unknown. In fact, we tend to be unaware of the extent to which even other human beings are aware of the nature of their relationship with Being/Reality.

Metzinger claims that the origins of the ‘myth of self’ are rooted in evolutionary changes of various kinds. For instance, he refers to the: “... development of cell membranes and an immune system to define which cells in one’s body were to be treated as one’s own and which were intruders.” (Page 64) Billions of years later, according to Metzinger (and other proponents of evolution), nervous systems arose that were capable of carrying on the physical partitioning project that began with cell membranes and immune systems, and such brains became able to create representations concerning the organism that gave expression to phenomenal models of the self interacting with an external world.

Neither Metzinger, nor anyone else, currently understands how cell membranes came into being by means of evolution. A number of possibilities in this regard are discussed in the evolutionary literature, but no one has been able to experimentally demonstrate how the complexities associated with membrane functioning – even in simple organisms – were able to arise through a step-by-step process of evolutionary development.

Neither Metzinger, nor anyone else, currently understands how the immune system arose through a process of evolutionary development. Neither Metzinger, nor anyone else, currently understands how the nervous system, with all of its many kinds of neurons, glial cells, and neurotransmitters, was able to organize itself through the step-by-step process of evolutionary development.

Finally, neither Metzinger, nor anyone else, currently has a viable account for how the notion of self came into human consciousness by means of evolutionary development. Metzinger runs through an array of possibilities concerning the foregoing issue in his book *The Ego Tunnel: The Science of the Mind and the Myth of the Self*, but nowhere within the pages of that book does one find a definitive, plausible, viable explanation that demonstrates that the self is nothing more than the nervous system’s way of constructing a means for phenomenally representing the activities of the brain.

One encounters many theoretical possibilities in the aforementioned book of Metzinger. However, none of those possibilities tend to show anything more substantive than speculative hypothesizing.

Metzinger states that: “In the history of ideas, contemporary philosophical and scientific debates about the mind developed from this protoconcept – an animist quasi-sensory theory about what it means to have a mind. Having a mind meant having a soul, an ethereal second body. This mythical idea of a ‘subtle body’ that is independent of the physical body and is the carrier of higher mental functions, such as attention and cognition, is found in many different cultures and at many times. Examples are the Hebrew *ruach*, the Arabic *ruh*, the Latin *spiritus*, the Greek *pneuma*, and the Indian *prana*.” (Page 86)

According to Metzinger, no such ‘subtle body’ exists. What exists is a process of information processing in the brain that, in turn, makes possible a phenomenal or conscious representation that really constitutes nothing more than a reflection of some of the results of the underlying process of information processing.

Let’s put aside terms such as: *ruach*, *spiritus*, *pneuma*, or *prana* that were mentioned by Metzinger in the foregoing quote. Let’s just consider his use of the term “*ruh*”.

In contradistinction to the foregoing position of Metzinger, the “*ruh*” is not necessarily a “subtle body”. Instead, from the perspective of practitioners of the Sufi path, “*ruh*” gives expression to a dimension of ‘*ayn al-thabita*’.

‘*Ayn al-thabita* is a fixed form potential. This potential is a locus of manifestation that can be induced to give expression to various qualities and properties that are established – and activated -- through the dynamics of the interplay of Divine Names and Attributes.

‘*Ayn al-thabita* is like a form of virtual reality. The hardware and programming underlying this form of virtual reality are rooted in the dynamics of Divine Names and Attributes.

As such, any given instance of ‘*ayn al-thabita* has no reality of its own, any more than the virtual objects that are manifested through computer activity have a reality of their own. Moreover, just as a computer is capable of generating dynamic “spaces” – i.e., virtual

forms – that manifest different properties as a function of the capacities inherent in computer hardware and concomitant programs, so too, the activity of Divine Names and Attributes are capable of generating dynamic “spaces” – i.e., ‘ayn al-thabita – that manifest different properties as a result of the manner in which Divine Names and Attributes both establish and interact with any given instance of ‘ayn al-thabita.

Eddies in a body of flowing water have a reality of sorts, but they have no actual reality of their own. They are the result of the way that different currents and sources of turbulence interact with one another, and when those currents and sources of turbulence alter the nature of their interaction, then places where eddies previously appeared will no longer give expression to such eddies.

Similarly, human beings – like eddies – have no actual existence of their own. Rather, they are the form – i.e., the virtual, dynamic space – that is generated through the interplay of Divine Names and Attributes.

There is no dualism entailed by the foregoing arrangement. There is just the presence of Divine Names and Attributes that bring about the manifestation of dynamic spaces – i.e., the virtual reality of ‘ayn al-thabita – that serve as the loci of manifestation through which Divinity gives expression to this or that dynamic interplay of Names and Attributes and which serves the interests of Divine aspirations, purposes, and intentions with respect to what transpires in the virtual reality – Being/Reality -- that has been made manifest.

In terms of the perspective being outlined in the foregoing paragraph, *ruh* – in contrast to what Metzinger claims -- is not a subtle body that is different from, yet capable of, interacting with physical bodies. Moreover, in contrast to the position outlined in the previous quote from *The Ego Tunnel*, the *ruh* is not the “carrier of higher mental functions, such as attention and cognition,” but, instead, the *ruh* is the locus of manifestation – that is, a dimension of the dynamic, virtual space known as ‘ayn al-thabita -- whose properties and qualities (including attention and cognition) have been programmed through the dynamics or interplay of Divine Names and Attributes.

Attention and cognition are made possible through the dynamics of Divine Names and Attributes, just as the properties of the virtual

realities that are created in computerized games have the properties that are made possible by the hardware and programming that underwrite such games. Physical and mental properties are different kinds of manifestation that are made possible by the underlying dynamic, and, in addition, those properties can be made to interact with, and affect, one another through the virtual programming to which the interplay of Divine Names and Attributes gives expression.

No duality is present. All that is present is the dynamic interplay of Divine Names and Attributes that have been generated through the presence of God.

The only reality that is substantial is Divinity. All other “realities” are insubstantial in as much as they are derivative, virtual forms of being that are manifestations that are made possible by the dynamics or interplay of Divine Names and Attributes that have been set in motion by Divine purpose or *himma*.

Metzinger refers to terms such as “*ruh*” (or *prana*, *ruach*, and *spiritus*) as if they were just entries in the history of ideas that have arisen over the years. He doesn’t believe those terms have any actual counterpart in Being/Reality.

However, when individuals such as Rabi’a al-Adawiyya, Ibn al-‘Arabi, and Ahmad Sirhindi speak (may God be pleased with them all) – as well as when many other Sufi saints speak (or write) – they are not proffering conceptual speculations but, instead, they are reporting on insights that have arisen in conjunction with the results of experiments that have been conducted in the crucible of Sufi practices. One can, if one wishes, accept or reject what they have to say, but until one replicates the experiments they have conducted, then one is not in any position to determine whether, or not, what they have to say is true.

Moreover, interestingly enough, authentic Sufi masters indicate that what they have and can say concerning the nature of the relationship between an individual and Being/Reality is only a very, very limited description concerning what they have experienced. In other words, what they have said is like the tip of an iceberg that runs to great ontological and epistemological depths beneath the surface waters of normal, waking consciousness.

Sufi masters might agree with Metzinger that various conceptual, emotional, motivational, social, sensorial, biochemical, and physical forces are at play within an individual through which a sense of self could be created in which nobody is actually at home – i.e., the false self. Nonetheless, Sufi masters might take issue with his contention that such a constructed sense of self is all that is possible, or they might take issue with his contention that there aren't dimensions of human potential that give expression to a much more substantial, inward sense of self than is generated through the manner in which the brain processes information.

Chapter 7: Theories of Anxiety

Within each of us, anxiety exists. It lurks in the chaotic caverns of our minds, coiled and ready to strike -- possibly, at the very core of our Being.

Its presence is ominously felt ... constantly threatening each individual with varying degrees of uncertainty. Many of us flee from station to station in life in an attempt to avoid being in the presence of this phantom from within.

During the last 60 years, or so, the issue of anxiety has undergone a significant amount of transformation. What once was considered to be little more than a fringe nuisance that entered our lives only occasionally, has, now become something of a central problem in the lives of many people.

"This emergence of anxiety from an implicit to an explicit problem in our society, this change from anxiety as a matter of 'mood' to a recognition that it is an urgent issue which we must at all costs try to define and clarify are ... the significant phenomena at the moment."¹

Freud was not the first to investigate the 'problem of 'anxiety', but he was among the first to give a psychological rather than a philosophical explanation of the conditions in which anxiety becomes manifest. He attempted to delineate the fundamental conditions and processes through which anxiety was generated.

Many of Freud's views changed over time, and his thoughts on anxiety did not prove to be an exception to this general rule. At one time, for example, Freud agreed with Rank on the fundamental importance of the birth trauma.

During this period of his theoretical life, Freud felt that any accurate description of anxiety must give a considerable role to the way in which the trauma of birth played in the life of each individual. Later, however, Freud reconsidered the foregoing position and decided that the trauma of birth was not a crucial factor, after all, in the etiology of anxiety -- instead, the former was only a specific example of a more generic principle.

While criticizing Rank's thesis, Freud said:

"I am forced to the conclusion that the earliest phobias of childhood do not permit of being directly traced to the impression made upon the child by the act of birth. A certain predisposition to anxiety on the part of the infant is indubitable. It is not at its maximum immediately after birth, to diminish gradually thereafter, but first makes its appearance later on with the progress of psychic development, and persists over a certain period of childhood ..."²

Thus, Freud by-passed the birth-trauma and looked elsewhere for what he considered to be the fundamental, prototypic psychic context in which anxiety was rooted.

While investigating the emotional contours of the interior life of childhood, however, Freud came across three types of experience that came to have special value for him in his attempts to define anxiety. These three kinds of experience were: a) being left in the dark; b) being left alone, and c) expecting to see, say, the mother's face and seeing, instead, the face of a stranger. Freud believed that the tentative conclusions to be drawn from each of these instances all pointed in the same general direction.

At birth, and for a considerable period of time after birth, individuals are completely helpless.' The 'mothering-one' must gratify the majority of an infant's needs, and, therefore, an infant is, in virtually every sense, functionally dependent upon the mothering-one.

If anything were to endanger the vital mother-infant relationship, an infant would be left without any source of support. Therefore, according to Freud, the most basic fear of the infant child is one of not having one's wishes gratified.

Since the mothering-one is associated with past experiences of gratification (mnemonic images of perceptual identity), there is a displacement of felt-danger from the fear of not being gratified to the fear of loss of the one who provides the desired satisfaction -- i.e., the mothering-one. In earlier stages of development, ungratified needs, and the increase in felt tension that ensued from such unrequited

wishes, represented a danger, but a time comes when the absence of the mothering-one occasions this same feeling of danger.

Under such circumstances, anxiety signifies the child's recognition (not necessarily conscious) of his or her own helplessness. It constitutes an understanding -- on however primitive a level -- about one's biological and psychological inability to cope with the prevailing set of circumstances. Freud summarizes this situation in the following way:

"The memory picture of the person longed for is certainly cathected to a very intense degree, probably at first in hallucinatory fashion. But this is without result and now it appears as if this longing were transformed into anxiety. It decidedly seems as if this anxiety were an expression of helplessness, as if the, still, very undeveloped creature did not know what else to do with his longing."³

Freud extends this 'loss of provider' theme to Rank's birth trauma and notes how both situations share a common factor -- namely, a detachment from the one who gratifies needs. In other words, the intrauterine existence of the fetus can be considered as a prior stage in a biological continuum that began at conception and extends into the individual's post-birth existence.

The main characteristic of this continuum is dependence upon the mother. The biological fetal dependency during intrauterine life is replaced by the individual's psychic dependency upon the mother-object after birth.

According to Freud, this fundamental fear of object-loss represented the ground upon which all other 'anxiety-veiled' fears were constructed. Freud believed that whenever an individual displayed overt symptoms of anxiety, the individual's conscious feeling were being shaped by underlying or unconscious fears with respect to threatened or actual loss of 'need-satisfaction' from a 'significant other' ... i.e., someone (or something) on whom the individual is dependent, in some sense of this word, for satisfaction of one's needs.

For Freud, the problem, now, is to understand why an infant should have reason to fear the possibility of object-loss at all. There

appears to be no a priori reason why an infant will assume that the present circumstances (whatever it might entail) will, necessarily, be characteristic of the universe in general.

For example, if there is such a concept as an 'average' infancy (one in which most needs are satisfied, yet, still marked or colored by a number of painful instances of ungratified need or instances in which needs are not immediately satisfied), there is no obvious reason why an infant should suspect that the mother will leave and not return. In fact, the child's experience should point in just the opposite direction.

Presumably, the 'conclusions' to be drawn from an 'average' infancy of the foregoing sort is that, usually, most needs are satisfied and, sooner or later, there is a reunion with a mothering-one who might have been absent. In short, the 'average' period of infancy and early childhood seemingly should be inclined in the direction of a basic, underlying optimism concerning the satisfaction of needs and the presence of the mothering-one. Naturally, the degree of this optimism varies from individual to individual.

Obviously, if one considered instances in which an infant's needs were irregularly -- and, then, only partially -- gratified, the infant's basic outlook might be quite different. Under those circumstances, however, although the individual still is totally helpless and dependent, there might be some reason to suspect that an infant's relationship to the mothering-one might not be as intense as the so-called 'average' infant's attachment might be.

For example:

"Bowlby and his colleagues believe that some degree of separation anxiety during the second year indicates a close mother-child relation, for the child's anxiety signifies that he values the mother presence and sees her as a nurturant person. The child who never displays such anxiety may have . . . never experienced a continuous loving relationship or, more frequently, the relationship he has had has been disrupted so severely that he has not only reached but remained in a phase of detachment."⁴

In any event, the question remains the same. Assuming there is no a priori to suggest that in the future a mother will act differently (e.g., to leave) than she has in the past (e.g., generally satisfying the infant's needs), what prompts an infant to anticipate object-loss?

Freud believed such fears arose as a result of an infant's awareness of unacceptable thoughts, wishes, and/or desires. This judgment of 'unacceptability' is a function of what the infant perceives to be acceptable and unacceptable with respect to perceived parental values.

For example, an infant believes that if certain wishes become known to the significant other, the significant other 'might' (there are other possibilities) withdraw invested energy that had previously been directed toward the satisfaction of the infant's needs. The infant experiences this as a 'loss of love', and Freud maintains that such a withdrawal would be quite frightening to an infant.

According to Freud, instead of consciously acknowledging the libidinal demands that are emerging from the depths of the id, the infant's ego is often forced to inhibit the psychic advancement of such demands for conscious attention. Under such circumstances, anxiety represents a danger signal ... a sense of helplessness that activates repression. In this regard, Freud states:

"Anxiety is an affective state which can, of course, be experienced only by the ego. The id cannot be afraid, as the ego can; it is not an organization, and cannot estimate situations of danger. On the contrary it is of extremely frequent occurrence that processes are initiated or executed in the id which give the ego occasion to develop anxiety."⁵

For Freud, there was another direction from which one might approach the exploration of a child's psychic condition with respect to the issue of anxiety. In contrast to the foregoing perspective, however, a child's emotional state is only indirectly concerned with any eventual loss of love from the mothering-one. Nonetheless, the conscious concerns of the child still are focused upon a recognized danger to the child's relationship with his mother.

The fear this time, however, revolves about the idea of being castrated. Adopting an idea from his associate and friend, Ferenczi, Freud described the nature of this fear as follows:

"The high narcissistic value attached to the penis may be referable to the fact that the possession of this organ contains a guarantee of union with the mother (or mother substitute) in the act of coitus. Deprivation of this member is tantamount to a second separation from the mother, and this has again the significant (as in the case of birth) of being delivered over helpless to the unpleasurable tension arising from the non-gratification of a need."⁶

Later, Freud extended the theme of punishment and contended that the specific fear of castration eventually underwent a transition to a more indefinite dread of one's super-ego. This is the conscience that one incorporates from the parental figures who, originally, 'threatened' castration -- or, more correctly, the conscience that a child incorporates from the parental figures who the child believed (correctly or not) threatened castration.

Aside from the fact that none of the foregoing adequately deals with the etiology of fear and anxiety in women (and Freud's hypothesis of the Electra complex, in relation to woman is far less compelling than is his idea of the Oedipus complex in the case of men ... and the latter theory is not without its critics), the following points need to be emphasized. Although one may be able to trace the origins of diffuse anxiety back to a specific situation of childhood fear -- and there is a range of possible candidates that might serve as a source of such fear -- nevertheless, according to Freud, the factor most characteristic of any experience of fear concerned some form of separation from the one who is most closely associated with gratification of an infant's needs. More-over, as Stein indicates:

"This particular situation was so painful that its memory had to be ejected from consciousness ('repressed'); the concrete fear was transformed into diffuse anxiety. Thus, for Freudian psychology, anxiety is fear which has lost its object."⁷

Irrespective of whether one is discussing fear -- or its conscious precipitate, anxiety -- one is, necessarily, deeply rooted in an infant's or a child's sense of basic helplessness and dependency on others.

This brings one to an interesting theoretical juncture. Although one might agree with Freud that fear of castration is so painful that the memory of it must be repressed, one might not as readily agree to the proposition that other kinds of fear also must involve repression.

Helplessness, for instance, and the subsequent dependency that it fosters tend to become accepted existential facts. An infant that knows little else tends to know⁸ what it means to be helpless and dependent.

In a manner of speaking, factors such as helplessness or dependency are too prominent and blatant to be ejected from consciousness. For an infant or a child, such themes represent the core around which one begins to slowly build one's mental map of the world. They are the two of the most outstanding characteristics of 'Being-in-the-world'.

Moreover, repression, as a defensive mechanism, seems to be accurately descriptive only of those instances that involve unacceptable (either to the child or in relation to a child's understanding of parental taboos) thoughts, wishes, desires, drives, etc. ... in other words, those ideas that, if acted upon, might threaten an infant with some form of separation from the mothering-one on a permanent basis.

Helplessness and dependency, per se, do not represent such a threat⁹. Rather, they signify the need for care from the mothering-one.

In non-Freudian terms, helplessness and dependency give expression to a child's felt need for loving, tender care. Consequently, although the child's sense of helplessness and dependency may be painful, these feelings do not readily, if at all, fit into the type of theoretical framework Freud tried to establish that tied together repression and anxiety.

If one accepts the foregoing perspective, one can begin to develop a different approach to phenomena such as 'separation-anxiety'. More specifically, if anxiety is described as that conscious, affective precipitate of painful thoughts that have been repressed, then the term 'separation-anxiety' seems to be a misnomer.

The reasons for making such a claim are easily accessible. For example, by the time 'separation-anxiety' appears as a general phenomena (between 12-18 months), an infant -- according to Piaget's studies on the child's construction of the world¹⁰ -- already has begun to understand that objects possess a permanency even outside of visual presence.

Although the mother represents a special value, she is still an object of sorts -- albeit, a human object. When the mother leaves, therefore, it is quite reasonable to assume that a child perceives her as a valuable, permanent object for whose return the child longs.

Furthermore, there does not seem to be any theoretical justification of a Freudian nature for assuming that the child is not in some way cognizant of the mother's absence, along with the child's sense of helplessness in the absence of the mothering-one. The various empirical studies concerning the issue of separation all tend to support such a conclusion.

Therefore, after giving a summary account of much of the work that has been done with respect to the phenomenon of separation, Mussen, Conger, and Kagen stipulate the following:

"One . . . source of anxiety in the young child, which seems wholly dependent upon learning, involves an expectation of separation from sources of security and nurturance. . . . If he anticipates that he has lost, or will lose, people or situations that perform these functions he may become anxious."¹¹

For these researchers, the term 'separation-anxiety' does not give expression to a child's conscious, affective preoccupation of painful thoughts that exist in conjunction with repressed material. On the contrary, the presence of anxiety is a startling on-going reminder of the child's continuing sense of helplessness.

One might say that with respect to the foregoing scenario, the Freudian overtones completely disappear from the term 'separation-anxiety'. This term no longer accurately gives expression to a child's 'consciousness, or affective precipitate, of painful thoughts that have

been repressed'. On the contrary the mental state represents a startling remainder for a child of her or his sense of helplessness.

Viewed from another perspective, however, there is an element of helplessness -- which one might refer to as 'directionlessness' -- that comes very close to a distinction Freud made in a context somewhat detached from the issue of anxiety. More specifically, in 'Beyond The Pleasure-Principle'¹², Freud differentiated among 'fright', 'fear', and 'apprehension' in terms of their respective relationships to perceived danger.

"Apprehension (Angst) denotes a certain condition as of expectation of danger and preparation for it, even though it be an unknown one; fear (Furcht) requires a definite object of which one is afraid; fright (Schreck) is the name of the condition to which one is reduced if one encounters a danger without being prepared for it, it lays stress on the element of surprise."¹³

Freud's foregoing distinctions run in two directions. First of all, of course, there is the affective quality felt by an individual.

Even when one acknowledges that individual life histories -- and the responses that are shaped by that kind of history -- might vary considerably from one person to the next, one still is able to note differences that are, nonetheless, common to people in general. For instance, the sharp, piercing shock experienced when we are frightened suddenly is, for most of us, quite distinct from the experience of a 'knotted stomach' when we are apprehensive, say, about the unknowns of the future.

Undoubtedly, there may come a time when the affective quality one experiences might not be amenable to any precise labeling. Thus, if one is in a state of severe, psychic pain, then distinguishing whether one's feelings are instances of 'fear' or 'anxiety' may be very hard, if not impossible, to do. On the other hand, in cases involving less severe forms of affective experience, one may be able to attach a label that is fairly accurate in the manner in which the idea to which the label refers is able to characterize one's state of mind -- regardless of whether the latter gives expression to fear, fright, or apprehension.

The distinction Freud makes among the three, aforementioned terms also runs in another direction. The circumstances within which a given event takes place often helps to shape the kind of response or coping strategy that might follow.

Consequently, if a 'normal' individual feels 'moderate'¹⁴ fear in a given situation, one might, quite reasonably, assume this person may have some definite plan of action deigned to control the situation despite subjective feelings of fear. Because of the specificity that is characteristic of fear, this directed direction that is associated with such a fear provides an opportunity for definite plans to be formulated.

On the other hand, in cases of extreme fear, even the presence of specificity cannot guarantee that such plan-formation will take place ... or, if it does occur, that the plan will be sufficiently well-conceived to be able to cope successfully with the danger at hand. Obviously, a great deal depends upon the prevailing circumstances.

All of the foregoing considerations, however, are in contrast to the hazy indefiniteness surrounding apprehension. The uncertainty characterizing such a situation limits the amount of planning that can be completed precisely because such haziness or uncertainty shrouds some of the significant factors that need to be known before a plan of action can begin to take shape. Even in the case of fright -- provided that one is able to recover from the initial, paralyzing shock -- one has an opportunity to decide an appropriate course of action on the basis of available information and understanding concerning the nature of the situation that caused the fright.

However, if one does not know the exact nature of a danger, one lacks the type of data that can channel and direct one's planning. Therefore, the range of possible modalities for action is severely curtailed under such circumstances.

Returning to the issue of an infant's basic condition of helplessness, there are several points that emerged in the previous, brief elaboration of Freud's distinction among apprehension, fear and fright, that need to be developed somewhat. More specifically, both in terms of affective quality, as well as the 'shaping-circumstances' (i.e., the circumstances surrounding each factor that are peculiar, for the most part, to that factor and that tend to vary from person to person),

apprehension was described, essentially, as being ‘directionless’ in nature.

One’s sense of danger is pervasive, yet, the feelings often are not focused on any one thing ... or, to the extent there is such a focus, it tends to be very diffuse and ill-defined. Furthermore, one has difficulty making plans to deal with the situation because of the lack of specificity inherent in such feelings.

This lack of direction is what lays the foundation for an apprehensive¹⁵ person’s sense of helplessness. A person in this condition seems to have little choice but to suffer under the burden of helplessness since there is nothing in the contents of consciousness containing sufficient concreteness and specificity that provides a ‘handle’ that an individual can grab hold of and around which an individual can rally or on the basis of which a person can develop a plan of attack.

The infant who fears any sort of separation from her or his mother feels this same type of helplessness. For the most part, the mother is the one who always has satisfied the infant’s needs.

In many ways (although certainly not in all) a child’s relationship with the mother has been largely passive. Without skill, knowledge, power, and so on, a child has had to depend on someone else’s knowledge, power, and problem-solving skills. If the one on whom a child depends is absent, the child is without means and without direction amidst a host of needs.

There is a further similarity between the sense of helplessness experienced by an infant and the helplessness felt by an apprehensive adult. An infant’s discriminatory capacities are quite primitive.¹⁶

Undoubtedly, a major reason for the primitive condition of these capacities is developmental. Many of the mechanisms and processes that make even rough discriminations possible have only begun, if at all, to mature in an infant.

There is another reason, however, for the primitive nature of an infant’s ability to make useful distinctions among life experiences. This reason is something of a corollary to the idea of a developmental lag between acquiring experiences and the subsequent processing of such experience.

In order to recognize a specific danger as such, one must not only be aware of the source of, and some of the circumstances surrounding, a danger, one also must be aware that a given situation, object, individual, or activity is dangerous. This distinction is not as simple as it first appears to be -- especially, in the case of a developing infant.

'Danger' is a directed term. In the context of an individual's frame of reference, dangerous situations envelope a range of possibilities. 'X' is dangerous because: it leads to this or that type of injury pain, problem, consequence, etc.

Certainly, if an infant's ability to discriminate is not well-developed, then the range of possibilities that might be generated by an infant with respect to some situation is likely be limited, filled with misperceptions, and infiltrated by various problematic assumptions. In fact, building a sufficient data base of distinctions and discriminations through which something can be seen as potentially dangerous may take an infant or child some time to develop.

Perhaps, an example will help clarify matters:

"Among the Hanuroo, who have names for ninety-two varieties of rice, any one of those varieties is highly codable in the array of ninety-one other varieties. The Hanuroo have a word for it and so can transmit it efficiently and presumably can recognize it easily. Among speakers of English one kind of rice among ninety-one other kinds would have low codability and would be difficult to recognize."¹⁷

Although the foregoing quote is taken from a study pursuing different goals, the implication it has for the present discussion is quite evident. More specifically, a mother's absence represents many potential dangers for an infant or child. Nonetheless, although an infant might know that unsatisfied needs are to be equated with pain, such 'knowledge' may not extend much beyond an initial primitive mode of linking together experiential components of need, absent mother, and the possibility of pain in a vague, amorphous manner.

Having a limited data base with which to work, an infant may not be able to recognize something as dangerous, nor have developed a conceptual map that indicates what the implications of a given

situation, object, and so on, are for her or him ... to have developed a sense of what is possible and what is not possible in conjunction with such phenomena. Thus, an individual who is only vaguely aware of, say, the possibility of death or what this entails is likely to have parameters of anticipation and expectation in relation to such a possibility that are very limited, if not non-existent.

The next step seems unavoidable. In situations that are perceived by an infant or child to contain a threat in relation to possible, or actual, separation from the mother, the phenomenology of the child will be a function of anticipated pain from needs that go ungratified due to an absent mother.

"Basically, anxiety is an anticipatory internal response -- an anticipation of an unpleasant event. The cues that become capable of eliciting anxiety are those that have been associated on previous occasions with an event that led to a feeling of fear. Later reenactment of the event -- usually in thinking -- leads to anticipation of the unpleasant feeling and to anxiety. Thus, the anxiety response is elicited when the child anticipates some unpleasant future, event, such as being physically hurt, deserted, punished."¹⁸

In terms of 'separation-anxiety', however, the 'unpleasant future' does not cluster around any one danger. Instead, the anticipated unpleasantness ranges over a considerable number of different possible pains ... all of which are the result of needs that might go ungratified.

In short, the sense of unpleasantness is pervasive and diffuse. This is the exact opposite of possessing a specific range of possibilities through which to understand a situation.

Although the foregoing situation may be limited by the amount of unpleasant events that, on the basis of previous experience, an infant or child might be able to anticipate, the child, nonetheless, feels that anything within the known universe might happen, and the individual doesn't know that of the possibilities needs to be feared or that of them represents the greatest threat. Of course, in one sense, any type of pain is extremely unpleasant and, thus -- as far as an infant is

concerned – dangerous ... yet, an infant may be unable to settle upon the specific nature of the anticipated unpleasantness.

The pain resulting from wet diapers is just as threatening -- as far as unpleasantness and pain are concerned -- as is hunger. Because an infant is, for the time being, developmentally incapable of looking much beyond the immediate horizons of pain, the infant does not necessarily understand that ungratified hunger over a sustained period of time is much more likely to be a greater threat than is the unchanged diaper (although this too, given time, can endanger the infant.)

Consequently, an infant who fears separation from the mother not only lacks 'direction' with respect to helping herself or himself, the infant also lacks 'direction' in terms of both the specific nature of anticipated unpleasantness as well as the range of dangerous circumstances that are possible and not possible. The helplessness experienced by the infant is, to a large extent, the product of the lack of directedness the child feels.

The whole future is shrouded in uncertainty ... except for the presence of a pervasive feeling of an anticipated, but amorphous, sense of unpleasantness looming on the temporal horizon. If one will recall, for a moment, the manner in which Freud described 'apprehension', as well as, the way in which that term, subsequently, was elaborated by him, it is quite easy to understand the relationship between the two -- namely, separation-anxiety, when described in terms of apprehension, is seen to be a general feeling of helplessness that is the direct result of experiencing a sense of directionlessness in important areas of need, planned action, anticipated forms of unpleasantness or pain, along with the establishment of a range of likely possibilities.

There is a further consideration that emerges from the foregoing comparison of 'fear' and 'apprehension'. The problem that arises out of this becomes quite clear in relation to the issue of 'separation-anxiety' that is being discussed.

There is a tendency among many theoreticians, to equate fear with anxiety ... or, what amounts to the same thing, to refrain from making any theoretical distinction between the two. For instance, Robert White says:¹⁹

"Nothing is gained at this point by making a systematic distinction between anxiety and fear ... roughly speaking, it is customary to use fear when the object of danger is unknown or vaguely discerned. Such distinctions are more linguistic than psychological. Whatever the status of the arousing object, the basic emotional reaction is the same."²⁰

According to such individuals, one might just as well speak in terms of 'separation-fear' as 'separation-anxiety'. For these individuals, the two experiences give expression to, roughly, the same phenomenology. One may use the two interchangeably, without significantly affecting the meaning of the context in which either is found.

Nonetheless, there might be good reason for believing that the foregoing contention obscures the importance of making phenomenological and hermeneutical distinctions between the two that goes beyond saying that, customarily, the only real difference between fear and anxiety is that one has an object, while the other does not. Perhaps, one way of beginning to outline a perspective that treats these two terms as different is by reflecting upon the circumstances through which one is said to learn things.

In the comments that follow, no attempt will be made to say much about the process of learning other than in a very general and rather vague way such as: it involves a cognitive capacity to change, over time, one's understanding concerning the character, meaning, and value of experience. This definition -- if one can call it that (it might be more appropriate to refer to it as a description, but, then, any definition involves description to some extent) -- is offered because it contains two elements common to most theories of learning ... namely: (a) a concept of 'change'; (b) an assumption that human beings are, to some unknown degree, inherently predisposed toward this kind of transformation.

Of course, any discussion that purports to examine the circumstances in which one is said to learn without studying the nature of learning, itself, is prone to a number of weaknesses, not the

least of which is putting the cart before the horse. Nevertheless, the following discussion may prove to have a certain amount of heuristic value with respect to the issues of 'fear' and 'anxiety'.

Whatever else learning may entail, one needs to secure a good perceptual representation of any situation about that which one would like to learn. This is so because any given situation involves a certain amount of information-content.

One's ability to withdraw content of value from such situations depends, to a certain extent, on the nature of one's sensory awareness concerning the objects or phenomena that are helping to give expression to the contents within our phenomenology of the experiential field. Such sensory 'withdrawals' from one's phenomenological engagement of ontology form the basis out of which mnemonic images, or memories, arise.

The quantitative character of these withdrawals, together with the quality of such information, helps shape one's capacity to respond to a various kinds of situation in the future. In fact, one might say that, an individual's range of possible modes for interacting with a given situation is directly proportional to one's in-depth knowledge of the situation under-investigation.

In other words, the degree of one's ability to cope successfully, when interacting with a given set of circumstances, often depends on one's capacity to make transitions from one type of understanding to another type of understanding in a manner that is resonant with, or accurately reflects, within limits, various characteristics of the circumstances being engaged. This capacity to make such transitions in cognition -- that is, one's ability to change -- is, in some way, functionally dependent on both the quality and quantity of the information one withdraws from what might be referred to as 'basic learning situations'.

Since the present essay is not concerned with the precise nature of the aforementioned functional dependence between change and information, the important point to emphasize here is that the shape of learning -- and, therefore, the character of cognitive transformation -- is intimately connected with the 'shape' or character of the information content that is withdrawn from an array of phenomenological engagements with ontology.

Essentially, each individual divides the world up into knowns and unknowns. One knows Bob and, Jill; one does not know Davis and Spencer. One knows Boston; one does not know Detroit.

Moreover, to paraphrase Kurt Riezler, one does not just know facts of this kind or that kind. One also knows, or does not know, certain possibilities:

"We know what Mr. Smith can be or is likely to be. He will not suddenly turn into an elephant and trample us down. He will keep within the limits of a definite order."²¹

This 'definite order' is a major component in our conceptual geometries -- geometries that are constructed from, and into which one fits, various facts, possibilities, beliefs, fantasies, experiences, sensations, and so on, and that form so many points of conceptual reference when confronted by 'reality'.

These conceptual geometries contain the tools through which one attempts to engage life. They are precipitates²², so to speak, that are derived from a set of 'basic learning situations' that populate one's interaction with existence. Although the specific properties of these geometries depend on the directions in which an individual life travels, the geometries, themselves, are broadly shaped, to varying degrees, through what Harry Stack Sullivan calls: 'consensual validation'²³

The term is fairly self-explanatory since, obviously, the individual does not grow up in isolation. Roger Brown notes that:

"The whole point of defining terms is to make it possible to go on and say something useful employing those terms. With children, when we have finished defining, what we go on to say is our total cultural tradition. ... Some of these propositions are intended to guide action. They can only do so if the child can 'cash' the principle words into referents. ... The codability scores of a linguistic community are a reflection of that community's total culture. In acquiring these codability scores the child is acquiring a certain model of the world. When he has it, he will be able to receive complex information

concerning that model and will be able to act in the light of that information."²⁴

The world of one's elders represents the universe of discourse to which one refers for support with respect to mapping out one's conceptual geometry. Largely through such support, an individual becomes able to classify, distinguish, identify, and represent the phenomena that one experientially encounters.

Given the foregoing perspective, anything that endangers a learning situation, endangers the individual because learning constitutes the key that unlocks the mystery of unknown entities. By learning about the world, one becomes able, in time hopefully, to confidently interact with various facets of that world.

Clearly, if one does not learn about the world, one cannot venture into it and be able to adequately cope with the experiences one encounters there. Under such circumstances, one has neither guidelines, nor reference points, nor a framework through which to engage the world.

"This system is the basis of nature or action. If we do not know the nature of a danger, we make an assumption. Without such an assumption, we cannot act. Without such a scheme, we cannot make such an assumption."²⁵

When the idea of 'fear' was first encountered in this essay -- by way of the distinctions made by Freud in *Beyond the Pleasure-Principle* -- a certain point was emphasized in the comments that followed the quote, namely:

"Because of the specificity which is characteristic of fear, it allows the possibility of definite plans to be formulated. . . . All of this, however, is quite in contrast to the hazy indefiniteness surrounding apprehension. The uncertainty which characterizes this situation limits the amount of planning which can be completed"

The important point to notice, here, is that 'fear' tends to involve an aspect of knowledge, while apprehension seems to be rooted in some kind of deficiency with respect to the processing of, or access to, certain kinds of information or related knowledge.

More specifically, when one fears something -- for example, a dog - one's fear encompasses a certain amount of knowledge and stored memories of previous existential encounters. This information includes such factors as: dogs, types of dogs, characteristics of dogs, experience with dogs, etc.

On the basis of this sort of information, one begins to construct a conceptual geometry that, among other things, contains a range of possibilities in relation to dogs. One's acts tend to be a manifestation of one set, or another, of cognitive functions involving those possibilities.

However, when, in some given context, one is apprehensive, an individual's conceptual geometry seems to be like a ship without compass or rudder. For example, in the phenomenon of 'separation anxiety', one of the most prominent features of this condition revolved around a child's sense of helplessness and a concomitant dimension of 'directionlessness' that tended to interfere with, and undermine, any sort of planned action.

Moreover, this aspect of 'directionlessness' pervaded one's perception of the danger, itself, as well as, the range of possibilities connected with one's attempt to cope with the perceived danger. As a matter of fact, because these last two facets of cognitive functioning (namely, perception and building a conceptual geometry are deficient in various ways), one is unable to act appropriately ... or at all.

The distinction between fear and anxiety becomes increasingly important, if one, briefly, returns to the previously mentioned notion of 'consensual validation'. Riezler contends that:

"The process in which he forms his preliminary world could not proceed if the child were not aware of living in the world of his elders. His first assumption is his mother and her knowledge. The mother is not simply one of many items in a phenomenal field. The entire phenomenal field is referred to the mother. The assumption of her knowledge underlies and accompanies every hypothesis the child

makes concerning the nature of things. As the child builds up his own world, he 'learns' the world of his elders..."²⁶

Not only does the 'assumption of her (i.e., the mother's) knowledge' underlie and accompany 'every hypothesis the child makes', but the mothering-ones' presence shapes, colors, and orients - - for better or worse -- an infant's or a child's general engagement of the world. For all practical purposes, the mother -- at least in the beginning -- is the conceptual geometry through which an infant and young child existentially navigates her or his way through life.

Just as an adult depends upon his or her own conceptual geometry to help understand and cope with life, the child depends on the mother's conceptual geometry in the same way. If, in either instance, anything were to happen to their respective conceptual geometries, both the adult and the child would become helpless and without direction.

Such 'informational directionlessness', however, does not lead to fear but to a sense of apprehensiveness or anxiety. As noted previously, whatever else 'fear' may entail, it contains, on a minimal basis, some possibility for directed action (fight, flight, or some other strategy).²⁷ If one lacks this possibility, one's basic affective state is not fear but apprehension or anxiety ... although there might be some degree of fear woven into the fabric of one's state of anxiety.

One of the characteristics of anxiety is that irrespective of how mild the associated felt-state may be the phenomenology of anxiety tends to be antagonistic to directed action. For example, if one feels mildly anxious about an upcoming talk, then -- according to the perspective being advanced in this essay -- one's anxiety gives expression to one's recognition²⁸ that there are various kinds of lacunae or gaps in one's conceptual geometry concerning the talk ... these lacunae might have to do with: performance; other people's perception of the talk; the impact the talk might have on one's career or standing in the community; implications for self-esteem, and so on.

However, the range of possibilities surrounding such concerns tends to be so open-ended and diffuse that one would have difficulty formulating a specific course of action that, simultaneously, could

address all of one's concerns with respect to the speech. In fact, to the extent that the horizons surrounding such diffuse possibilities involving the forthcoming speech begin to expand, an individual may start to blur the conceptual lines that demarcate between what is possible and what is not possible ... what is likely to happen and what is not likely to happen.²⁹

One is not afraid of what is going to happen. Rather, because one doesn't know what will happen, one becomes apprehensive or anxious.

Anxiety attacks occur when the aforementioned lines of demarcation concerning possibility tend to break down or disintegrate -- at least for a period of time. During this interim, one is unable to act in any directed manner because one has become overwhelmed by possibilities along with various, unanswered questions concerning what significance to assign to such possibilities, and, therefore, one has no sense of direction for how to cope with these uncertainties.

Two British psychiatrists, Bowlby and Robertson, discovered that while very young infants were concerned, apparently, largely with issues of physical needs, somewhat older infants (between 3-6 months) seemed to have a slightly different orientation to life.

One of the most striking characteristics of these older infants was their apparent recognition of the mother as an individual and not just as someone who gratified the infant's physical needs. By the time the child is between 18-24 months old, this engagement of the mother as a person apart from issues of physical need has a central place in the child's developing conceptual geometry.

In the words of Bowlby and Robertson:

"He is by no means content to be fed and tended by anyone, but appreciates his mother as a particular person and has a hunger for her love and presence which is as great as his body's hunger for food. He has been weaned from the breast, but he is still unrecovered from complete dependence on the protection and love of this one person."³⁰

The foregoing observations dovetail with the views of Riezler noted previously -- namely, the first assumptions of the child concern the mother and her knowledge. In many ways, the mother's behavior,

attitudes, and emotions form substantial aspects of a child's initial conceptual geometry.

There are a number of studies on institutionalized children, as well as other kinds of studies, that support the perspective being outlined here. For instance, Spitz investigated a cluster of behavior traits known as 'anaclitic depression'.³¹

In terms of implications for the present essay, perhaps, one of the most significant results of Spitz' investigation is that even when the physical needs of very young, institutionalized children were met (e.g., adequate food, physical comfort, etc.), the child seemed to need something more:

"In many cases, this unusual behavior [i.e., anaclitic depression] began to appear after the child was separated from its mother or mother substitute. If favorable mother child relationships were reestablished within three months, a more normal course of development occurred. However, if the deprivation lasted longer than five months, the child did not improve but continued to deteriorate."³²

Although the specific principles that regulate this phenomenon are still under investigation, the available evidence does seem to indicate that the relationship between mother and child does extend beyond both the satisfaction of physical needs as well as simple emotional attachments. The onset of the symptoms of anaclitic depression in these children suggests that processes are going on in their psyches that are eating away at something that is of crucial importance to them.

Such evidence points to an area that Freud either failed to explore or that he misunderstood. This area revolves around a child's dependence on the mother in a way that is above and beyond the mother's role as the one who satisfies physical needs or who is a possible object of sexual desire.

Actually, the fact that Freud did not arrive at some similar conclusion is rather amazing. Certainly, there was sufficient evidence available to him that might have permitted him to make an educated conjecture concerning this issue.

For example, a very prominent piece of evidence existed in the form of the phenomenon of 'separation-anxiety'. After all, even when a mother is absent for any length of time, an infant's needs still could be satisfied through the presence of a governess.

Strangely enough, Freud did not seem to think it odd that although the basic needs of an infant might be satisfied by a surrogate mothering-one (such as a governess), the infant still might long for the mother. The existence of this longing suggests that Freud did not properly probe to the heart of the mother-child relationship.

Rather, because he was pre-occupied with a child's sexual attachment to the mother, this tended to close Freud off to other possibilities.³³ Although Freud proved himself, over the course of his life, to be quite willing to make theoretical changes -- even in relation to fundamental precepts -- his openness had limits and very definite biases.

In any event, as Erickson points out:

"Knowing what we know today, it is obvious that somebody had to come sometime who would decide that it would be better for the sake of the study of human motivation to call too many rather than too few things sexual, and then to modify the hypothesis by careful inquiry."³⁴

One of the ways in which the hypotheses of Freud has been modified involves the whole realm of psychical needs encompassing aspects of emotional attachment between mother and child that appear to be non-sexual in nature. The remainder of this essay will concentrate on providing added detail to certain aspects of these non-sexual, psychical dimensions.

R.D. Laing has written along lines that can contribute to the present discussion. Although, ultimately, his reflections on his clinical experience took him to a variety of points of interest other than just the matter of anxiety, in *The Divided Self*, Laing indicates that:

"Most people feel they begin when their bodies begin and that they will end when their bodies die. We could say that such a person experienced himself as embodied.

"This, however, need not be the case.. . there are individuals who do not go through life absorbed in their bodies but rather find themselves to be, as they always have been, somewhat detached from their bodies. Of such a person one might say that he has never become quite incarnate and he may speak of himself as more or less unembodied.

"Here we have a basic difference in the self's position in life. We would almost have, if the embodiment or un-embodiment were ever complete in either direction, two different ways of being human."³⁵

The embodied person is rooted in his or her biological constitution and its component building blocks of bone, muscle, etc.. The body of this sort of individual constitutes the base of operations through which such a person engages existence. From this port, the person sets to meet the world.

To the extent that a person is embodied, that individual will consider herself or himself to be co-extensive with the body. The dangers that threaten the body, threaten an individual's sense of self, and the objects that attract the body reflect that person's sense of self.

The approach to life of a 'disembodied' individual, however, contrasts substantially with that of people who are characterized as being 'embodied'. According to Laing, observation, rather than participation, is a central feature of the 'disembodied' orientation.

In addition to observing the activity of the body and its engagement of the physical world, the disembodied individual also focuses upon criticizing, directing, and/or applauding the body. In other words, the disembodied individual tends to focus upon controlling all that the body does or is.

The center of ontological gravity, so to speak, has changed from the body (i.e., the embodied individual) to the phenomenology of mental activity. In the case of a disembodied individual, the 'self' is no longer synonymous with the body but, instead, is given expression through the agencies of internal analysis, judgment, and control with respect to the body's engagement of the external world. Furthermore, these mental processes are perceived by the individual as being detached and isolated from the external world.

Of course, most people are a combination of such embodiment and disembodiment typologies. To what extent either of these ontological orientations is genetically fixed and how much is shaped by environmental influences remains an open question.

Laing touches on these matters, when he says:

"In short, physical birth and biological aliveness are followed by the baby's becoming existentially born as real and alive....

"The individual, then, may experience his own being as real, whole; as differentiated from the rest of the world in ordinary circumstances so clearly that his identity and autonomy are never in question; as a continuum in time; as having an inner consistency, substantiality, genuineness, and worth; is spatially co-extensive with the body; and, usually, as having begun in or around birth and liable to extinction with death. He thus has a firm core of ontological security....

"... in the individual whose own being is secure in this primary sense, relatedness with others is potentially gratifying; whereas the ontologically insecure person is preoccupied with preserving rather than gratifying himself; the ordinary circumstances of living threaten his low threshold of security. . ."36

We understand the 'ontological' through having a conscious awareness of our 'Being' and the modalities of our living that are embedded in that Being. In these terms, one might briefly summarize the difference between ontological security and ontological insecurity as a function of one's capacity to cope.

The experiential background of the ontologically secure individual forms a solid base of operations through which to extend out into the world. A sense of ontological security provides an individual with a relatively clear conception of his or her own distinct position in relation to other people and things. Moreover, that sense of ontological security frames and orients an individual's approach to interpersonal situations by rooting a person's psychic life in conditions that have been gratifying and satisfying to varying degrees, and, as such, ontological security has been intimately woven into the fabric of an individual's conceptual geometry.

The experiential background of an ontologically insecure individual, on the other hand, leaves sizable lacunae in the foundation through which that person engages life. As a result, one of the most prominent features of an ontologically insecure individual is the significant degree of uncertainty that surrounds and permeates one's relationship with oneself, others, and the world.

Although each individual is ontologically insecure at birth, and for some time afterwards, the ontologically insecure adult represents that sort of individual who is never able to overcome the basic sense of insecurity that one inherits at birth. The ontologically insecure individual has a conceptual geometry, but it is only a ragged, piecemeal, inferior shadow of the conceptual geometry of an ontologically secure person.

Although Frieda Fromm-Reichmann uses the term 'self-realization'³⁷, she is, essentially, saying the same thing as is being said in this essay when she contends that:

"The lack of freedom for self-realization and the feeling of stagnation and 'nothingness' that goes with it, this sense of psychological death, seems to me to be at the root of many people's anxiety. To repeat, they cling to infantile, intrapersonal patterns, and as result, feel helpless without really knowing why. They are unable to grow emotionally, to develop or change. They are not able to think, feel and act according to their chronological age. They live anachronously in a deadening emotional rut where they compulsively continue to distort their interpersonal images of new people whom they meet, and to mis-value the interpersonal reactions and behavior of these people along the line of the conception gained in the resolved interpersonal childhood contacts."³⁸

While there are many ways for an individual to become 'stagnated', Harry Stack Sullivan³⁹ describes at least one way that is quite important in the present context. This mode of stagnation concerns his conception of 'anxiety'.

According to Sullivan, the 'tension of needs' are not the only cause of reduction in an infant's 'euphoria' or sense of well-being. Anxiety also can cause such a reduction.

Unlike other needs, however, anxiety is not related to an infant's physiochemical environment. The felt tension generated by physical/material needs is directed toward a specific source. The tension to which anxiety gives expression, on the other hand, is, for the infant, non-specific, and, in many ways, without direction.

According to Sullivan, anxiety is empathically transferred from the mothering-one to the infant. That is, the infant is, in some unspecified manner, able to feel discomfort because of the anxious discomfort present in the mothering-one.

Due:

". . . to the peculiar emotional linkage that subtends the relationship of the infant with other significant people -- the mother or the nurse,"⁴⁰

an infant feels a strange tension without any accompanying physiochemical need. Thus, the tension of anxiety, as experienced in prototaxic contexts (the earliest, most rudimentary form of experience in Sullivan's developmental framework), is distinguished from other instances of reduction in euphoria, or sense of well-being, by the absence of a specific source that can account for why one is experiencing a reduction in one's normal sense of existential euphoria that is derived from the state of being alive. Anxiety simply exists in the infant.

With this sort of experience in mind, Sullivan advances a postulate:

"The tension of anxiety, when present in the mothering-one, induces anxiety in the infant."⁴¹

When this tension of anxiety is reduced in the infant (which first requires anxiety be reduced in the mothering-one), such a reduction of tension does not result in satisfaction but in 'interpersonal security'.

For Sullivan, this means that anxiety is a function of the infant's interpersonal, communal existence ... that is, significant others need to co-operate in relieving an infant's need. Seemingly, a child is able to sense (but not understand) any emotional change, brought about by tension in the mothering-one, that might interfere with such co-operative behavior.

The foregoing way of putting things is, however, somewhat misleading. Sullivan believes that an infant is unable to connect the felt tension of anxiety with the mothering-one who induced it. Moreover, at this point, the infant is not developmentally capable to be able to logically extrapolate the anxiety in the mothering-one with any, possible impairment of future co-operation that such anxiety might signify to an adult mind. Consequently, perhaps, a more correct way of describing the situation is to say that an infant 'senses' or 'feels' that something is wrong, without knowing what that something is.

Originally, if an infant felt a tension of need, the child could seek to evoke, say, the 'nipple-in-lips' situation through a 'crying-when-hungry' behavior. 'Crying-when-hungry' (this expression is used by Sullivan to denote an infant's experiential perspective and, for the infant, is distinct from, say, 'crying-when-cold' or 'crying-when-anxious') causes the mother to manifest tenderness.

In the present case, this tenderness takes the form of, among other things, presenting the mother's milk-laden nipple to the infant. The infant's tension of hunger tends to maintain this situation until the original tension has been reduced below a certain threshold value.

According to Sullivan, the experience of hunger envelops the functions of recall and foresight. Recall relates back to previous instances of satisfaction (along with the 'coloring' that accompanied that experience), while foresight relates forward toward anticipated satisfaction with respect to future instances in which the tension of hunger arises (along with various projections concerning the potential for gratification in association with the mother).

Eventually, as the infant is engaged in sucking activities across time, tactile and thermal properties in the region of the infant's mouth, along with a variety of other visual and emotional currents, come to constitute a 'sign' that satisfaction (i.e., reduction of a need of tension - in this case, hunger) will, or will not, be forthcoming. As an infant's

ability to identify tactile, thermal, visual, auditory, and emotional cues in conjunction with satisfaction-giving and non-satisfaction giving experiences grows, an infant becomes able to differentiate between types of signs and assign significance, meaning, or interpretation to such sets of signs.

Some of these discriminations become signs for various categories of signs. Sullivan refers to such signs as 'symbols'.

For instance, certain facial expression of the mothering-one may invariably appear concurrently with other factors (such as posture, sound of voice, etc.). In time, each of these may indicate that tender behavior is forthcoming that in turn, indicates a forthcoming satisfaction of need through reduction of a given felt tension.

The foregoing brief sketch of a portion of Sullivan's theoretical framework parallels what has been emphasized earlier in the present essay. Conceptual development brings about a constantly expanding awareness of resonance and relatedness among various types of experiences in the sense that certain facets of the phenomenology of experience come to be perceived as being related or 'falling together'.

All of these experiences and discriminations lead to the development of an individual's conceptual geometry concerning self, others, life, and the world. In fact, one might say that 'signs' and 'symbols' are the guideposts that are at the heart of a framework of postulates, hypothesis, theories, conjectures, and so on, that form the core of an individual's conceptual geometry.

Now, imagine an instance in which a mother⁴² becomes anxious while feeding her infant. Also imagine that the infant's need has not been brought to resolution.

From the infant's side of things, the felt aspect of anxiety tends to cause an infant in such a situation to avoid using the existing system of integrated signs and symbols that, normally, are directed toward resolving hunger. As far as the infant is concerned, the present nipple--in-lips context is no longer the sort of nipple-in-lips situation that has been experienced in the past and led to a satisfying experience.

Something is wrong. The felt presence of anxiety has modified the situation. The infant's transformation of energy -- i.e., sucking -- ceases.

In the foregoing context, anxiety is disjunctive and opposes a tension of need -- in this case, hunger -- rather than reduces it. The infant becomes so preoccupied with the felt aspect of the tension of anxiety that significant needs get pushed into the background.

There is still a need for food since the infant is still hungry. The nipple of the anxious mother is -- we are assuming (and, sometimes, this assumption is not warranted because the intensity of the mother's anxiety disrupts the production of milk) -- still capable of providing milk. However, the interpersonal situation between mother and child has disintegrated.

Our fictional infant's predicament has become quite complicated. Not only is a significant need unresolved, the discomfiture of anxiety that is present is, in many ways, unmanageable.

Since anxiety is often shrouded in uncertainty and phenomenological fuzziness with respect to its generating source, the infant's rudimentary functions of recall and foresight cannot be relied upon to point the way to appropriate action for the relief of anxiety while the child continues to be engaged in the anxiety-producing circumstances. According to Sullivan:

"...severe anxiety probably contributes no information. The effect of severe anxiety reminds one in some ways of a blow on the head, in that it simply wipes out what is immediately proximate to its occurrence. If you have a severe blow on the head, you are quite apt later to have an incurable, absolute amnesia covering the few moments before your head was struck. Anxiety has a similar effect of producing useless confusion, and a useless disturbance of the factors of sentience that immediately preceded its onset..."⁴³

Alternatively, one also might say that because, over time, an infant may come to recognize -- either overtly or in an indirect, subconscious manner -- then by withdrawing from a situation in which anxiety is being felt, in time the felt anxiety tends to dissipate and an infant might come to believe that withdrawing from situations is the only way to deal with the presence of anxiety. However, because, as previously indicated, the nature of anxiety is often diffuse and non-

specific, there is a potential for an infant to draw the wrong conclusions concerning the relationship between withdrawal and anxiety reduction.

More specifically, although withdrawing from situations in which anxiety has arisen does help to lessen the felt tension of anxiety, nevertheless, the reduction is rarely total. Therefore, this residual anxiety presents a problem because one now has to find something new from which to withdraw in the hopes of alleviating the felt tension of such residual anxiety.

The strategy of withdrawal has the potential for placing an individual on what is referred to as an 'intermittent, variable reinforcement schedule' in which rewards (in this case, the reduction of felt anxiety) come at unpredictable intervals. Such reinforcement schedules can underwrite the linkage of all manner of arbitrary factors, and they tend to do so in the form of habitual patterns of behavior that are very hard to break (e.g., for example, gambling, compulsions, obsessions).

In his book, *The Abnormal Person and His World*, Stern writes:

"A position similar in many respects to that of Heidegger is taken by the psychologist Schachtel. Schachtel uses as his starting point the concept of embeddedness, To be in a state of embeddedness means to be surrounded and sheltered by what is familiar. The prototype of this state is the prenatal existence in the womb. All human growth means a separation from the state of embeddedness, and such separation, actual or threatened, arouses anxiety, whenever the person is or feels helpless to cope with it."⁴⁴

Approached from a slightly different, but related, perspective:

"The problem of the psychiatrist is more or less to spread a larger context before the patient; insofar as that succeeds, the patient realizes that, anxiety or not, the present way of life is unsatisfactory and is unprofitable in the sense that it is not changing things for the better; whereupon, in spite of anxiety, other things being equal, the self-system can be modified."⁴⁵

Finally, in 'Escape From Freedom', Fromm argues that:

"...the new freedom which capitalism brought for the individual added to the effect which the religious freedom of Protestantism already had had upon them. The individual became more alone, isolated, became an instrument in the hands of overwhelmingly strong forces outside of himself; he became an 'individual', but a bewildered and insecure individual."⁴⁶

In modern times, we are beset with a flood of information concerning technology, science, world events, life styles, choices, and so on. The conceptual world is increasingly divided up amongst a proliferation of disciplines and areas of expertise, each with its own language, rules, purposes, and techniques.

Confronted with all of this information, an individual is constantly threatened with a sense of directionlessness whose -- to invert, if not pervert, Pascal's saying -- 'center is everywhere and whose circumference is nowhere'. Perhaps, this is why:

"Not only in the understanding and treatment of emotional disturbances and behavioral disorders has anxiety become recognized as the 'nodal problem', in Freud's words; but it is now seen likewise to be nodal in such different areas as literature, sociology, political and economic thought, education, religion, and philosophy."⁴⁷

Footnotes

1.) Rollo May, "Centrality of the Problem of Anxiety in Our Day", in *Identity and Anxiety*, ed. by Maurice Stein, Arthur J. Vidich, and David Manning White, The Free Press, New York, 1963, page 121.

2.) Sigmund Freud, 'The Problem of Anxiety', *The Psychoanalytic Quarterly Press* and W. W. Norton & Co., Inc., New York, 1936, page 75.

3.) Sigmund Freud, op. cit., pages 75-6.

4.) Paul Mussen; John Conger; Jerome Kagan, *Child Development and Personality*; New York: Harper & Row, Inc., 196, page 213.

5.) Sigmund Freud, op. cit., page 80.

6.) Ibid, page 78.

7.) Paul J. Stern, *The Abnormal Person and His World*; D. Van Nostrand Co. Inc., New Jersey, 1964, page 28.

8.) I am using the term "know" in a very loose sense ... applicable to anyone who has suffered through such a painful experience.

9.) Only at a later stage of development might the theme of dependency become subject to repression - for example, when an individual wants to assert his or her independence but discovers that, in truth, one is still dependent, yet, cannot accept such a discovery and its implications for 'self'.

10.) Roger Brown, *Social Psychology*, The Free Press, New York, 1965, pages 195-245.

11.) Paul Mussen, John Conger, Jerome Kagan, op. cit., page 222.

12.) Although *Beyond the Pleasure-Principle* does not deal with, anxiety, per se, it does develop, briefly, a general distinction that Freud made between fear and anxiety (Angst).

13.) Sigmund Freud, *A General Selection from the Works Of Sigmund Freud*, ed. by John Rickman, M.D. Doubleday & Co., Inc., New York, 1957, page 199.

14.) Both these terms -- i.e., 'normal' and 'moderate' -- contain a great deal of imprecision. Nonetheless, they are useful to the extent that they represent a situation somewhere between extremes - that is, fear so mild, one takes no action at all, and fear so severe, one panics and is incapable of acting -- at least, in a considered, rational manner.

15.) The perspective being advanced through this essay is not meant, necessarily, to replace any existing theory of anxiety -- including that of Freud. The perspective of the present essay can be used, however, in a way that supplements and complements some of the existing theories concerning anxiety.

16.) Mussen, Conger and Kagan point out that:

"Maturation of the child's perceptual capacity plays an important role in emotional development. As he matures he becomes better able to discriminate among stimuli such as smiling and frowning faces, pleasant and unpleasant voices, and friendly and angry gestures. Thus, new babies between 2 and 6 months of age smile indiscriminately in response to nodding faces or masks, regardless of whether the facial expression might be considered to be pleasant or unpleasant from an adult's point of view. However, by the second half of the first year, some infants show evidence of discrimination among people by smiling at those they know and showing a fear reaction to strangers." (page 121)

The work of Robert Fantz also suggests that a certain capacity to discriminate may, within certain limits, be active even within a few days and weeks following birth.

17.) Roger Brown, op. cit., page 335.

18.) Paul Mussen, John Conger, Jerome Kagan, op. cit., page 146.

19.) Earlier in this essay, I have noted that Mussen, Conger and Kagan equate fear and anxiety.

20.) Robert W. White, *The Abnormal Personality*, Ronald Press Co., New York, 1964, page 192.

21.) Kurt Riezler, "The Social Psychology of Fear", in *Identity and Anxiety*, Free Press, New York, 1960, page 197.

22.) Once again, the meaning of terminology is, to a degree, being left open. The term 'precipitate' -- like 'functionally dependent' -- is important to my understanding of what learning is and how it occurs. However, in the present context, the most important point concerns a

number of general relationships with which, I believe, most educators and learning theorists might agree.

23.) Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry*, W. Norton & Co., Inc., New York, 1953, pages 28-29.

24.) Roger Brown op. cit., pages 339-340.

25.) Kurt Riezler, op. cit., page 152.

26.) Ibid, page 150.

27.) Subject, of course, to one's ability and knowledge in relation to the nature of the danger in question.

28.) This might be on either a conscious or unconscious level. This essay tends to emphasize the importance of the former rather than the latter.

29.) The reasons why one thinks this type of "thought" are complex. However, part of the following section indicates the type of insecurity to which such thoughts may be attached.

30.) Mussen, Conger, and Kagan, op. cit., page 163.

31.) Of more than passing interest are Harlow's studies with surrogate mothers among monkeys. His findings parallel this kind of investigation to a striking degree. At the same time, one needs to exercise a certain amount of caution when making comparisons across species.

32.) Mussen, Conger, and Kagan, op. cit., page 163.

33.) For example, Freud's preoccupation with instinctual drives may have prevented him from considering the type of interpersonal theory that H. S. Sullivan proposes.

34.) Erik H. Erikson, *Insight and Responsibility*, New York: Norton & Co., Inc., 1957, page 33.

35.) R. D. Laing, *The Divided Self*; Maryland: Penguin Books, 1965, page 66.

36.) Ibid, pages 41-42.

37.) I am using the idea of 'self-realization' in a very general sense. This term refers to a person's development of her or his talents, skills, cognitive capacities to the full extent of that individual's potential in various areas. Similarly, I am referring to the potential of patients to be

able to reach out for and to find, fulfillment of their needs with respect to, among other things, satisfaction and security ... as far as these can be obtained, without interfering with the laws and customs that protect them and their fellow human beings.

38. Frieda Fromm-Reichmann, "Psychiatric Aspects of Anxiety", in *Identity and Anxiety*, page 139.

39.) General references are Sullivan's: *Conceptions of Modern Psychiatry* and *The Interpersonal Theory of Psychiatry*.

40.) Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry*, W. W. Norton & Co., Inc., New York, 1953; page 41.

41.) Ibid, page 41.

42.) The mother's emotional turmoil does not even have to be related to the infant. It might be quite detached from that relationship.

43.) Sullivan, op. cit

44.) Paul J. Stern, *The Abnormal Person and His World*, page 27.

45.) Erich Fromm, *Escape From Freedom*, The Hearst Corporation, New York, 1966, page 141.

46.) Rollo May, op. cit., page 121.

47.) Obviously, the development of one's conceptual geometry does not end in childhood. It continues throughout life. One can become directionless at any point along a continuum that represents one's life history.

Chapter 8: A Fate Worse Than Death

Let us begin with an observation. Under many circumstances, there seem to be, at least, two sets of, seemingly, antagonistic forces at work in human consciousness. One set of such forces is given expression through our struggle to discover the truth of things, while the other set of opposing forces is a manifestation of a tendency to hide, distort, or rebel against whatever the truth might be.

Deciding which is which in any given instance is not always an easy or problem-free task. Consequently, various kinds of methodologies are sought and/or developed in order to deal with the problem of trying to differentiate that which is true from that which is not true.

There are philosophical, scientific, theological, mathematical, psychological, mythological, sociological, political, economic and mystical methods for engaging the challenge of determining the truth. We tend to derive paradigms of meaning through the exercise of these methodologies, and these frameworks organize, shape, color, generate, and orient our interpretations and understandings of where we feel truth and falsehood are to be located within the realm of experience.

In addition to the aforementioned two, broad, kinds of force, there also is a third set of forces at work in consciousness. This involves a tendency toward dissociation – which is neither a function of truth nor falsehood, but is, instead, an attractor-like basin that constantly pulls at us like a maelstrom via the currents from certain facets of the horizons of our awareness.

Dissociation is an experience consisting of a pervasive sense of having lost essential contact with: meaning, purpose, direction, belonging, acceptance, identity, and reality. The presence of dissociation gives rise to intense, often overpowering and debilitating, feelings of anxiety, fear, depersonalization, de-realization, alienation, emptiness, disconnection, cynicism, doubt, depression, sadness, hopelessness, and anomie.

The foregoing needs to be distinguished, to some extent, from many of the traditional, psychiatric modes of referring to the phenomenon of dissociation in which so-called dissociative disorders tend, in a sense, to be considered synonymous with the experience of

dissociation. I would like to differentiate between, on the one hand, the trauma of a dissociative experience -- as outlined in the preceding paragraph -- and the pathological coping strategies and defense mechanisms that might arise in response to the trauma of dissociation.

From this perspective, the so-called dissociative disorders are an individual's maladaptive responses to the continued presence of the intense pain of dissociative phenomenology. Dissociative disorders are the problems that arise -- such as multiple personality disorder, fugue states, and the like -- in reaction to the presence of dissociative trauma, but there is a difference between the trauma (over which the person might have little control) and the disorder that arises in relation to that trauma -- a disorder whose characteristics might reflect choices (such as they are) as well as individual vulnerabilities and/or inclinations of the person who develops such disorders. These disorders entail life problems for the individual because of their debilitating quality, but the existence of such problems seems to be a better proposition for an individual than the intense pain of the dissociative trauma that leads to the formation of symptoms inherent in a given disorder.

We seek meaning in our everyday lives and in relation to the big questions of existence because, among other things, if we don't, we tend to drift into the gravitational pull of dissociation. In fact, the experience of dissociation is so painful (and we all have had encounters with this condition) that, in many cases we might not care whether the meanings through which we run our lives are true, or not ... just as long as the howling, vicious dogs of dissociation are kept at bay.

Philosophy, science, technology, hobbies, games, careers, television, athletics, politics, social relationships, shopping, war, religion, therapy, and addictions are among the ways we use to, on the one hand, avoid listening to the call of dissociation, by, on the other hand, seeking to invest our lives with meaning, irrespective of whether such meaning-structures might, or might not, have relevance to the truth in some ultimate sense. Truth might have priority in the scheme of things, but living in accordance with falsehood, whatever the associated problems might be, beats having to deal with the extreme unpleasantness and debilitation of dissociative states.

Whenever the promise of meaning enters our lives, we are induced to cross an emotional/physiological boundary that brings, -- to varying degrees -- feelings of direction, purpose, identity, value, pleasure, happiness, belief, and motivation in conjunction with whatever the nature of such meaning might be. The more essential we feel such a sense of meaning to be, the more intense tend to be the emotions that are experienced in conjunction with such meaning.

In some instances (but not all) the rise of an interest in mystical pursuits (which might be scientifically explored through transpersonal psychology) might occur in individuals who currently are struggling, or have been struggling for quite some time, with the currents of dissociation. For such people, the usual array of meanings associated with society, family, career, education, activities, as well as relationships have lost their attractiveness or appeal, and, at the very least, are seen as being unable to provide answers to the great questions of life -- such as: Who am I? Why am I here? What is the purpose of life? How do I find the truth(s) about being? To what should I commit my time, energy, and resources?

If such people are strong, they might have tried a variety of different things in a search to distance themselves from the intensely uncomfortable feelings of dissociation. Yet, in one way or another, if what has been tried has not been successful in assuaging the demons of dissociation, then they might be left with a taste of disappointment and a sense of promise having gone astray as they continue to try to manage the rest of their lives as best they can amidst the undertow of dissociation.

Some people refer to this quest in terms of a 'holy longing' -- a desire for direct experience of the sacred realms and the Divine. One feels within oneself a deep thirst and hunger for an ineffable 'something' -- something beyond the ordinary doors of experience and perception ... something more essential and satisfyingly meaningful ... something life-defining.

Quite a few individuals spend their whole lives in pursuit of this elusive, mystical will-o-the-wisp. When the quest gets bogged down in this or that way, they wonder if, perhaps, mysticism is all just a figment of the imagination.

Then, it happens. They meet up, somehow, with a person or group that seems to offer an antidote to the poisons of dissociative trauma, and it is important to understand just how central and important such an event is in the life of an individual.

More specifically, all of us are a lot closer to dissociative dissolution than we might care to admit. We busily fill up the hours of our life with all manner of activity. Much of this activity is senseless. Moreover, there often is a frenetic quality to a great deal of our behavior in which issues of education, career, work, home, politics, hobbies, and leisure time become the basic sources of meaning-giving in our lives ... after all, if we don't derive essential meaning from such activities, then really, who are we, and what is life actually about, and what should be our true purpose?

For most of us -- some sooner than others -- the capacity of normal life to supply us with the kind of meaningfulness into which we can sink our essence or soul begins to suffer from the law of diminishing returns. The more this sense of dissolution takes place, the more the threat of the pain of dissociative trauma looms on the horizon.

Some people, when they face this Rubicon of life, retreat into ever more frantic commitment to the surface features of life -- such as career, politics, family, home, and community activities. Other individuals, however, cannot go back and need something deeper in their lives to provide them with a sense of essential meaning, purpose, and identity, and so they cross into a battle with the unknown.

With respect to the latter group of people, there tends to be a sense of urgency about their search. Part of this urgency comes from a vague sense of the enormity of the task in front of them and the concomitant realization that they cannot do what they need to do without some expert help ... someone to guide them through the unknown territory on the far shore.

Another part of the aforementioned urgency arises from the ominous threat of dissociative trauma nipping at their soul. They have sailed into the unknown, and they don't know if they will find anything on the other side ... something that will help defend them against the maelstrom of dissociation that could suck them down into a bottomless abyss arising from a loss of meaning, identity, purpose, peace, and stability with respect to lived existence.

Yet, when someone who, supposedly, is a spiritual guide or teacher enters their lives, an apparently viable solution to the impending threat of dissociative trauma appears to take concrete, accessible form. When such an alleged guide appears to be charismatic, interesting, warm, friendly, compassionate, entertaining, wise, calm, and in control of her or his life, then this all seems like manna from heaven.

They experience -- and it makes no difference, at the time, whether such experiences are rooted in truth or falsehood -- a deep, powerful, intense sense of apparent (possibly real) love, acceptance, purpose, direction, honesty, compassion, kindness, generosity, identity, integrity, commitment, happiness, and community at the hands of a 'teacher' or those who are influenced by such a 'teacher'. Among other things that are going on emotionally and psychologically, enkephalins and endorphins begin to flow in such substantial quantities that one might feel an encompassing sense of joy, ecstasy, happiness, well-being, peace, and security.

One feels one has arrived at one's metaphysical, cosmic home. Furthermore, everything that is happening is framed in a way that suggests that what is going on is an expression of the presence of spiritual or mystical truth.

Such a framing might be accurate, as far as it goes, or it might be false. However, in the beginning, the individual has no way of knowing for sure what is going on except that the demons of dissociation have dissipated, and the presence of a dynamic paradigm of meaning has entered one's life.

In the imagery of the Velveteen Rabbit by Margery Williams, one feels that the presence of love, and associated qualities, has, finally, made one 'real', whole, alive, aware, and integrated. Whether this is really so, remains to be seen, but considerable time, experience, inquiry, and reflection will be necessary before one has enough information to be able to arrive at a reasonable assessment of the situation ... especially if certain facts are being actively kept from one's awareness, as is generally the case with respect to fraudulent spiritual guides.

There are people who claim that they could tell, instantaneously -- or within a very short period of time -- whether, or not, a given

individual is an authentic, sincere teacher. There might be some people who are sufficiently gifted to do this, but there are, I believe, far fewer people who actually are capable of this than there are individuals who are making claims in this regard on their own behalf ... and, in the present context, I would eliminate from consideration those individuals who reject all such possibilities simply because they are inveterate cynics and skeptics concerning everything spiritual and/or mystical, and, therefore, are in no position to make a fair and knowing discernment about these sorts of matters since their perceptions are colored and shaped by the constant presence of cynicism and skepticism.

In the beginning, Hazrat Ahmad al-Alawi -- a Sufi saint of the 20th century about whom Martin Lings wrote -- did not know the difference between someone who was a snake-charmer and someone who was a spiritual sage. Similarly, Hazrat al-Ghazali and Jalal-uddin Rumi each took time to find their respective ways to the truth of things with respect to mysticism.

For every rule of thumb one can come up with as a line of demarcation for discerning true teachers from false ones, there are exceptions to such a rule ... both on the side of legitimacy as well as in relation to spiritual charlatans. In instances where the quality of spiritual counterfeiting is poor, many of us might be able to gauge that some sort of fraudulent activity is going on, but when the quality of counterfeiting is high, distinguishing between the real and the false is very problematic.

Consequently, becoming entangled in a false modality of mysticism is not all that a difficult thing to do ... some people's opinion to the contrary notwithstanding. More importantly, once one's life has become immersed in such a group – one with the 'right' sort of dynamic 'guide'-- there are many emotional, psychological, and social forces that are capable of deepening such entanglement in very complex, subtle, and problematic ways.

For example, if one is faced with the prospect -- whether through personal choice or the decision of the group/teacher -- of leaving a given teacher or group, then an individual is very much aware that waiting for one on the other side of the boundary (which marks the boundary separating those who are within the group and those who

are without) is the abyss of dissociation. Under such circumstances, the threat of the terrors of dissociation are even more ominous because of an intense sense of relative deprivation that is experienced in being disconnected from a way of life through which one previously derived the sum total of one's orientation to: God, meaning, purpose, identity, truth, reality, community, commitment, trust, love, self, direction, acceptance, peace, happiness, the world, and the life to come, as compared to the painful offerings of dissociation ... anxiety, fear, alienation, meaninglessness, purposelessness, depersonalization, de-realization, depression, sadness, grief, and so on which are beckoning to one due to one's departure from the aforementioned group.

When I first began to explore the dynamic character of the relationship between various kinds of meaningfulness and the threat of dissociation, one of the images that came to mind was the following:

Meaningfulness) | (Dissociation

The line in the middle constitutes the potentially neutral ground between dissociation and meaningfulness. This middle area gives expression to the activities through which we seek to determine the way to meaning, objectivity, and 'truth'. It is the area within which we struggle for understanding and knowledge about how best to proceed.

When the methodological and hermeneutical activity of this middle area is successful, it helps to serve as a defense against the threat of being pulled into one, or another, state of dissociation. When such activity is not productive, then we struggle to resist the slide toward dissociative states involving anxiety, alienation, anomie, overwhelming stress, fear, loss of identity, and so on, that, in turn, might open us up to more pathological states such as P.T.S.D, an anxiety or dissociative disorder, or some other problematic condition.

With respect to the foregoing diagram, it is important to understand that meaningfulness and/or altered states do not necessarily equate with the truth of things. Rather, we might seek meaning and altered states in order to protect ourselves against being consumed by the ravages of one species, or another, of dissociation.

Furthermore, the phenomenology of going across the boundary into the realm of meaningfulness and/or altered states is experienced as being very pleasurable, if not given to ecstasy. In addition, this

boundary crossing is also felt to be tremendously liberating ... as if one were 'born again' or had come to see 'reality' for the first time.

Once one has undergone such a boundary transition, one seeks to maintain it or re-invoke it because this realm -- when it is intensely felt (as often is the case in many experiences of conversion or initiation into a new spiritual tradition) -- brings one into a state of awareness that tends to dissolve a variety of concerns or worries. One feels like one is in a dream-like state that is both very real and, yet, somehow removed from the rest of life.

Similarly -- but in an opposite, antagonistic manner -- the phenomenology of traversing the boundary into the realm of dissociation is experienced as being extremely painful and debilitating. In many ways, the emotional, existential, and spiritual pain, together with the dysfunctional life, that arise through conditions of dissociation -- such as alienation, anomie, de-realization, depersonalization, stress, confusion, uncertainty, loss of identity, purposelessness, and anxiety -- is so intense that for many individuals, dissociation is a 'fate worse than death'. Moreover, many people prefer the problems of becoming pathological -- in the form of a maladaptive coping strategy -- to the presence of dissociative pain simply because in such pathology there is a certain buffering quality against the felt presence of dissociation.

In phenomenological terms, when an individual travels from within the arc of meaningfulness noted in the previous diagram back across the boundary toward the center portion and, possibly, toward dissociation, this process is felt to be quite disorienting, difficult, stressful, and emotionally painful. Alternatively, when one journeys from within the arc of dissociation toward either the center portion of the diagram or toward the boundary-arc of meaningfulness, this process is experienced as being very positive, liberating, and happy.

Given the choice between having meaning, even if possibly false, and being engulfed in a dissociative condition, not everyone will opt for the latter possibility -- even though the latter option might appear to be closer to the current truth of things than is the former. Given such difficult choices, one might wish to linger over the decision and not rush to judgment.

In view of the bleak nature of the alternatives facing one, an individual might desperately try to reconcile seemingly disparate experiences, events, or pieces of information in a manner that favors perpetuating meaning (even if false) over the possibility of sliding into dissociation. Confronted with such extremes of emotional consequences, a person might be forgiven if she or he wished to extend a few degrees of freedom to the inexplicable and, as a result, give the current framework of meaning -- problematic though it might be -- the benefit of a doubt, rather than plunge into the cold, dark waters of dissociation ... even though the latter action might be the step that is most courageous, honest, sincere, and truthful.

In the face of such diametrically opposite considerations, one lives in the interstitial shadows of ambiguity, uncertainty, doubt, ignorance, the unknown ... a harbinger of things to come if one should move further across the emotional and psychological boundary that marks departure from the teacher and/or group. This is an extremely painful position to be in, and the motivational forces are extremely strong in relation to inducing one to not only refrain from crossing the aforementioned boundary, but, as well, to get rid of the doubts and suspicions one is entertaining, for occupying a state of emotional limbo is almost as bad -- but not really -- as entering into the state of dissociation on the other side of said boundary.

In most cases, unless a person can be motivated to trust the reasonableness of moving into dissociation -- and the move is very counter-intuitive for most of us -- then there is a strong likelihood that a person will stay with a paradigm of meaning that, though flawed in substantial ways, seems to be more emotionally satisfying than does the prospect of dissociation ... especially if an individual sees no readily available hope for finding a worthwhile exit from the condition of dissociation once the current source of meaningfulness is left behind. Furthermore, the threat of continued dissociation is one of the primary reasons why some individuals -- even after they manage to escape from an environment of thought control and spiritual abuse -- will tend to seek out further abusive relationships, just to get another fix of the emotional and psychological 'Baba juice' (see the next paragraph) that often is associated with the crossing-over of the boundary that separates meaningfulness from dissociation ... the same boundary

which, when re-crossed in the opposite direction (i.e., from meaning to dissociation), causes withdrawal-like symptoms due to the debilitating character of the dissociative symptoms that are encountered by an individual.

'Baba' means spiritual father, and the phrase 'Baba juice' is a term I have coined to allude to the trance-like state of ecstasy, liberation, contentment, and sense of well-being that occurs in some people when they are in the presence of a fraudulent spiritual guide. It is a very pleasant altered state of consciousness to be in but it is not a spiritually constructive condition ... in fact, quite the opposite.

Patterns of attitude formation, motivational networks, and habits tend to be rooted in what operant learning theorists refer to as a variable, intermittent schedule of reward contingencies. That is, something of a rewarding nature occurs in conjunction with a certain kind of activity, but, in subsequent life experiences, such rewards might not occur, except occasionally (if at all) but one continues on with such activity in the hope that a hoped-for reward will be forthcoming.

Once established, such learning linkages are very difficult to break. The gambler who rolls the dice one more time, the addict who seeks to recreate the first high, the promiscuous lover in search of the chemistry of that initial encounter of intimacy that came through the gaze or touch of another person, the seeker who longs for the return of an earlier feeling of ecstasy, well-being, peace, innocence, purpose, and meaning that occurred in relation with the meeting of a given 'teacher' – these are all potential examples of the principle of a variable, intermittent reinforcement contingency in action.

Although, ultimately, the only thing that can extricate someone from such forces is Grace' of one kind or another, nonetheless, if one looks at the dynamics of the phenomenon from a lesser perspective, then oftentimes, the only way to break free of the gravitational pull of such a set of circumstances (that is, the presence of variable, intermittent schedules of reinforcement, together with the desire to retain a sense of meaning, even if false, over the threat of impending dissociative states) is through the experience of traumatic events. In other words, if something happens between an individual and the teacher and/or religious/spiritual group with which that person is

associating that violates -- in no unmistakable way -- the trust that ties that individual to the teacher/group, then the trauma of that betrayal of trust might supply enough impetus to help an individual to cross the boundary into a dissociative condition and accept the reality of the latter state rather than continue on with a meaning system that has become spiritually bankrupt.

The process of traversing the border that demarcates previous meaning (false though it might have been) and present dissociation is marked by a profound sadness and depression that tends to occur when a person begins to disengage from a teacher and/or group and is an expression of the individual's sense of having been disconnected from the feeling of being 'real' and in touch with the truth ... if only in a passing, indirect, and limited fashion.

At times, the pain that is felt in this condition of essential, dissociative betrayal is so intense that a person might become vulnerable to being induced to re-crossing the boundary back into what is perceived as the framework of meaning that, previously, was associated with the alleged spiritual guide or group. Oftentimes, one will see an individual bounce back and forth across this boundary line before some final context of relative stability is achieved on one side, or the other, of the boundary line that separates continued association with the teacher and/or group from emotional and psychological disengagement.

The techniques that are used by fraudulent spiritual teachers and/or groups to induce people to not cross the boundary line that demarcates being initiated into a framework of such pseudo-meaning (as opposed to the real and essential meaningfulness of truth) from a condition of dissociative vulnerability are numerous. These include: Ericksonian-like hypnosis; trance inductions or other forms of altered states of consciousness; love-bombing; isolation; sleep deprivation; neuro-linguistic programming; various forms of variable, intermittent schedules of reinforcement; re-framing; misdirection; disinformation; prolonged conditions of ambiguity or tension; disruption of normal forms of social support; as well as the use of one's dependence on processes of consensual validation to undermine one's sense of reality.

The foregoing are but a few of the techniques that are employed to open up unsuspecting people to the 'joys' of being released from a

condition of dissociation, The term “joys” is a collective way of referring to the administering of the 'Baba-juice' that takes place when one is given a new paradigm of meaning in an apparently extremely attractive package by someone: who claims to be an authentic spiritual guide (but who is not, in truth, genuine); who seems to be the best friend one could ever have hoped for; and who appears to be an immense 'blessing' that has come to one that is so great that, heretofore, one could never have imagined it possible for such a person to be in one's life.

The above characterizes one's experiences until one learns otherwise. However, coming to know the ins and outs of this 'otherwise' might be quite a few years down the road when, once again, one stares into the abyss of dissociation ... an abyss that has been made deeper, darker, and more hostile by the fact that one seemed to be so close to the truth only to find one has been kept far from the truth of many things -- including the actual nature of the teacher and, most importantly, one's own relationship with one's essential potential since a fraudulent guide cannot help one realize that about which such charlatans are fundamentally ignorant, though they pretend otherwise, and, for a time, one might have trusted that such people were telling the truth.

For lack of a better phrase, the foregoing approach to the issue of spiritual abuse is known as the mirror image theory. It bears this name because of the character of the dynamics that occur at the boundary marker of demarcation between meaning and dissociation.

As one goes from relative dissociation into meaning, there is a gaining of a sense of freedom, release, peace, security, purpose, identity, acceptance, belonging, commitment, and so on which was not present in the condition of dissociation. As previously indicated, this is experienced as being joyful, happy, ecstatic, unburdening.

However, as one crosses back across the boundary in the opposite direction -- that is, from meaning back to relative dissociation -- one experiences the pain of losing a sense of freedom, release, peace, security, purpose, identity, acceptance, belonging and commitment. Instead, one feels shame, anxiety, guilt, depression, grief, sadness, depersonalization, de-realization, loss of identity, purpose, motivation, and the like. In other words, one's feelings and condition in this

situation of dissociation are the mirror image of, or a direct reversal of, what was experienced as one crossed over into the so-called meaning side of the boundary marker.

When an individual comes to understand the nature of the spiritual abuse that has been perpetrated upon him or her, there is a certain, new realization that occurs ... however inarticulate and vague this sort of realization might be. In this awareness, there is a sense that by having permitted oneself to be induced to cross the boundary from dissociation, or threatened dissociation, to the promised land of meaningfulness in the form of a relation with a certain alleged teacher or guide or group, one has made a maladaptive choice in coping strategy vis-à-vis the issue of dissociative trauma. Moreover, from a certain perspective, one's situation is worse than it was prior to one's encounter with the fraudulent teacher ... one has gone from the frying pan into the fire.

Prior to the appearance of the so-called teacher, there was a certain innocence, and, perhaps, naiveté, to one's search for meaningfulness. Once betrayed, however, in an essential way, one feels cast adrift in the middle of nowhere with nothing to defend one against the breaking storm of dissociation.

One is left with a feeling that there is no safe harbor to protect one and no direction that one can trust. These are intense, destabilizing, and debilitating emotions that were not there prior to the advent of the so-called teacher.

Any program of counseling or therapy that does not take into account the profoundly intense dynamics of this boundary crossing phenomena described in this essay (and what is entailed going in either direction) will have a difficult time helping a person to develop survival strategies with which to cope with the condition of dissociation. Moreover, failure to take such boundary dynamics into account might do considerable spiritual damage to the affected individual by leaving unaddressed the essential dimension of the grief that is at the heart of the re-entry process involving the condition of dissociation.

Although the mirror image theory that has been outlined above has been applied to a context of spiritual abuse, the potential relevancy of this framework does not end there. In whatever set of

circumstances the issue of abuse arises -- spousal, sexual, political, educational, or spiritual -- the dynamics of the mirror image phenomenon are present, and if one wishes to gain insight into the nature of such abuse one should look at the way the threat of dissociation plays off against the struggle for meaning -- even of a pathological kind -- in the structuring of relationships.

Finally, from the perspective of this mirror image theory, there is a potential vulnerability in all of us with respect to the possibility of being induced to flee from the threat of dissociative trauma and into the embrace of paradigms of meaning. On the surface, such frameworks of meaning might appear to be a God-send, but, in reality they might turn out to be just another expression of the sort of problems that arise when we are trying to elude the undertow of the maelstrom of dissociation that haunts consciousness, and, as a result, we do not clearly see the nature of the alternative we are selecting as our way of responding to the presence of dissociative pain in our lives.

Under the right set of circumstances, almost all of us are vulnerable to committing such a mistake in judgment ... and not necessarily because of any personal failing within us, or due to stupidity, or insincerity, or any other defect of character. Rather, we are all vulnerable to such a possibility, because of the very nature of being human -- a nature that is constantly being stalked by the very real threat of dissociative trauma, and with respect to which, we are constantly under pressure to discover viable ways of dodging such an existential bullet.

Chapter 9: The Subtle Side of Madness

Rip's voice drew my attention away from the memories, associations, and reflections with which my mind had been filled. "What do you do for a livelihood, David?" he asked.

"I teach psychology," I responded. "In addition, there is a certain amount of private, clinical work I do independently of my job at the college."

"What courses do you offer at your school?" he inquired.

"The topics tend to vary from year to year," I replied. "Our department likes its faculty members to keep current in a number of areas and believes the demands of teaching different courses will help encourage us to keep up with new developments, theories and research. In addition, none of the faculty members in our department wants to get bored and stale with what we are teaching, so there is a tendency, within certain limits, to change the nature of our responsibilities from time to time."

"I know," Rip said, "there are a lot of different areas of psychology to be taught. Do you have much to do with abnormal psychology?" he queried.

When Rip asked this question, I had a very peculiar, though fleeting, intuition that he already knew the answer. Maybe the fact I had mentioned doing clinical work had led to the reasonable assumption that I probably would have some degree of acquaintance with various aspects of abnormal psychology.

"I've taught a number of courses on abnormal psychology," I informed him. "I've also worked in a couple of private mental hospitals on several occasions during summer holidays when I was an undergraduate."

"What do you know about schizophrenia?" he inquired.

Although I didn't believe he was pursuing this line of questioning for the sake of idle curiosity, I really wasn't sure where he wanted to go with things. I shrugged my shoulders and said: "I know enough to understand that nobody really knows what's going on."

Rip didn't respond to my statement. He seemed to be waiting to see if I would say anything else.

I hesitated briefly and, then proceeded to expand a little on my initial reply. "There have been a number of studies involving twin offspring, both identical and fraternal, of schizophrenic mothers. These studies would suggest there is a strong genetic component to the condition but that genetics alone is not sufficient to account for schizophrenia.

"More specifically, depending on the study, the concordance rate of identical twins -- or the extent to which the condition shows up in both of the children of, say, a schizophrenic mother -- can vary anywhere from 0 to roughly 85%. Furthermore, studies involving fraternal twins show concordance rates that have values ranging somewhere between two and about thirty-five percent.

"Consequently, genetics does not seem to be the whole answer to the puzzle. If it were, then one might anticipate, for example a concordance rate in identical twins that approaches 100%, but this is not what has been established so far.

"A lot of theories have been advanced about what other conditions are necessary complements to genetic factors. These theories point fingers at different kinds of causal scenarios, ranging from: certain species of dysfunctional families; to various psychoanalytical accounts of ego melt-down; to double-bind or lose-lose scenarios of interaction from which one cannot withdraw; to a creative process of trying to adapt to an insane world; to nutritional deficiencies; to LSD-like metabolites roaming around in the brain; to environmental allergens; to auto-immune diseases of one sort or another.

"For the last thirty-five years, or so, there has been a lot of interest in the biochemistry of a number of neurotransmitters, such as dopamine and serotonin, that seem to be implicated, to a degree, in certain cases of schizophrenia. However, no one has been able to work out a fully satisfactory etiological account of the cause or causes underlying breakdowns in the normal process of neurotransmitter activity or how the complex set of symptoms associated with schizophrenia can be generated by problems in the malfunctioning of just a few neurotransmitters.

"No one really knows why schizophrenia has an early onset in some individuals, or a later onset in other individuals. No one knows

why the prognosis is, in general, relatively poor in the former cases, and, to a degree, more promising in the latter cases.

"Furthermore, no one understands why there should be spontaneous remission in a certain number of cases of schizophrenia. No one understands how to fit this phenomenon in with either the data on neurotransmitters or our current knowledge of genetics.

"Considered from, yet, another direction, the problem of trying to determine the cause or causes of the onset of schizophrenia has not been helped by the fact that the diagnostic profile, that supposedly helps to identify those who suffer from this condition, has gone through a number of transitional stages over the years. In addition, there have been significant differences between how, for example, Europeans and Americans have diagnosed schizophrenia.

"The Swiss clinician, Eugen Bleuler, coined the term 'schizophrenia' around 1908. From that time to the relatively recently released version IV of the Diagnostic and Statistical Manual, the way in which this term has been used and applied has exhibited considerable variance."

"Is there, currently, any set of criteria or symptoms that have been established as the agreed-upon standard for diagnosing schizophrenia?" asked Rip.

"DSM-IV is probably about as close as you'll get to a generally agreed-upon standard at the present time," I replied. "However," I added, "these guidelines have a variety of biases that shape and orient them.

"For instance, DSM-IV is solidly rooted in a medical/biological model of human nature and behavior. Moreover, this diagnostic tool also is, to a considerable degree, colored by a Western cultural perspective in general and American clinical experience in particular."

"As far as this standard ... ahh, DSM-IV ... is concerned, what are some of the symptoms that are generally believed to be associated with schizophrenia?" Rip inquired.

I reflected for a few seconds and said: "One important factor would be the length of time for which certain kinds of symptoms have been persisting. Generally speaking, even when the 'right' sorts of symptom are present, if these symptoms have not been in evidence for

at least six months, the mental condition might not be diagnosed as schizophrenia.

"Instead, if the symptoms have lasted for two weeks or less, then the condition might be considered to be some sort of brief reactive psychosis that might have been precipitated by intense stress of some kind. Or, if the symptoms have been present for more than two weeks, but less than six months, then the condition might be treated as some form of what is known as a 'schizophreniform disorder'.

"If the symptoms have persisted for the requisite six month period, then there are about six, or so, diagnostic categories that are compared to the symptoms being exhibited by the individual. These categories encompass themes of thought, perception, attention, motor behavior, emotion or affect, and life functioning.

"For instance, there might be different kinds of disturbance in thinking that could be evidence of the presence of schizophrenia. These disturbances might be either in the character of the structure or forms that such thoughts assume, or these anomalies might concern the content of such thoughts.

"In the case of problems with the form of thought, the individual's ideas tend not to be connected to one another, or the individual will have great difficulty sticking to any one topic. Form-of-thought problems also could include such things as the individual's inclination to use neologisms -- that is, to make up words that might, or might not, have meaning for a speaker, but that, in all likelihood, have little, or no, meaning for the listener. The individual might also make use of, what are known as, 'clang associations' in which lots of rhyming words appear in the individual's day-to-day discourse.

"Disorders in thought content could include a profound lack of appreciation for, or awareness of, the existence of a serious problem of mental disturbance in oneself. The schizophrenic often does not see anything wrong with the way he or she is behaving or performing.

"Another kind of disorder in thought content concerns delusions of one sort or another. The character of these delusions can vary considerably.

"Perhaps, the classic form of schizophrenic delusion, at least in the popular literature, is the one that is paranoid in nature. However, there are many other kinds of possible delusion.

"The individual, for instance, might believe that someone is stealing his or her thoughts. Alternatively, the person might believe that an external agency is broadcasting or inserting thoughts, feelings and impulses into one's consciousness.

"Another category of symptoms concerns various kinds of perceptual disorders. The most striking symptom in this category are hallucinations in which the individual has a sensory experience of some kind in the absence of any environmental stimulus.

"In three-fourths of the cases, this kind of perceptual distortion comes in the form of auditory hallucinations. The individual will report, for example, hearing different voices arguing or commenting about various issues.

"There are other kinds of perceptual distortions as well, besides these more common auditory ones. Some people do have visual hallucinations. Others might experience sensations of burning, electric tingling, or numbness. Still other individuals might feel that insects or snakes are crawling around beneath their skins or in their abdomens.

"Another category of mental disturbance that is used to try to diagnose the presence of schizophrenia involves the phenomenological quality of an individual's awareness or attention. Schizophrenics frequently report that the world seems unreal or colorless or flat.

"In addition, their awareness of the world might have a substantially alien quality to it, in the sense that everything is experienced as being strange and unfamiliar. Or, the individual might experience their engagement of the world in a depersonalized fashion, such that the body seems to go about its business in the world in a mechanical fashion that is devoid of a sense of personhood or identity as an individual.

"A fourth category of symptoms revolves around motor activity. The schizophrenic individual sometimes manifests -- for extended periods of time -- strange facial contortions, or they might exhibit a

complex, peculiar series of movements involving hands, fingers, arms and legs.

"Probably, the most well-known examples of motor disturbance in schizophrenics are catatonic immobility and catatonic agitation. In the former case, the individual tends to be, as the term suggests, immobile and might assume various kinds of unusual and awkward postures that are held for long periods of time.

"In the case of catatonic agitation, the individual tends to be constantly on the go and in a very excited state. In this condition, the individual expends tremendous amounts of energy with little, or no, regard being given to whether an activity is important or unimportant.

"A fifth category of symptoms that plays a role in helping to diagnose the schizophrenic condition involves the character of an individual's affective or emotional engagement of experience. In general, there are two distinguishing features to this affective component in the lives of schizophrenics.

"Various studies, such as the World Health Organization's International Pilot Study of Schizophrenia, have shown that approximately two-thirds of all schizophrenics report or exhibit a virtually total absence or flatness of affect in their daily lives. This flatness might manifest itself as a deep-seated apathy concerning oneself and one's surroundings, or it might show up as an inability or unwillingness to respond to any kind of emotional stimulus from the human beings forming one's environment.

"Individuals showing this kind of affective flatness will often be seen staring vacantly for long periods of time. The muscles of their faces tend to be flaccid or loose and lacking definition, and their eyes are lifeless. If they speak at all, their voices sound toneless, mechanical and devoid of any emotion.

"The other kind of affective disturbance that is prevalent in schizophrenics has to do with the display of affect or emotion that is inappropriate to a given context or situation. The individual might laugh uproariously when sadness or tears might be appropriate, or the person might cry when happiness might be the usual or expected response.

"Much more rarely, one might encounter individuals who display a constant, rapid shifting between, or among, various emotional states. When this does occur, such a symptom often carries a lot of weight with some people in reaching a diagnostic determination of schizophrenia.

"The final category of symptoms that is considered in diagnosing schizophrenics concerns disturbances in the way the individual goes about attending to their various needs of life. These life-functioning skills would include things such as: personal hygiene and grooming; an inclination to make friends and to socialize with other individuals; as well as the capacity to hold a job or to deal with responsibilities in school.

"In my opinion, this last category is somewhat more nebulous, subjective and less helpful than some of the other categories of symptoms that I have mentioned. There are a lot of different kinds of mental disturbance that would entail life-functioning problems very similar to the ones that I have summarized and, therefore, don't necessarily provide a good way to diagnostically identify the nature of the condition with which one is confronted.

"In fact, if one were to rely solely on this last category, then quite a few teenagers would stand an excellent chance of being diagnosed as schizophrenic. On the other hand, when one combines this category with the other five categories of symptoms, then such considerations concerning quality of life-functioning sometimes helps to round out the general clinical picture of schizophrenia."

When I had completed my overview concerning issues of diagnosis and schizophrenia, I smiled rather sheepishly. "You'll have to forgive me Rip," I requested. "Quite frequently, when one asks a professor a question, one ends up having to enroll, even if only informally, in the impromptu classes we professor types tend to launch into at the drop of even the most innocent and simple of questions."

Rip chuckled. "No apologies are necessary," he assured me.

"I was genuinely interested in what you had to say," Rip informed me, "and you provided me with the kind of information that I had been seeking."

"Was there any particular reason for your interest in schizophrenia?" I probed.

Rip looked at me. In fact, he appeared to look deep into me or right through me. I couldn't be sure which -- if either -- might be taking place.

He didn't reply to my question right away. He seemed to be lost in thought.

While waiting for what I believed would be an eventual response to my query, I began to consider various possibilities for his interest. At the top of my list, was an empirical finding that had been known for quite some time.

The highest incidence of schizophrenia is found in the inner-city areas of a metropolitan region. This finding has been confirmed in a number of cross-cultural studies carried out in Norway, the United States, England and Denmark.

In fact, studies have shown that schizophrenia showed up in the lowest socio-economic class at a rate roughly twice that of the incidence of schizophrenia in the next lowest socio-economic class. Moreover, in general, there was a very sharp discontinuity between the rate of schizophrenia in the lowest socio-economic classes and many of the higher socio-economic classes.

There have been several explanatory approaches to this statistic linking schizophrenia and socio-economic class. One approach is known as the social-drift theory, while the other major account is referred to as the sociogenic hypothesis.

According to social-drift theorists, an individual suffering from schizophrenia might start out in a middling or upper socio-economic class. Nevertheless, the traumatic, pervasive and debilitating impact of the condition is such that during the course of the person's lifetime, they gradually, or rapidly, will drift down through the various levels of socio-economic class until they hit rock bottom as homeless, street people in the poorest part of the inner-city.

Those people, on the other hand, who are advocates of a sociogenic hypothesis contend that the numerous impoverished dimensions of life among the lower socio-economic classes are the primary causes of schizophrenia. In other words, various

combinations of poor education, dysfunctional families, poverty, lack of social support services, negative self-image, inadequate nutrition, constant exposure to environmental stressors and pollutants, as well as a relative absence of different kinds of economic, social and educational opportunity, will either cause people to have schizophrenic breaks with so-called normal reality or will grease the skids for such a break in those people who might be genetically predisposed to succumb to such an onslaught of forces.

The available evidence seemed to suggest that both the social-drift theory and the sociogenic hypothesis had a certain degree of validity. Several studies indicated that while the fathers of schizophrenics were more likely to be from the lower socio-economic classes, nonetheless, the schizophrenic children of these fathers tended to end up further down the socio-economic class line.

Thus, on the one hand, empirical data gathered in relation to the socio-economic class of the fathers of schizophrenic children lent support to the sociogenic hypothesis. In other words, this data implicated the impoverished life of lower socio-economic classes as being a major precipitating factor in the emergence of schizophrenic children.

On the other hand, data from these same studies also showed that the schizophrenic children of lower socio-economic class fathers tended to end up worse off than their fathers as far as socio-economic class status was concerned. This finding lent a certain amount of support to the social-drift theories that held that the debilitating nature of this condition of mental disturbance would prevent one from holding jobs or getting an education and, consequently, would result in a drift downward in socio-economic class.

Perhaps, the reason Rip was asking questions about schizophrenia is because the inner-city work of his center -- in accordance with both the sociogenic hypothesis as well as the social-drift theory -- necessarily involved contact with a number of schizophrenic individuals. In fact, since many municipal and regional governments -- in order to cut costs -- merely were removing schizophrenics from therapeutic environments and placing them back into the communities with little more than prescriptions for different kinds of symptom-masking neuroleptic medications, Rip and the center were likely

encountering quite a few more schizophrenics than might have been the case previously.

I became aware that Rip was looking at me. He seemed to be waiting for me to return from my flight of thought.

"I have been reflecting," he began, "on what you were telling me about the various issues surrounding the diagnosis of schizophrenia. I have been intrigued by the parallels between what you have been saying and what is occurring in a quite different context.

"Psychologists, psychiatrists, doctors and other mental health clinicians are very busy these days applying their diagnostic instruments to various individuals who might be suffering from conditions such as schizophrenia. What these professionals might not understand is that they, along with the rest of us, are being examined and observed in accordance with another set of diagnostic instruments by, among others, some of the spiritually intoxicated people about whom I was talking previously."

I started to feel a tightness or tension in my stomach. I had an uneasy feeling I was at the mental/emotional equivalent of the first summit of a roller coaster ride that is poised to plummet down to the bottom of a very steep incline.

Quickly, I adjusted some of the emotional and conceptual safety-cushions that buffered my sense of psychological equilibrium. I wished I had something to grab hold of with my hands. I would have felt a bit more stability, if not comfort, if, in the best tradition of these kinds of experiences, I had been able to latch onto 'whatever' in white-knuckle fashion.

Rip continued on with: "From the perspective of some of those who are spiritually intoxicated, if one were to use diagnostic criteria similar to the ones that you have described, David, many, if not most of us, probably would be diagnosed, at least in spiritual terms, as being quite insane. Let's consider some of the possibilities.

"For instance, in one of your categories of symptoms, you spoke about catatonic immobility and catatonic agitation. Many of us 'normal' types, like our catatonic counterparts, also are locked into patterns of habitual behavior that completely immobilize us as far as pursuing spiritual activity is concerned. Furthermore, like the

schizophrenic who is exhibiting catatonic immobility, many of our so-called 'normal' habitual patterns are bizarre, peculiar, and maintained for long periods of time, and we seem to be frozen into various postures of idiosyncratic or personal significance.

"On the other hand, many of us are caught up in a frenzied sequence of activities in which an enormous amount of energy is expended with little consideration given to the difference between what is, spiritually speaking, important and unimportant. We rush about our lives, going from school, to jobs, to meals, to career, to marriage, to family, to houses, to possessions, to entertainment, to hobbies, to vacations and back again with, quite frequently, only the most fleeting energy, if any at all, being expended on spiritual needs.

"From the vantage point of the spiritually intoxicated, many of us have lives filled with complex, peculiar, strange sequences of movements involving our fingers, hands, and limbs that really serve no spiritual purpose whatsoever. I'm sure our motor activity must look as strange to the spiritually intoxicated as the motor activities of a schizophrenic looks to us.

"Another category of symptoms that you described concerned affect or emotion. If I remember correctly, you indicated that flat affect and inappropriate affect were the two major emotional indicators for diagnosing the potential presence of schizophrenia."

I nodded my head in confirmation of his recollection. I wondered if any of the people coming and leaving had just begun, or just completed, respectively, their clinical assessment of my spiritual condition.

Rip said, "Compared to the joy, ecstasy and sense of connection with the entire realm of Being that a spiritually intoxicated person experiences, most of the rest of us go about our lives as if we were schizophrenics. Like them, we spend inordinate amounts of time staring vacantly into space. Like schizophrenics, our eyes often have a gaunt, lifeless quality to them.

"Along with our schizophrenic brothers and sisters, we tend to exhibit a profound apathy toward a vast spectrum of stimuli. The stimuli to which schizophrenics are non-responsive are only sensory in character. However, the rest of us are non-responsive to the

spiritual stimuli that Divinity is conferring on us every second of our lives.

"In addition, we often laugh uproariously amidst the horror, suffering, oppression and injustice that exist in the world. On the other hand, we cry grievously and throw kicking- and screaming-tantrums when someone comes along and tries to help us stop doing all the things that are generating the horror, suffering, oppression and injustice that we seem to find so amusing.

"Like schizophrenics, our emotional or affective priorities seem to be inverted. We laugh when we ought to cry, and we cry when we have reason to be happy.

"David, you also mentioned a category of symptoms that revolved around the character of the phenomenological quality of a schizophrenic's experience of, or way of attending to, the world. For example, you spoke about themes concerning the unreal, depersonalized, colorless and alien nature of that experience.

"From the perspective of a spiritually intoxicated individual, the experience of a non-spiritually intoxicated person cannot help but be seen as being unreal, depersonalized, colorless and alien in nature. When an individual is alienated from his or her essential nature, when a person is estranged from a fundamental sense of connectedness with all of creation, when one is absent from one's true spiritual identity and, therefore, exists in a condition of depersonalization, when we have permitted our awareness to be veiled and reduced to a colorless reflection of the true, vibrant reality of things, then do we not share a great deal in common with the various kinds of deficit present in the phenomenological quality of a schizophrenic's manner of engaging experience?"

Apparently, my state -- was it a symptom of spiritual schizophrenic stupor? -- did not permit me to respond. I agreed with him, but I gave no visible acknowledgment of my internal, affirmative response to what was, under the circumstances, pretty much of a rhetorical question.

"Disorders of perception," Rip continued, "were another category of symptoms to which you made reference, David. Among other things,

these impairments of perception were said to involve hallucinations of both an auditory and visual nature.

"From the perspective of those who are spiritually intoxicated, most of us suffer from a disorder that is sort of the inverse of the perceptual problem experienced by schizophrenics. More specifically, schizophrenics tend to see or hear things for which there is no corresponding external stimulus. In our condition of spiritual psychosis, however, we tend to not see and hear realities that are present.

"The people of spiritual intoxication are responding to spiritual stimuli that are within, and around, us all the time. Yet, because we suffer from a condition of spiritual schizophrenia, we have become blind and deaf to the presence of these realities.

"We call the spiritually intoxicated crazy because we do not see or hear what they see and hear. We, however, are the ones with the perceptual disorder."

"Another category of symptoms mentioned by you, David, concerned disturbances with respect to both the content of thinking, as well as in relation to the structure or form of a person's thinking. There were," he indicated, "two types of problems with thought content that you said might be interpreted as providing evidence for diagnosing the presence of schizophrenia in an individual.

"One of these difficulties involved the lack of insight exhibited by schizophrenics with respect to the pathological nature of their condition. The other type of problem revolved around the delusional character of the content of schizophrenic thought processes.

"As far as the schizophrenic symptom of a profound lack of insight is concerned, those who understand reality from the perspective of spiritual intoxication could easily maintain that such a deep lack of insight is precisely the character of the disturbance that exists in most of our thinking concerning the nature of our own spiritual condition. No matter how extensive and pervasive evidence to the contrary might be, most of us seem to persist in believing there is nothing wrong with us or our spiritual behavior, and we have little, or no, appreciation of the seriousness of the spiritual pathology that besets our being.

"Many of us also suffer from various kinds of disturbances or disorders in the content of our thought processes. In fact, for those who live the experience of spiritual intoxication, much of the religious and spiritual pronouncements, theories, beliefs and philosophies of those who have never had such an experience are, by and large, delusional in character.

"People try to impose their systems of thought onto reality even though there might be all kinds of data or facts indicating that the former is not consonant with the latter. Yet, isn't this what schizophrenics try to do? Isn't this the essence of delusional thinking?

"Furthermore," Rip added, without waiting for an answer, "a great deal of our delusional thinking is quite paranoid in nature. We always seem to be suspicious of other people, or we seem to like to busy ourselves with thinking the worst of the intentions and motivations of other people. As a result, we often end up accusing them of entering into all kinds of plots and conspiracies against us.

"These disturbances in thought content are prevalent in the way we think about people from other races and religions, or about individuals of ethnicity and nationality that are different from our own. Even more unbelievably, however, such disordered thinking is reflected in the paranoid way we, all too frequently, treat members of our own families.

"Many of us also harbor these dark suspicions in relation to God. We often feel quite justified in hurling all manner of absurd paranoid, accusatory delusions in God's direction.

"The other kind of thought disturbance you mentioned encompassed issues of form or structure. If I have understood what you said, David, this sort of problem or disturbance has to do with the incoherent, unconnected, scattered flights of thinking sometimes exhibited by schizophrenics.

"Just as schizophrenics do not seem to be able to focus or concentrate and, therefore, tend to drift or jump from one topic to another, so too, many of us are incapable of maintaining spiritual focus. In fact, most of us are so challenged in this regard, a Zen master once likened the quality of our thinking processes to what one might expect from a barrel full of drunken monkeys.

"Furthermore, many of us engage in something very similar to the neologisms invented by schizophrenics. However, instead of inventing new words, like the schizophrenic, that have meaning for her or him but for no one else, most of the rest of us invest many of the words of everyday conversation with ideas that make sense to us but often do not make sense to those with whom we are speaking.

"We might use a common vocabulary, but many of us tend to give quite different interpretive connotations and denotations to the words we speak and hear. This is especially true in the realms of religion and spirituality."

As Rip was talking about neologisms, schizophrenics and the rest of us, I thought briefly about the world of academia and its penchant for neologisms. Perhaps, our inclination to introduce new words, or to give old words new meanings, was symptomatic of an underlying pathology rather than an expression of a creative component of communication.

On the one hand, I felt the idea might form the seed for a journal article. On the other hand, wanting to write a paper about the academic pathology in which I was immersed made me feel like a man who is in the process of being hanged and decides to busy himself in his last minutes of life with helping the hangman -- in this case, Rip -- to tighten and adjust the rope.

"Finally, David, we come to the category of symptoms dealing with impairments in the life-functioning of an individual. Just as schizophrenics are said to have few social skills, friends or intimates, so too, from the perspective of the spiritually intoxicated, many of the rest of us have few, if any, real spiritual skills, friends or intimates.

"Like schizophrenics, but in accordance with our own manner of psychosis, we tend to lead spiritually isolated and secluded lives. Many of us actively avoid the company of spiritual people due to a variety of irrational fears.

"Like schizophrenics, we tend to give only cursory attention to personal hygiene and grooming. The only real difference is that in the case of schizophrenics, this problem concerns their inattentiveness to their physical appearance, whereas for many of the rest of us, the issue is a matter of our lack of attentiveness to our spiritual appearance and

the underlying need for a concern about processes of internal cleansing and spiritual orderliness and being presentable.

"Moreover, like schizophrenics, many of us encounter spiritual counterparts to impairments in life-functioning abilities such as keeping a job or concentrating in school. In the realm of spirituality, the form that this impairment might assume could involve difficulty in committing ourselves to the work that is entailed by observing a regular, day-by-day set of spiritual practices. In addition, many of us might experience trouble concentrating on, and learning about, a given spiritual curriculum.

"Last, but not least, is the time factor that you mentioned in passing, David, at the beginning of your outline on some of the factors involved in diagnosing schizophrenia. You indicated, I believe, that symptoms had to persist for at least six months before one could begin to consider schizophrenia as a possible diagnosis in any given case."

"That is correct," I confirmed. I wasn't sure if -- from the perspective of the spiritually intoxicated -- my voice sounded flat, toneless and mechanical.

"For most of us," Rip pointed out, "the symptoms of our spiritual schizophrenia have persisted throughout our entire lives. And, in view of what you said, David, about the poor prognosis for those who experience an early onset of the symptoms of schizophrenia, if the same holds true for the spiritual counterpart I have been discussing, then a lot of us have a tough row to hoe."

"We could," I observed, "always hope for spontaneous remission of our condition."

Rip's face brightened with a smile. "Yes," he said, "Divine intervention is like that."

Apparently, Rip had come to the end of his reflections. He had become silent and, seemingly, introspective.

I filled up the silence with the noise of my own thoughts. I started to speculate about how one might work various sociogenic theories as well as the social-drift hypothesis into the context of a discussion about spiritual schizophrenia.

Chapter 10: The Construction of Reality

Cardinal Law -- lately of the archdiocese of Boston but, now, having been forced to resign in disgrace from that position -- is a sign, for all of us. He knew about the molestation and sexual improprieties going on, and, yet, for decades, he continued to put parishioners in harm's way, without, apparently, even trying to take effective steps to bring the tragedy to an end ... both in relation to the abused as well as with respect to the abusers. He just kept moving the perpetrators around without telling people about the evil that was being parachuted into their communities and without appropriate safeguards being put into place to ensure that parish children would not be placed in harm's way.

Even in those cases where someone has had the courage to speak up and seek to address such situations --whether administratively, legally, or in other ways -- there are many obstacles to overcome, along with an array of daunting biases with which to struggle. For example, there have been a variety of instances reported where some parishioners were angry that action was being taken against this or that abusive priest because, well, it was upsetting to those parishioners. Apparently, the entire matter was quite inconvenient for the latter individuals because of the way the exposé brought doubt, uncertainty and anxiety into their lives, as well as the manner in which it disrupted the life of the parish.

In addition, the issue was just so embarrassing for everyone. The situation undermined the peace of mind of these parishioners. Wasn't anyone concerned about the opportunity that such a public washing of dirty linen gave to those seeking to point accusing fingers at Catholics?

Consequently, oftentimes, anger, resentment, hostility, and vilification, would be directed toward those who had been abused. Surely, the latter individuals were lying, and/or seeking publicity, and/or were trouble-makers, and/or wanted to make money, and/or were angry about their own misery or lack of worldly success and were merely trying to shift responsibility for their own short-comings to others, and/or such people were crazy, and/or were alcoholics, drug addicts, people of low moral character, sexual degenerates, and/or social activists agitating to advance their own dubious agenda, and/or people who, for some irrational reason, harbored resentments

with respect to hard-working, spiritual men, or against religion, or toward God.

The abused should have kept their mouth shut. They should have gone about things quietly. They should have thought about the ramifications for others instead of being so damn self-centered and self-absorbed. They should have turned the other cheek. They should have remembered the beam in their own eye rather than whine about the mote in the eyes of others. They should have followed the advice about letting him who is without sin cast the first stone. They should have abided by the decision of those who are in authority and who know much more about spirituality than the abused. They should have left it to God and just got on with their lives.

One of the most gut-wrenching, emotionally draining, and spiritually depressing dimensions of circumstances involving spiritual abuse -- of whatever variety -- is that almost everyone has a vested interest that they wish to protect and, for such reasons, they really don't want to hear what an abused person might have to say. Whenever abused people try to bring their abuse to the attention of others -- even family and friends -- the people who have been abused tend to be met with all manner of: disbelief, anger, hostility, fear, hatred, resentment, suspicion, ridicule, character attacks, shunning, attempts to censor or discredit, as well as campaigns of threats, intimidation, and more.

In the process, the abused get exposed to more abuse. As a result, the abused feel even more alienated, depressed, rejected, and alone than they do already.

Many people want silence to be maintained about such issues, because they don't want to be put in a position where they have to choose and make a moral stand that conflicts with what they perceive to be their vested interests in the matter. Before the abused person came along and began blabbing, those in whom the abused person tried to confide (and, initially, such people often are members of the same group), had -- or, so the latter supposed -- purpose, peace, meaning, identity, community, knowledge, position, status, understanding, happiness, stability, methodology, faith, certitude, trust, a guide, and so on.

These people don't want anything upsetting their spiritual and existential applecart. If one were to listen, with care and consideration, to the events and issues that an abused person is trying to relate, then one might have to begin questioning the validity and truth of everything of importance in one's life. After all, if the integrity of a teacher, priest, minister, educator, or politician is being called into serious question, one might no longer be certain with respect to how to go about distinguishing between truth and falsehood -- given that the spiritual compass one has relied on, for some time, is none other than the very person or persons whose virtue and moral character are being called into question.

Someone once e-mailed a certain internet Sufi discussion group and made an announcement about the existence of a Sufi Spiritual Abuse Recovery Assistance Group that had been created and was accessible to anyone who might feel the need of interacting with other individuals in order to learn more about such issues. The notice concerning the aforementioned spiritual abuse group was made in the other Sufi group, but there was an editorial comment attached to the posting.

In effect, the added comment went something like the following: if you have a question, go to your spiritual guide; if you have a problem, go to your spiritual guide; if you have doubts, go to your spiritual guide; if your faith feels vulnerable, go to your spiritual guide. The person who added this editorial comment to the notice about a spiritual abuse group just doesn't get it.

How can one go the spiritual guide if that person is at the very epicenter of all one's questions, problems, doubts, and uncertainties? To be sure, while pursuing a spiritual path, all seekers are likely to encounter the whisperings and the machinations of the ego. Such forces will seek to undermine the resolve of anyone who steps onto the mystical path, and one of the techniques used by such forces in order to accomplish this is by going to work on weakening an initiate's relationship with the spiritual guide through the raising of certain kinds of doubts, questions, and so on in relation to the teacher.

However, the sexual exploitation of a spiritual seeker by an alleged spiritual guide is not an instance of such whisperings and machinations. Furthermore, the use of lies, deceit, duplicity,

manipulation, force, fear, intimidation, and authoritarian impositions in order to control how people think, feel, and behave is not a function of such whisperings and manipulation either.

Yet, so-called spiritual guides who are well-versed in various techniques of undue influence are so clever and subtle in the way they spin their webs that one is often left wondering whether one is actually witnessing what one feels one is witnessing. Even veteran politicians of the most corrupt kind would have a great deal to learn about how to spin and re-frame things in order to be able to keep people off-balance and puzzled about the actual nature of what is going on.

Because of the foregoing possibilities, abused people who are disclosing their experiences are often seeking consensual validation from other people who are involved in the same group situation. They want to be told that what is going on is not in their imagination, or that what is going on shouldn't be going on, and that the tales one is being told by the alleged spiritual guide are just a means of misdirection to take attention away from the actual character of the abusive behavior.

Yet, when an abused begins to speak out, people often do not listen. Damn the abused for opening his or her mouth and raising such terrible issues. Damn the abused for caring and wanting to warn people about someone -- the teacher -- who is actively harming those who are staking their whole lives on the veracity and alleged spirituality of such an individual. Damn the abused for making one feel so vulnerable and confused. Damn the abused for inducing one to question one's own motives and the intention of the so-called guide. Damn the abused for throwing into doubt one's assumed place in Paradise. Damn the abused for waking one from spiritual slumber. Damn the abused for undermining one's sense of being among the spiritual elite and chosen. Damn the abused for introducing factual evidence that indicates that people are being conned, swindled, cheated, lied to, manipulated, misinformed, and turned into obedient servants of evil. Damn the abused for making people feel like fools because they have turned over the keys to their hearts, minds, finances, talents, time, resources, and lives to a spiritual fraud. Damn the abused for raising the possibility that one has been wasting x-years of one's life.

The process that one goes through when one attempts to warn people about a spiritually abusive individual who professes to be a spiritual teacher is a very instructive one. It has taught me a great deal about myself and other people ... people whom I thought were my friends and people whom I thought cared about me or even loved me ... people whom I have lived with ... people whom I believed trusted me ... people who have known me for years and who have never known me to lie and who have sought out my assistance and counsel in many matters across the years ... people whom I would never have believed would have been capable of lying, manipulation, and deceit with respect to their interaction with me ... people who were willing to abandon relationships -- which had seen us sail many stormy seas together -- without losing a moment's sleep over it ... people who were willing to believe lies about me simply because someone they trusted (but shouldn't have) told them that the lies were true (just as Joseph Goebbels, the Nazi Minister of Propaganda, had taught his staff to do) and without them giving any consideration to such trifling details such as the truth of the matter concerning me, or the giving of evidence, or verification of such allegations.

Many of us are largely unaware of just how powerful some of the psychological and social forces are that manifest themselves in group dynamics or in the context of a teacher-student relationship. Or, perhaps, a more accurate way of saying this is that many of us have some awareness of these sort of forces but believe the latter are not all that powerful or apply to others, for the most part, and not us.

When someone carries the label of spiritual teacher, or guide, or leader, many people automatically will consider whatever such individuals say as being: without question; authoritative; true; sincere; based on acquired knowledge of a deep kind; expressions of Divine wisdom, and so on. This is so even though we might not be able to verify one thing the alleged teacher or leader says.

Degrees of freedom are automatically awarded to such individuals by many individuals such that whatever theses so-called spiritual guides or leaders say and do is assumed to be a manifestation of mystical, professional, secret, spiritual insight and understanding that has been gifted to them across many years of ascetic practices or work ... even though we might have never seen them perform any of these

austerities and even though we are not privy to the precise nature of their relationship with Divinity. These same degrees of freedom are not likely to be extended to someone we meet on the street or even someone who is a friend if either of the latter were to begin espousing this or that kind of spiritual treatise.

There is a phenomenon in social psychology that is known as the 'halo effect'. This effect gives expression to the tendency within many of us that when we find people to be physically attractive, quite a few of tend to be willing to assign other positive qualities to those people as well ... irrespective of what the truth of the matter might be. Similarly, if we consider people to be physically unattractive, then many of us often are inclined to assign other negative qualities to those people quite independently of the realities of such situations.

When someone is called a spiritual teacher -- and the person is charming, charismatic, interesting, fun to be with, or plays a musical instrument, and the like -- the very fact of the 'teacher-label' -- together with whatever quality is displayed by the teacher that we, personally, find to be appealing and attractive in that teacher -- then, these two factors are enough, quite frequently, to induce many people to assume (without verification) that such a person has many other positive qualities as well. In other words, we are dealing with a slight variation on the 'halo effect' outlined above.

No one really knows why there is this tendency in human beings. I'm only concerned, at the moment, with the fact that such a phenomenon does exist.

The presence of the 'halo effect' tends to induce us to lower our defenses and render us more receptive to whatever an alleged spiritual guide, minister, or leader has to say, and this tends to make us more vulnerable to whatever sorts of influence might be manifested through such an individual.

There is a reason why advertising often features sexually attractive men and women. Both sex appeal, as well as attractiveness, help generate a powerful halo effect that can shape how people think and feel about products and issues -- there are also other themes involving modeling and learning theory that are applicable here, but, for the moment, the focus is on the way the presence of the 'halo effect' can affect our judgment and perceptions of reality.

To go in a slightly different but not unconnected direction, Henry Kissinger once said words to the effect that the greatest aphrodisiac was power. What greater power could there be than to be in the presence of a 'friend of God' or a person of immense political power? To be close to such an individual is heady stuff. Furthermore, to have such an individual know our name and to take an apparent interest in us and our lives and to be willing to help one, is often quite intoxicating and exhilarating.

This is another kind of halo effect at work. If one is in close proximity to a 'friend' of God, then perhaps, one is chosen and special just like this alleged Divine emissary is. One basks in the glow of juxtaposition, and one feels (or hopes or anticipates) that some of the assumed qualities of God's agent might belong -- in some lesser fashion of course, to oneself -- as well ... even though there might be little, or no, evidence to support the reality of such beliefs.

Quite a few years ago, Robert Rosenthal wrote about a phenomenon that he dubbed the 'Pygmalion Effect'. To make a long study short, he found he could alter the degree of academic success among randomly selected students merely by getting teachers to believe that such students possessed certain kinds of intellectual potential. By altering the expectations of teachers, he was able to show that these altered expectations led to significantly better academic performance in those students who had been randomly selected and labeled as students who were ready for academic success as compared with other children for whom such expectations had not been indicated to the teachers. Teachers began to pay more attention to the 'designated' students and extend assistance to them ... assistance that previously was not being extended to those students. The teachers began to be more receptive to what these individuals said and did ... now 'seeing' intelligence and ability where, before, the teachers had 'seen' not much of anything.

If reality is 'framed' in certain ways (whether by a clever psychologist, experimenter, sales person, politician, leader, or an alleged spiritual guide), we tend to develop beliefs and expectations in accordance with the nature of the framing process. In school settings, this can lead to academic success or failure among students (because there is also a 'negative' Pygmalion Effect with which all too many

students are familiar) according to the expectations that teachers have of such students ... and in spiritual circles, as well, the 'Pygmalion effect' can lead to our having various expectations about the spiritual abilities and qualities of an alleged teacher, once someone -- whether the teacher, a friend, a book, or a follower -- introduces the idea that such an individual is a spiritual guide, teacher, guru, among the elect, or whatever.

None of this necessarily has anything to do with the actual ability or quality of this alleged spiritual guide, leader, politician, or the like. Everything might be just a function of our expectations and how these expectations alter our perception of reality as well as how we interpret the nature of our interaction with others ... in this case, a so-called spiritual guide.

We meet someone who is called a spiritual guide, and immediately, many of us might begin to see, imagine, feel, think, and believe things that might have little to do with the on-going reality. We might read into events and construct our world view according to the manner in which our expectations create certain images in our minds and hearts. We might filter reality through such expectations and often tend to disregard whatever experiential evidence there is that is inconsistent with those sorts of expectation.

A fraudulent spiritual teacher might do various things to cultivate our expectations as well. One such individual whom I have met used to repeatedly say: "I never lie", or, "I never use people", or, "I am always sincere", or, "I never interfere in marriages", and, consequently, when people around him encountered evidence that contradicted what he claimed, and because they believed him to be a spiritual teacher -- that, thereby, afforded the so-called 'guide' quite a few degrees of latitude of good will -- they re-framed or reinterpreted the evidence to make it consistent with the mantra that he kept repeating ... well, after all, since by his own account, this 'man of God' never lies, or never uses people, and is always sincere, then 'obviously', what is going on must be something else -- something that, because of the mysterious nature of mysticism, we just don't understand. In this way, many false spiritual guides are able to hide in plain sight, because we, ourselves, help to maintain that individual's camouflage.

Solomon Asch, a social psychologist, devised an experiment in 1951 that examined the way individual perception might be affected by other people. In simplified form, the study posed a task that, ostensibly, required subjects to judge which of three lines on one card matched a single line on another card.

Subjects were placed in a group setting, and unknown to the subject, the other people in the group were all confederates of the experimenter. Each person in the group was required to make a 'judgment' about which of three lines on card placed near the right side of the person was equal in length to a single line appearing on a card placed near the person's left side.

One of the variables studied was the effect that a subject's placement in the group of confederates had upon a subject's response. In other words, the researchers wanted to know if a subject's judgment, with respect to the assigned perceptual task, would vary with where in the group sequence a subject was asked to respond to that task.

When confederates selected a pairing that was clearly in error (that is, the line selected from among the three on one card did not match the single line on the other card, and the error was very obvious), the experimenters found that about a third of the subjects went along with the erroneous judgment of the confederates when the subjects were required to respond last in an experimental group. Furthermore, the more confederates there were in such a group who were asked to give a judgment before the subject gave his or her response, the more pronounced the influence of the group was on the judgment of a subject in cases where the confederates were clearly wrong in their 'judgments'.

The explanations that some of the subjects gave -- when debriefed after the experiment as to why they went along with the erroneous group judgment -- are very instructive. Some of the subjects, when confronted with a group judgment that differed from their own, assumed that the group's judgment must be correct and their own perceptions must be wrong.

Some other subjects knew that the group was wrong in its judgment, but, nevertheless, they went along with the group because they didn't wish to be considered different from the group. Still other

subjects claimed that they saw the mismatched pair as being equivalent despite the obvious difference in length.

Now, someone might look at the Asch experiment and say: “Big deal -- so what if a few people were dumb enough to permit their judgment and behavior to be affected by what others in a group said or did. Surely, to discover that a third of the subjects tested were susceptible to being manipulated is not all that significant.”

The Asch experiment was intentionally designed in a very simple way. It focused on a perceptual task where there could be little doubt that the judgment of the other people in the group (the confederates) was erroneous, and, yet nonetheless, a certain percentage of subjects went along with that incorrect judgment, and some of the subjects even swore up and down that they ‘saw’ the two lines as being equal when such was, very clearly, not the case.

What if we were to take a context that did not involve a simple, visual stimulus ... a situation where the issues were more complex, iffy, ambiguous, muddled, and open to a variety of interpretations? Isn’t it likely that the percentage of people whose judgments might be affected by what others in a group said and did might rise significantly -- especially if those other ‘confederates’ were all saying very similar things to one another?

One tends to feel very uncomfortable when one goes in a direction that is not consonant with the position of a group of individuals with whom one is friendly or associating. This tends to create stress, anxiety, alienation, and anomie in the one who is in opposition to the group norms.

We are creatures of consensual validation. We often seek out the opinion of others to shore up our own confidence about what we see, hear, feel, believe, think, and do. Furthermore, in the absence of agreement about such matters, we tend to get nervous and uncomfortable, filled with existential angst about our status, vis-à-vis reality and the truth.

If one translates the foregoing considerations into spiritual group dynamics, one is likely to experience a great deal of dissonance when one tries to tell others that one believes the alleged teacher is perpetrating various kinds of spiritual abuse. More often than not, one

will be met with considerable disbelief and anger toward oneself on the part of those in whom one confides or with whom one seeks to engage in discussion. More often than not, the abused person is perceived to be the problem, not the so-called teacher, and because of experiments like Asch's, one begins to understand that there are powerful forces at work... forces that can make an abused person wonder if the whole thing is just in her or his mind ... just a figment of their paranoid imagination ... and forces that can cause others who are listening to one's 'story' to shift, sometimes very rapidly, between believing and not believing what is being said.

Elizabeth Loftus, who is a professor of psychology as well as associated with the Law School, at the University of Washington, has been studying the relationship among imagination, memory, perception, and belief for a number of years. Her work in the area of false memory syndrome, together with the many problems surrounding the reliability of eye-witness testimony has shed a great deal of light on these processes.

Among the many things that Professor Loftus has demonstrated is how many of us have a tendency, under different circumstances, to construct reality based on the kinds of information or misinformation we are given by others ... information that frames the way we remember and perceive events. This distortion of remembered events, or the generation of false autobiographical beliefs (that is, beliefs which are not actually reflective of our past experience), or the confabulation (the interjection of imagined happenings to create a seemingly consistent story line concerning some event we have experienced) are all psychological processes that occur, from time to time, under a variety of settings, in many, if not most, of us. We might not even be aware that such processes are happening as we do it or as we are asked questions about our past or about on-going events.

The moral of the foregoing points is not that our understanding of reality or our grasp of the truth are total fabrications. At the same time, in the light of the sort of phenomena being studied by Professor Loftus, we should not be so quick to suppose that our understanding is accurately reflective of the truth of things either. There are many forces and factors that can alter and influence how we experience and interpret the events of life.

In very important ways, we construct worlds within our consciousness and project these onto the reality of things, treating the former as if they were the latter, and conflating the two. Disentangling the two is not an easy or straightforward process.

When someone claims to be a spiritual master, this claim might, or might not, be true. But, it is a claim that should not be accepted at face value because there are just too many ways in which we are vulnerable to having our perceptions, beliefs, understandings, and judgments concerning the nature of reality or truth altered and influenced in distorted, misleading, false directions.

Yet, many people -- unaware of the foregoing possibilities -- might insist that they 'know' that a given person is an authentic teacher, not realizing how their (i.e., the 'seekers') understandings have been shaped, colored, and framed by the use of a variety of psychological techniques and social forces. Under such circumstances, many of these people are unwilling to even consider or look at evidence that might contradict their constructed versions of reality concerning questions about the actual authenticity of a given, alleged spiritual guide or the legitimacy of a specific spiritual path. Moreover, many of these individuals might become quite hostile and mean when anyone approaches them with such evidence.

Attitudes and beliefs, once formed, are very resistant to change. We would like to claim that we are rational beings who are willing to examine evidence objectively through the use of logic and impartial, methodical analysis, but, unfortunately, when push comes to shove and we are faced with a choice of having, on the one hand, to change our attitudes and beliefs or, on the other hand, needing to reject evidence, many of us would prefer to ignore, hide, and re-frame evidence than we would be inclined to alter our precious attitudes and beliefs.

Back in the 1960s, Stanley Milgram, who was at Yale at the time, did a series of studies concerning obedience and compliance. The results are rather sobering and disturbing.

A newspaper ad is run in a New Haven newspaper that offers \$4.50 in exchange for an hour's time of anyone who signed up for the experiment. The ad indicated the study is about memory and learning.

The people who respond to the ad are just average human beings who like the idea of participating in an interesting investigation at a prestigious university. These individuals are introduced to a person who is dressed in a white coat and looks like a scientist or academician and appears to be very serious about the project.

In addition, the people who have responded to the ad are introduced to a friendly, affable, fellow participant in the study. The individual conducting the project indicates that the study is designed to focus on the possible effects that punishment has in relation to learning.

One of the participants is to be a teacher, and one of the two individuals is to be a student. Lots are drawn in order to assign the student and teacher roles.

Once these roles have been assigned, the two participants are taken into a second room by the individual conducting the study. The person who has been identified as the student, through the drawing of lots, is strapped into a chair.

An electrode, to which a conductive gel has been applied, is attached to the student's arm. The person running the experiment explains that the electrode is connected to a generator in the other room that, when certain switches are thrown, is capable of delivering an electric shock to the student.

The purpose of the electric shocks is to punish the student for incorrect responses to the test items that are presented to the would-be learner. Naturally, the question is raised about whether, or not, the shocks are capable of doing any permanent damage. The participants are told that although the shocks can be quite painful, no tissue damage will occur.

The 'student' is left in one room strapped to a chair, and the 'teacher' is taken into an adjoining room containing the shock generator. The machine has a console with 30 switches and each of the toggles is labeled with a different voltage ... running from 15 volts up to 450 volts.

Furthermore, each of the switches also has a label associated with it that indicates the degree of severity for that given level of

shock/punishment. These labels range from mild to dangerous, and the 29th and 30th switches have an XXX label next to them.

The learning task is described as a paired association task in which the teacher recites a word, and the student must give an appropriate word of association for the original word. Shocks are to be administered by the teacher whenever the learner gives an incorrect response, and, moreover, for each incorrect response on the part of the student, the learner is not only given a shock, but afterwards, the level of shock is increased by 15 volts that is to be delivered by throwing another, 'higher-level' switch among the graduated set of 30 switches whenever the next incorrect response is given for a subsequent word pair.

Before the experiment begins, the 'teacher' is given a 15 volt shock in order to both test the machine -- to be sure that it is functioning properly-- as well as to give the teacher a taste of what the punishment feels like at the very lowest level of shock. The shock is sufficient to make the arm of the 'teacher' tingle.

Once the experiment begins, the first several word pairings go easily and without any need of punishment. Eventually, however, a mistake is made by the learner, and a shock is administered.

In due time, the student is making quite a few errors. With each mistake, the level of voltage applied to the learner becomes higher and higher.

When the voltage of the shock reaches 75 volts, the teacher can hear an audible grunt from the student through the wall that separates the teacher from the learner. Similar sounds are heard when shocks of 90 and 105 volts are administered during subsequent punishment for incorrect responses.

When the level of shock reaches 120 volts, the student indicates clearly that the punishment is becoming very painful. When the shock reaches 150 volts, the learner yells out that he or she wants to be released and doesn't want to continue on with the experiment. The nature of such protests and exclamations of pain become more intense as the level of voltage is increased.

If a teacher should express reservations or anxieties about what is going on or about what she or he is hearing, the experimenter will

simply indicate to the teacher that: the study needs to be completed, or that the learner is being paid for his or her participation, or that the teacher must continue and cannot stop. These instructions are given in a detached manner.

As the shocks proceed past 150 volts, the remonstrations of the learner become more and more agonizing. At a certain point, the learner yells the pain is unbearable.

When the 20th switch is reached (300 volts), frantic pounding is heard on the wall behind that the learner is strapped in, and the student begs to be freed from the chair and to be let out of the room. After the 22nd switch has been thrown (330 volts), there are no further sounds emanating from the room in which the learner is situated.

The teacher is informed that silence on the part of the learner is to be interpreted as an incorrect response. With each lack of response to the next word pair, a shock is delivered and, as well, the level of shock continues to be increased by 15 volts, in anticipation of the next incorrect answer – or silence -- by the learner. Once the 30th switch has been thrown, the experiment is over.

Now, before continuing on, I should point out that, in fact, no shocks were ever administered to the 'dim-witted' learners. In fact, the learner was a confederate in the experiment who was playing a role, and everything had been pre-arranged so that the only actual subjects in the experiment were the people who had responded to the newspaper advertisement and became the 'teacher'.

Independently of the experimental set-up, psychologists and university students were asked to estimate the level of shock at which they -- if they had been assigned the role of teacher -- would discontinue participating in the experiment. On average, the psychologists who were polled said that if they had been the teacher, they would have dropped out when the level of shock reached 120 volts. The university students who were asked the same question indicated that, on average, they would have stopped at 135 volts.

150 volts is the point at which the learners invariably began to complain about the pain they feel from the shocks being administered.

No one among either the psychologists or the university students who were polled indicated that they would have tossed all 30 switches.

When asked to predict what other 'teachers' might have done in such an experiment, the university students suggested that, on average, only 1/10th of one per cent of the teachers would go through all 30 levels of shock. The psychologists predicted that 4/10ths of one per cent of the subjects would run through the full complement of switches.

No one was prepared for what actually took place. Over 60 per cent of the subjects in the experiment -- the ones who were the 'teachers' -- went through the full complement of 30 switches.

Many of these subjects were in obvious emotional distress and agony as they did so. Many of them struggled with the moral issue of what was going on ... that is, having to choose between whether to harm another human being or to continue to comply with the directives of the experimenter.

Many of the subjects stopped numerous times, only to be prodded back into action again by the detached, emotionless urging of the experimenter that the study needed to be completed or that the subject really had no choice but to go on as instructed. Many of the subjects broke down in tears or exhibited signs of anxiety, frustration, trembling, intense conflict, uncontrollable laughter, and indecision, but in the end, over 60 per cent of these 'average' people kept upping the level of what they believed were extremely painful shocks until those individuals ran out of switches to throw.

The same experiment was run in a number of other countries. The number of subjects in these other countries who threw all 30 switches never went below 60 per cent. Furthermore, in some countries, this percentage was even higher than in the United States ... reaching 85 per cent of the participants in one country.

In some of the other variants on this experiment, the researchers wanted to study what effect, if any, the teacher's proximity to the learner might have in relation to how far a subject would be willing to comply with the experimenter's wishes. In some of these instances, the researchers required the 'teacher' to hold down the hand of the 'learner' on the plate that, supposedly, was delivering shocks. The

experimenters found that such a requirement did not appreciably affect the percentage of people who, if necessary, were prepared to see the experiment through across all 30 switches.

In all of the different variants of the experiment, the subjects were asked, after the experiment had been completed, to indicate -- on a scale of 1 to 14 (with 14 being the most severe) -- how painful they believed the shocks were. Most of them responded with '14', so they were aware of the pain that was being caused.

One of the reasons for going into such detail in relation to Milgram's research is to help illustrate a certain dimension of the forces that are at work in many of us when it comes to our willingness to comply and be obedient to someone whom we consider to be an expert, or knowledgeable, or whom we perceive to be in authority ... even when we have serious misgivings about what we are being told or about what we see going on. All too many people are prepared to behave in callous, hurtful, irrational ways as long as there is someone to whom they can defer -- like a spiritual guide or political leader -- telling one that it is all right to proceed, even though people (including the seeker) might be damaged in the process. Moreover, for many of us, when our vested interests are being threatened, then truth, morality, integrity, decency, and justice frequently become the first casualties.

The subjects in the Milgram experiment were told that although the shocks that might be delivered to a learner could be very painful, no serious or permanent tissue damage would result. Presumably, this assurance might have played a role in helping to comfort or buffer the subjects such that although they believed the shocks that were being administered were painful, nevertheless, no permanent damage would result.

In view of this possibility, perhaps, it should not be surprising if 'seekers', who are troubled by what is going on within a supposedly mystical/spiritual group, often tend to find comfort in the words of an alleged spiritual guide who says that what he or she (that is, the so-called guide) is doing is necessary for the spiritual good of the people in the group ... or that even though while -- on a mundane, worldly level -- that which 'appears' to be going on might seem deceitful or a lie or manipulative or duplicitous or authoritarian or exploitive or

controlling that, nonetheless, the alleged spiritual guide knows what she or he is doing, and, therefore, no permanent damage will result -- only good will ensue.

In light of the Milgram studies, one should not be surprised when average, non-psychotic individuals are willing to participate in 'Divine trickery' that is designed, so the false teacher says, to help separate seekers from their normal modes of consciousness and problematic ways of understanding and engaging Divinity. After all, when people are induced to believe that spiritual reality doesn't have to operate in accordance with the requirements of rational considerations, then almost anything becomes possible for, and permissible to, someone if we believe that such a person is a spiritual being ... a friend of God ... someone who possesses insight into the mysteries of being.

Fraudulent teachers take a truth -- namely, that there is, most definitely, a difference between the rational and the trans-rational (which is not irrational but transcends normal modes of rational thought and logic) -- and they exploit that truth, twisting it and altering the nature of its reality to accommodate their own distorted purposes. To be sure, rational thought will never, on its own find the way to Revelation or to the spiritual station of a Prophet, or to the mystical understanding of a Rumi, Hafiz, or Ibn al-'Arabi, but this does not entitle someone to take license with the truth by trying to say that anything and everything one wishes to claim about what is, and is not, permissible on the mystical path, thereby, becomes true.

Yet, how is a would-be seeker to know this? If an alleged spiritual guide comes along and -- like the authority-figure in the Milgram studies (i.e., the person in the white frock coat with the clip board who is, supposedly, the one conducting the experiment) -- says, "hey look ... everything, despite appearances, is quite okay" ... well, shouldn't we leave such things to the experts, the academics, the people in charge, the authorities. Surely, they know what they are doing, and who are we -- the great unwashed and ignorant dregs of humanity -- to suggest otherwise?

The Inquisition, the Salem Witch Trials, Nazi Germany, Senator Joe McCarthy, Stalin's Russia, Mai Lai, Pol Pot's reign of terror, Jonestown, Sabra & Shatila, the Waco tragedy, Srebrenica, the first and second Iraq wars, the decades-long debacle of the Catholic Church, along with

many other examples of abuse don't 'just' happen. They occur because they are linked to mechanisms, phenomena, effects, processes, and influences within human beings ... mechanisms and influences to which all of us might become vulnerable under the right set of circumstances.

Less one suppose that intelligence has anything to do with how a person might respond in the 'right' setting, one would do well to consider an experiment conducted by Philip Zimbardo at Stanford University during the summer of 1971. The results are, again, very instructive, if rather disquieting.

The experiment was intended to run for two weeks. Students were randomly divided up into two groups -- guards and prisoners.

Within a few days the experiment had to be shut down because the guards were exhibiting considerable sadistic behavior, and a number of the prisoners were becoming deeply depressed and showing extensive symptoms of stress and anxiety.

There are at least two features of interest in this experiment -- that is, aside from the obvious ... namely, the willingness of supposedly intelligent students to become sadistic toward fellow students even while being observed. The first point of interest revolves about the relatively short period of time that was needed for sadistic behavior to surface, and, secondly, the experiment had to be shut down by the professor rather than by those who were being abused but were trying to comply with the requirements of what they perceived to be the professor's expectations concerning the study.

Or, consider a study conducted by D.L. Rosenhahn, a professor of law and psychology at Stanford University. In the January 1973 issue of the journal, *Science*, an article of his was published, entitled: "On Being Sane in Insane Places".

Essentially, Rosenhahn had a number of his students go to 12 hospitals, across five different states, along both coasts of America. Eleven of these hospitals were public, and, as a result, they were funded through state, federal, or university funding, while one of the hospitals was privately run.

The task of these students was to see if they could gain admission as psychiatric patients by presenting only one symptom -- hearing

voices that were rather unclear with respect to what was being said. All other information that these 'pseudo-patients' gave was to be truthful.

After being admitted, the abnormal symptoms would cease, and the pseudo-patients would seek to be released -- which did not always happen ... at least, not right away. The resulting experiences of these pseudo-patients revealed a great deal about the institutional depersonalization that occurs during confinement with patients as well as about the difficulty of doctors to be able to distinguish between sane and insane people -- whether during admission or for purposes of release.

After the first part of the foregoing study had been completed, there were several hospitals that learned about the project and indicated that they were highly doubtful that such pseudo-patients could escape their diagnostic detection. The staff members at these hospitals were informed by Professor Rosenhahn that at some point -- over a given, three month period -- there would be a number of pseudo-patients sent to them, and the challenge would be to identify these latter individuals from among all the other people who came to them for diagnosis.

At such hospitals the staff members were asked to rate the potential patients who were being considered for admission as to the likelihood of being a pseudo-patient. By study's end, there were 193 patients who were rated by the staff members of the participating hospitals.

One percent of these patients (41) were considered, with a high level of confidence, to be pseudo-patients by at least one staff member of a given hospital. 12% of the 193 patients (23) were suspected of being pseudo-patients by at least one psychiatrist, and 10% of the sample (19) were judged to be possible pseudo-patients by both a staff member and a psychiatrist.

Actually, Professor Rosenhahn had pulled another fast one. During the three month period in which the study was conducted, no pseudo-patients were sent to either of the two hospitals that had accepted the challenge, and, therefore, there were a fairly large number of false-positives that had been committed during diagnosis by the staff and psychiatrists at those hospitals.

There are a number of lessons to be learned from the Rosenhahn study. Perhaps, one of the most important of these lessons -- at least, in the present context -- is how the expectations of professionals were capable of being manipulated to induce them to see something that was not true and, yet, believe they knew what was going on -- all that was necessary was for the right kind of 'framing' of a situation to take place.

The placebo effect is a well-documented phenomenon. If people are led to believe -- or to have the expectation -- that a pill with no active ingredients is capable of producing certain kinds of effects, precisely those effects will take place in many people.

Consequently, if people are led to believe that a so-called spiritual guide has special sorts of knowledge, quality, ability, and so on, then many people will experience altered states of consciousness as a function of this expectation. The actual reality of an alleged teacher's spiritual status might, up to a point, be irrelevant to what is transpiring in an individual's life.

Between 1927 and 1932 a research project was conducted at the Hawthorne works of the Western Electric Company in Chicago. While there are many controversial methodological and interpretive issues swirling about these studies, in essence, the investigation attempted to examine the relationship between changes in working conditions and productivity.

A variety of physical and psychological factors were altered to see what impact such changes would have on worker productivity. Oddly enough, they found that regardless of whatever changes were introduced productivity increases ensued.

Harvard Business School professor George Elton Mayo -- together with several associates, F.J. Roethlisberger and William J. Dickson -- concluded, in part, that one way to explain or interpret the observed increases in productivity that took place -- no matter what physical and psychological variables were introduced -- was to suppose that what the workers were primarily responding to was the attention being paid to them and that they were trying to respond positively to this attention.

There is an old adage that a change is as good as a vacation. Apparently, there is some indication in the Hawthorne Effect that merely by showing interest in people, the latter individuals might have experienced enhanced levels of: motivation, sense of importance, self-esteem, well-being, morale, and so on.

People who accept initiation through even a false teacher will often remark about all the great changes that they believe are entering their lives as a result of the 'blessing' of being associated with a given, alleged teacher. In many of these cases, a combination of suggestibility, placebo effect, together with variations on the Hawthorne, Halo, and Pygmalion Effects are structuring an individual's experience and reality.

There is a certain amount of corroborating data with respect to the Hawthorne Effect. However, the data comes from psychotherapy rather than management studies.

Many researchers have found that the success rates of various kinds of therapy are almost indistinguishable from one another. As long as these treatment methods contain elements of warmth, acceptance, personal contact, positive regard, support, encouragement, and so on, patients seem to do equally well and make various degrees of improvement with one kind of theoretical treatment just as much as with some other theoretical approach. On the other hand, there is the very disturbing bit of evidence -- for therapists -- that two-thirds of many classes of psychotic individuals experience spontaneous remission, for a time, irrespective of whether anything is done or not.

Similarly, many problems that people experience tend to sort themselves quite independently of the presence of a spiritual guide.

Of course, fraudulent teachers are very adept at re-framing such realities and taking credit for the positive things, while using on-going problems in the individual as case exhibits for the seeker's need to apply herself or himself all that much harder to a given mystical discipline.

Moreover, there has been evidence collected that suggests that patients tend to have dreams that reflect the theoretical predilections of their therapists. Therefore, should we be surprised when a seeker

begins to have dreams that reflect the teachings of a fraudulent teacher?

The foregoing discussion is not meant to imply that there is no such thing as real mysticism or authentic guides or legitimate spiritual experiences. Rather, the intention is quite different since, in truth, I do accept the idea that there are hidden dimensions to life and that there are methods that enhance one's chances to be opened to these possibilities -- possibilities that are rooted in the essential identity of human beings as well as the purpose of life.

In general, there are only two kinds of mistakes a researcher can commit. A scientist might accept a hypothesis as true, when, in fact, it is false, or an investigator might consider a hypothesis to be false that, in reality, is true.

Seekers after mystical truth are, in effect, researchers. They are trying to test various hypotheses and determine what is, or is not, true.

Is a given spiritual or mystical path authentic? Is a given experience a function of imagination or an instance of an actual mystical state? Does a certain dream mean this, or that, or something else? Am I making spiritual progress? Will such and such a practice be spiritually beneficial or harmful? Am I wasting my time? With whom should I associate for best spiritual results? How should I balance the different facets of my life? What is the moral thing to do? Will I achieve Paradise and/or spiritual Self-realization? How will I know whether what I am experiencing is real or illusory or satanically inspired?

People who have invested heavily in one individual – for example, an alleged spiritual guide -- with respect to all their hopes, dreams, expectations, commitments, beliefs, values, purposes, and meanings concerning their (the seekers) spiritual future and welfare, then such heavily invested individuals often tend to be extremely resistant to any information that indicates there is considerable evidence to lend credence to the possibility that a so-called teacher is nothing more than a clever charlatan, and, therefore, the trust of the former individuals has not been well placed. There are many reasons for this, but part of the answer for such behavior is a function of a phenomenon known as cognitive dissonance.

Back in 1956, Leon Festinger -- along with Henry W. Riecken and Stanley Schachter -- wrote about a small cult that (long before the X-Files was even a gleam in the eye of Chris Carter) followed the teachings of Mrs. Marian Keech, a housewife, who believed or made claims to the effect, that she was in touch with aliens and was receiving messages from them via automatic writing. Apparently, the messages described a coming world-cataclysm from which people who obeyed the instructions coming to Mrs. Keech from the aliens might be saved.

Many, if not most, of the followers of Mrs. Keech sold, or gave away, their possessions and left the previous life that they had been living. They had put all their trust in one thing -- the alien messages -- and were waiting for the appointed date.

When the predicted date of the cataclysm came and went, but nothing happened, the researchers were interested in what would happen to the cult. The people conducting the study discovered something rather curious.

Contrary to what one might expect, instead of turning their backs on the teachings, the commitment of many of the followers in the group became even more fervent than before the date of the failed 'prophecy'. And, of course, a relevant question to ask is: why should this sort of behavior take place under these kinds of circumstance -- namely, in the face of evidence that a key part of one's belief system has been falsified?

Cognitive dissonance is the study of the dynamics among attitudes/beliefs, experiential data, and behavior -- especially in those cases when there is dissonance, or disharmony, among these three components. Will attitudes/beliefs change, will behavior change, or will experience be re-framed in order to accommodate either the structure of one's attitudes/beliefs and/or the nature of one's behavior?

In many contexts involving groups that have formed around spiritual frauds, merely exposing members of that group to compelling evidence that there is something seriously amiss in, say, the moral conduct of the teacher, will not necessarily be enough to alter either the attitudes/beliefs or behaviors of those members. There are a lot of reasons for why this is so, and one has to look to the personal history, vulnerabilities, emotional character, personality, needs, and

motivations of such individuals to gain insight into the particular mechanisms at work in a given person.

In almost all cases, however, one should try to follow the vested interests of these people. In other words, one has to try to understand what such people believe they stand to lose if they accept, as true, what is being said in the way of contradictory evidence concerning the authenticity of their spiritual guide.

Some people believe that salvation itself is at stake. Others might believe that Paradise/Heaven is being placed at risk ... or they see opportunities slipping away -- such as realizing the purpose of life ... or they feel threatened that they might become alienated from the truth ... or they fear becoming the vassal of Satanic forces should they leave their teacher (indeed, they perceive the presentation of evidence as one of the overtures of Satan) ... or they fear a loss of access to essential identity ... or they do not wish to forego the ego gratification and/or power and/or perks they receive as someone who has been appointed a 'teacher' by a given fraudulent spiritual guide.

Whenever one is talking about issues and forces as powerful, fundamental, and essential as the foregoing possibilities, it becomes understandable that for some people, the idea of changing either attitudes/beliefs or behaviors to accommodate available evidence is more antithetical to their interests than is re-framing the evidence and labeling the information as lies, or fabrications, or character assassination, or the workings of Satan, or the delusions of a disenchanted, former follower, or the result of some personal defect of the individual who is introducing, or trying to, the evidence.

Some of these 'true-believers' are even proud -- arrogantly so -- of their own willingness to completely ignore truth, reality, evidence, proof, and common sense while maintaining an unwavering commitment to the idea that their spiritual guide is authentic ... even when the evidence says otherwise. They equate dogmatism, authoritarian rigidity, foolishness, ignorance, and a closed heart or mind with the light of faith and are too self-absorbed to understand the differences.

Many spiritual charlatans are able to maintain their cover of alleged mystical acumen by keeping their distance from people. They limit access to themselves, not for legitimate reasons, but in order that people do not have the opportunity to discover that the emperor is, in fact, not wearing any mantle of spiritual authenticity.

I spent nearly 17 years with my first spiritual guide. During this period of time, I interacted with him a great deal ... often on an almost daily basis. I went on several extended journeys with him to a number of foreign countries.

I was able to observe his conduct across a wide variety of circumstances, problems, pressures, and issues. He was a man of complete integrity and elegance -- spiritually, academically, and socially -- as well as a friend and guide.

Pretty much everything I have learned that I consider to be of any value to my life arose through the time I spent with my spiritual guide ... from the things I learned by observing him live life. This was the essential pillar of my spiritual training, and whatever practices I have done in the way of prayers, fasting, seclusions, chants, contemplation, and so on, were rooted in the aforementioned spiritual edifice of the integrity of my spiritual guide's lived life.

Comparatively speaking, I spent very little time with a second person who, for an extended period time, I considered to be an authentic spiritual guide. Perhaps, all told, I might have spent 4 or 5 months -- in sporadic, intermittent fashion -- out of 10 years in close proximity to this second individual.

Moreover, many of these circumstances were of limited difficulty, consisting of talks or discussions, either of an individual nature or among a group of people. Much of my interaction with him was via phone or e-mail.

I have since come to learn that there were a number of things that were staged whenever I would visit this man. In other words, he behaved differently in my presence than he did in the presence of others, and when I came to learn of some of these differences, I knew things were being hidden from me and that my interaction with him was something of a managed stage play where everyone but me knew the nature of the production that was going on.

I came to know of my first -- and, as far as I know, only -- guide's spiritual character by direct exposure to his conduct. I came to learn of the second person's character -- or lack thereof -- by direct exposure to his conduct, especially after the artificial aspects of the relationship had been removed through ensuing events.

Both of the foregoing individuals spoke very well-- although each in his own way -- about mysticism. Based on what was said, both individuals appeared to be very factually knowledgeable about spiritual matters, but the factor that separated the wheat from the chaff was the quality of conduct.

In this respect, one person (the first spiritual guide) has been nothing but pure joy, while the other individual (the second person mentioned above) has become a living nightmare who spews evil where ever he goes. For me, it took time to realize that this is what this second individual is all about because of the many techniques he used to re-frame events that were going on, and because of a certain number of degrees of freedom he was granted by me based on an assumption -- a false one -- that he was an authentic spiritual guide.

Understanding what I do now, I can see how he exploited vulnerabilities and the good-will that I had been willing to extend to him based on a variety of assumptions. Understanding what I do now, I have come to recognize the techniques of re-framing, misdirection, compliance, manipulation, misinformation, disinformation, deceit and duplicity he employed to keep me ignorant of what he was actually up to.

People who choose to stay with this sort of man and refuse to look at, or consider, the evidence that has accumulated concerning the spiritually fraudulent character of that individual, are protecting vested interests of their carnal souls. As indicated previously, what these interests are vary from individual to individual, and, such interests can be fairly complicated in structure.

Having tried to apprise a variety of individuals about the dangers of their situation concerning the individual in question, I have been vociferously rebuffed by a number of them. I do have a certain degree of appreciation with respect to the nature of the dynamics that are in play in such rebuffs ... and some of these processes, effects, phenomena, and forces have been outlined in the foregoing discussion.



Chapter 11: The SSRI Issue

My mother had quite a few physical problems, ranging from: severe rheumatoid arthritis, to: some form of Addison's disease, food allergies, and a few other physical ailments thrown in for good measure. The doctors prescribed quite a few medications in their attempt to treat different symptoms of her various maladies.

At some point, she began to worry about what was going on and, as a result, she purchased a fairly comprehensive reference guide to pharmaceuticals. Whenever a doctor prescribed a drug, she would do some research in her book and proceed to express whatever concerns she might have to the doctor who had written out the prescription (such as raising questions about whatever contraindications were listed in conjunction with a given drug or, perhaps, talking about the possibility that there might be problematic synergistic effects when a given drug was used in combination with certain other drugs).

My mother found out at least two things when she did this. First, her doctors – or, at least, some of them -- seemed to resent the fact that someone was looking over their shoulders, so to speak, and raising questions about treatment. Second, the doctors often didn't know all that much about the drugs they were prescribing.

From time to time, some of my mother's doctors would criticize her behavior and belittle her concerns. Those same doctors would often treat my mother with a certain amount of contempt ... as if she were a petulant child complaining about irrelevancies rather than someone who was the object of whatever treatments were being administered and, consequently, she would be the one who would have to suffer the consequences if there were problems entailed by the cocktail of medications being imposed on her.

Doctors, of course, are busy people. Among other things, this means they don't have the time to do a great deal of research concerning the developmental history of a particular drug ... let alone hundreds of such pharmaceutical agents.

What they know about those drugs is frequently limited to what a drug company representative might have related to them, or what other doctors might have told them over, say, lunch, or what they have heard about such drugs at a medical conference, or that information

might be based on having read an article appearing somewhere in a medical journal, newsletter, or circular.

Oftentimes – and, sometimes, this is true even in the case of specialists – general practitioners do not look at the original research that led to the approval of a given drug, nor are they likely to have done their own independent and rigorous research on the matter. Most of their understanding concerning those drugs is based on little more than hearsay testimony from various formal and informal sources ... including their own clients/patients.

Drug representatives often leave samples of a drug with the doctors they visit. Those samples constitute part of Phase-IV testing when drugs, with the approval of the FDA, are released for purposes of public consumption and statistics begin to be compiled on: how well different patients/clients safely tolerate those drugs, or what problems, if any, show up with respect to those drugs, and whether those drugs seem to work effectively outside the confines of the laboratory.

Although a number of steps are taken by government regulators (such as the FDA) in order to protect the public and, hopefully, to try to ensure that drugs are both safe and effective by the time they reach the public, Phase-IV testing is, nonetheless, still part of an experimental process. In effect, the general public constitutes a group of guinea pigs that are not always properly informed about the on-going experimental character of the process through which they are being prescribed drugs.

When guinea pigs – like my mother – speak out, all too frequently they are treated as if they had no more rights than a mouse does who is judged to be acting in an ethically-challenged manner should it decide to object to the questionable drugs to which it is being introduced in some pristine, high-tech laboratory. The system works best – at least for the doctors, insurance companies, and the pharmaceutical companies -- when the experimental subjects keep their mouths shut and just go along with the “normal” order of things.

There are other considerations beyond the foregoing one. Suppose a medical doctor takes his responsibilities seriously and actively seeks out to learn about the drugs by attending a number of talks being given at a medical conference of some kind.

What does that doctor know about the background of the speakers? For example, does he or she know whether, or not, the speakers are getting paid by a pharmaceutical company in order to promote such a drug – a practice that tends to occur fairly often.

Or, suppose that a medical doctor makes the effort to read the relevant literature concerning a given drug. Does that doctor know how many of those articles have been ghost written for the author(s) of such articles by individuals who have been hired by a pharmaceutical company to give the drug a positive spin or that the author gets various financial or other considerations for allowing her or his name to appear on those articles?

Alternatively, what about the process of receiving FDA approval? How many of the individuals who are on the review committees that advise the FDA are merely advocating for drugs or products that are manufactured by companies for whom those people are consultants, and what, if anything, does a given medical doctor – even a conscientious one who desires to exercise a certain amount of due diligence with respect to the drugs she or he prescribes – know about the actual dynamics that underlie the approval of a given drug?

Let us assume that our heroic medical doctor – the one who is trying to do right by his/her clients with respect to the drugs that are being prescribed -- comes across a report that pits some, unknown clinician against the powers that be with respect to possible problems surrounding use of a given drug. The unknown clinician is being criticized by an array of established and well-known medical organizations, university professors, and foundations for having uttered various critical remarks concerning, say, the safety or efficacy of a given drug ... remarks that are considered to be unprofessional and without foundation.

What should our medical doctor think about that difference of opinion? This question becomes more complicated when considered in the light of the fact that there have been quite a few historical examples in which the people of power have sought to discredit some individual, not because the latter person was wrong in what she or he was saying, but, quite the contrary, because that individual was speaking the truth and those with vested interests were trying to

weather the storm by seeking to discredit, if not destroy, that person in the eyes of the general public.

Consider the case of Dr. Martin Teicher, a psychiatrist, who worked at McLean Hospital in Belmont, Massachusetts. Up until 1988, he had used a variety of approaches in conjunction with the treatment of depression – including tricyclics, MAO (monoamine oxidase) inhibitors, and electroshock therapy – with varying degrees of success but, as well, with varying kinds of unwanted side-effects.

In 1988, he began to hear about a new drug – Prozac – that was an SSRI ... that is, a selective serotonin reuptake inhibitor. Serotonin is a neurotransmitter, and SSRIs have the capacity to prevent or inhibit serotonin from being reabsorbed back into surrounding neurons and, thereby keep them actively available in the synaptic spaces that separated the terminal portion of neurons (referred to as an axon bulb) from one another.

According to one of the initial hypotheses involving SSRIs, people who suffered from depression exhibited diminished levels of serotonin, and, consequently, the possibility was entertained that increasing those levels might relieve some of the symptoms associated with depression. Since SSRIs had been discovered to increase the levels of serotonin – at least in certain synaptic areas – drugs like Prozac were being hailed as the next generation with respect to, allegedly, state of the art treatments for depression.

Before continuing on with the Martin Teicher saga, there are several preliminary considerations to keep in mind. For example, no one has explained why levels of serotonin tend to be diminished in individuals who are suffering from depression. In addition, no one has explained what role the absence of serotonin plays in generating the symptoms of depression. Moreover, no one has explained why – even if one were to suppose that increasing levels of serotonin is the right thing to do – that enhancing the quantities of serotonin in synaptic areas is the way to go. Finally, no one has explained how the process of elevating levels of serotonin in synaptic areas actually engages the problem of depression.

Notwithstanding the foregoing pieces of information, and prior to Prozac even being approved by the FDA in January of 1988, quite a few clinicians had begun to experiment with Prozac in relation to their

patients/clients. A sufficient number of those clinicians had indicated how use of the drug was producing remarkable results, and consequently, a considerable buzz began to swirl about the drug.

After earning a medical degree from Yale University and a PhD in developmental psychology from Johns Hopkins, Martin Teicher had worked his way up through the ranks at McLean Hospital, long considered one of the preeminent psychiatric facilities in America. He started out as a psychiatric resident, then became a staff psychiatrist, and, eventually, was appointed to be the director of the fledgling biopsychopharmacological research program that had been established at the hospital. In addition, he was a member of the faculty at the Harvard Medical School.

After he began hearing about the seemingly ‘miraculous’ successes that Prozac appeared to be enjoying, he decided to give the drug a try and began to administer it to a few of his patients. Although Dr. Teicher might have done some manner of homework concerning the biochemistry of Prozac, it is more likely that his willingness to experiment with the drug was based on the word-of-mouth reports he was hearing about in relation to the practice of various psychiatrists because the fact of the matter was that no one really knew how Prozac worked ... to whatever extent it did.

In any event, after working with the drug for a period of time, Dr. Teicher was not all that enamored with its efficacy. Although he continued to prescribe it, he didn’t feel the drug was particularly effective.

In addition, he started to wonder if there might be a dark underside to the drug. He began to harbor these concerns when he observed that a number of his patients who had never exhibited any inclination toward, or ideation about, suicide began to become preoccupied with thoughts about ending their lives.

The foregoing changes could just be a function of a deteriorating condition of deepening depression. On the other hand, those changes might have something to do with the drug that they were taking.

Dr. Teicher began to collaborate with several other staff members at McLean Hospital, each of whom had noted similar anomalies in a number of other patients. Their concerns were heightened when one

of these other patients -- who had never expressed any thoughts about suicide prior to taking Prozac but who began to harbor such thoughts after beginning to take Prozac -- was taken off Prozac and the suicidal ideation stopped.

The three staff members -- Dr. Teicher, Dr. Jonathan Cole (head of psychopharmacology), and Carol Glod (who was a nurse) -- wrote up an article that provided an overview and analysis of six cases involving changes in ideation and/or behavior with respect to suicide and the use of Prozac. They submitted their article ('Emergence of Intense Suicidal Preoccupation during Fluoxetine Treatment') to *The American Journal of Psychiatry* and, eventually, after recommended revisions were completed, the article was accepted for publication ... appearing in the February 1990 edition.

After the publication of the foregoing article, Dr. Teicher was contacted by hundreds of people from various parts of the world who had lost -- or nearly lost -- a family member or friend to suicide after the loved one had been placed on Prozac (Fluoxetine) by a psychiatrist or medical doctor. The FDA also had received nearly 15,000 complaints in conjunction with Prozac ... significantly more than had been the case with other drugs that had been released.

In September 1991, the FDA decided to hold hearings on the issue via its Psychopharmacological Drugs Advisory Committee. Dr. Teicher had been invited to be a part of the proceedings.

Prior to the release of the February 1990 article, Eli Lilly, the manufacturer of Prozac, had dispatched several of its top experts to meet in Boston with Dr. Teicher and his colleague Dr. Cole in order to present statistical data that was based on clinical trials involving some 3,000 individuals, and that, supposedly, demonstrated there was no evidence correlating Prozac with suicidal behavior. In the light of clinical experiences with their own patients -- as well as based on the clinical experiences of some of their colleagues -- involving adverse reactions in patients taking Prozac, Dr. Teicher and Dr. Cole wanted Eli Lilly to fund a comparative study using Prozac and a placebo, but the company rejected the idea.

There was a strange dynamic taking place. On the one hand, Dr. Teicher and Dr. Cole had written an article indicating there might be some problems associated with the use of Prozac, and the prospect of

that article had led Eli Lilly to send several scientists to Boston in an attempt to convince the doctors from McLean Hospital that their concerns were unfounded. Yet, when Eli Lilly was presented with an opportunity to acquire further proof that Prozac was safe and effective, the company appeared to be disinterested.

Of course, the company might have felt that its own clinical trial studies were so definitive that there was no need for further proof. Such additional testing might have been considered a waste of money.

Nonetheless, there were an increasing number of clinicians who were providing evidence that something of possible concern was taking place with their patients in relation to using Prozac. Moreover, such anomalous experiences seemed to indicate that Prozac might have something to do with whatever was taking place.

No matter how much Eli Lilly might have been committed to believing that its clinical trials had proven Prozac to be safe and effective, why would the company back away from an opportunity to further substantiate the correctness of its position and, in the process, help alleviate any doubts that clinicians might have concerning use of the drug? This question looms especially large given that all too many people taking Prozac were dying, and one of the primary suspects underlying those deaths was the drug itself.

Saving money by avoiding unnecessary testing is one thing, but the prospect of possibly saving lives raises the stakes to a whole different level. Of course, if one values money over life, then the nature of the calculus used to evaluate the situation will alter accordingly.

Interestingly, several organizations that fund research involving suicide, schizophrenia, and affective disorders also turned down the idea of providing a grant to support the aforementioned Prozac/placebo study. What is interesting is that those organizations received substantial funding from the pharmaceutical industry and, therefore, might have been reluctant to do anything that could jeopardize further funding of the organization by pharmaceuticals.

On September 21, 1991, the Psychopharmacological Drugs Advisory Committee of the FDA began hearings that supposedly were intended to explore the possible pros and cons of Prozac use. A number of people from the general public wanted to provide personal

testimony concerning what they believed were possible negative dimensions of Prozac use and had traveled to the meeting at their own expense.

Following the foregoing sorts of personal testimony, much of the rest of the hearings turned to so-called scientific considerations. One of the speakers was Gary Tollefson, an Eli Lilly research scientist who provided an overview of the results of a variety of clinical trials involving Prozac.

After going through a number of slides with running commentary, he stipulated there was no evidence demonstrating any significant difference in the suicidal thoughts or actions of those individuals who were treated with Prozac during the trials relative to those subjects who had been administered a placebo. However, inadvertently or otherwise, Gary Tollefson had left out something of considerable importance from his presentation.

More specifically, he had neglected to point out that there actually had been a clinical trial held outside the United States showing a significant increase in the incidence of suicidal acts when one compared those subjects who had been placed on Prozac relative to those individuals who had been placed on a placebo during the clinical trials. The result of the foregoing trial had been sufficiently worrisome that the German government initially refused to grant approval for the drug, and only agreed to do so six years later when an appropriate warning accompanied the drug.

Earlier in the hearings, Dr. Paul Leber, who was head of the FDA's Division of Neuropharmacological Drug Products, had asserted that the only form of scientific assessment that was considered to be reliable – namely, randomized clinical trials – had provided no evidence indicating that the use of Prozac was associated with any increases in aggressiveness, violence, or suicidal behavior. Another speaker, Dr. Charles Nemeroff, who was a psychiatrist and a faculty member at Emory University School of Medicine, reiterated the position that no one had been able to establish a cause-and-effect relationship between Prozac use and increased suicidal thoughts or behavior, and in the process, claimed that the Prozac case studies discussed in the February 1990 edition of *The American Journal of Psychiatry* article, together with some other case studies along the

same lines that had surfaced, could be attributed to various factors unrelated to Prozac. A third participant, Dr. Daniel Casey who was a psychiatrist with the Veterans Administration Medical Center and who was chairing the FDA session, also voiced his opinion that there was no credible evidence linking Prozac use with increased tendencies toward suicidal thoughts or behaviors.

At a certain point during the proceedings, Dr. Teicher was asked by someone in the audience to state his (Dr. Teicher's) views on the matter. Dr. Teicher began outlining some of his findings but was interrupted at different points by both Dr. Casey and Dr. Leber.

When asked to present evidence to back up his claims, Dr. Teicher offered to show some slides on the matter. Dr. Casey, who was chairing the session, discouraged Dr. Teicher from doing so despite the fact that other speakers had been permitted to do precisely that at some length.

Shortly thereafter, Dr. Casey called for a vote of the advisory committee with respect to whether, or not, the members believed there was any evidence to suggest that Prozac was associated with an increased likelihood of either suicidal thoughts or behavior. The nine member committee voted unanimously that there was no such evidence and, then, held a second vote, that carried 6-3, that there was no need to issue any sort of warning in conjunction with the use of Prozac.

Let's retrace our steps and reflect a little on what appeared to be transpiring at the advisory committee meeting. First, despite the fact that nearly 15,000 complaints had been received by the FDA concerning Prozac – far more than in relation to any other drug – and despite the fact that a number of people from the general public showed up at meeting to give testimony related to those complaints, those concerns were treated as non-evidence even though they were, supposedly, one of the primary reasons – if not the sole one – for the meeting being called in the first place. (A more cynical individual might suppose that the reason the meeting had been called was a strategic move by officials at the FDA to provide a pharmaceutical company with an opportunity to get out ahead of the mounting bad publicity and put a positive spin on things.)

Dr. Leber, Dr. Nemeroff, and Dr. Casey did not consider those complaints to constitute proof of any thing. In fact, during his

presentation, Dr. Nemeroff claimed that such cases could be explained away by complicating factors of one kind or another.

However, providing a possible, alternative explanation for a given phenomenon is not really proof of much of anything. Indeed, why should anyone accept, at face value, a claim that only alludes to (and does not rigorously demonstrate) the possibility that there are alternative ways of accounting for the cases written about in *The American Journal of Psychiatry* article or in relation to any of the other 15,000 cases that had been reported to the FDA?

This is a very lazy person's way of doing research. Unless Dr. Leber, Dr. Nemeroff and Dr. Casey can prove that Prozac was not responsible for increases in suicidal ideation and/or behavior in the cases presented by Dr. Teicher or in the cases encompassed by the 15,000 other complaints, then their statements about science come to nothing.

The whole point of the Phase-IV portion of the drug approval process is to gather evidence concerning clinical experience involving drugs that have passed through Phase-III trials. If such evidence is considered to be scientifically useless, then why collect it ... especially given that it is precisely that sort of information that shapes the kind of warnings, contraindications, and so on that – moving forward -- will be associated with a given drug as a means of helping to protect the public?

Phase-IV information is important because it can provide data that cannot be provided by Phase-III testing. Randomized trials have a value, but they don't necessarily reveal the full story of what happens when drugs are released for public consumption and, therefore, are not being used by individuals who have been selected simply because they satisfy the conditions of certain protocols where many factors are controlled for in a way that does not occur in the 'wild'.

The 15,000 complaints registered with the FDA against Prozac were potential candidates to be mixed in with other Phase-IV data. The case studies being written up by Dr. Teicher and others were also potential candidates to be included in that data set.

Unfortunately, the foregoing information was being treated as if it automatically should be deemed to be of dubious pedigree and,

consequently, should be rejected out of hand. However, there was never any proof put forward during the advisory meeting other than a series of summary judgments against considering such data to have any value, but proceeding in this manner does not constitute a proof of any kind.

When Dr. Teicher sought to present some evidence in support of his position through the use of a few slides, he was denied the opportunity to do so ... an opportunity, as noted earlier, that had been granted to other speakers. The proceedings of the FDA advisory committee bear more than a passing resemblance to the show trials that used to take place in Stalinist Russia where guilt and innocence were all arranged ahead of time and everyone went through the motions until the inevitable, pre-determined result is produced.

One might add to the foregoing considerations the fact that one of the speakers -- Gary Tollefson of Eli Lilly -- was knowingly or unknowingly -- misleading everyone in the room. There was, in fact, randomized, clinical trial evidence indicating that Prozac could be linked to an increase in suicidal thoughts and behavior relative to a placebo control group.

There is a precautionary principle that often is mentioned in conjunction with ecological issues. More specifically the principle says that when there is doubt about whether, or not, some action will, or will not, result in harm being done to the environment, one should err on the side of caution and refrain from the action about which there is some doubt.

The members of the FDA advisory committee had a great deal of evidence in front of them (15,000 complaints-plus) indicating that Prozac might not be as safe as some of the clinical trials were suggesting was the case. However, those advisory committee members were prepared to accept only one kind of evidence -- namely, clinical trials -- not because this was the only scientifically justifiable way to proceed but because they couldn't be bothered to actually critically explore in a rigorous way the available evidence that ran contrary to their clinical trials.

Science is not just about conducting randomized trials. Science is, first and foremost, rooted in the process of observation.

If the evidence arising from an array of observations runs contrary to the evidence arising from randomized trials, then, one needs to pursue the matter further. Among other things, this means that one should undertake further testing and exploration in order to address the questions and problems that are being suggested by those anomalies that are being observed independently of clinical trials.

Whenever evidence is available (and nearly 15,000 complaints, along with a number of case studies, do constitute evidence irrespective of whatever members of an advisory committee might say) and that evidence suggests the possibility there might be something in a drug -- or connected with its metabolism once ingested -- that induces violent or suicidal behavior, then one should be inclined to exercise caution ... perhaps even be willing to err on the side of caution because people's lives are at stake.

If someone has a product to sell, then, it is the responsibility of the manufacturer to prove that the product is safe. It is not the responsibility of a customer to do this.

The members of the advisory committee who unanimously voted that there was no scientific evidence to indicate that Prozac caused increased thoughts or behaviors involving suicide actually had failed in their fiduciary responsibility to the general public. There was empirical data indicating, at the very least, that caution should be exercised with respect to the use of Prozac, but the members of the advisory committee simply chose to discredit that data without providing -- or even being willing to entertain (e.g., none of them insisted on taking a look at Dr. Teicher's slides) -- any kind of evidence that was inconsistent with the sort of vote they seemed intent on taking.

There is a further set of problems surrounding the view of science that was being advocated by individuals such as the one being alluded to by Dr. Leber, Dr. Nemeroff, and Dr. Casey during the advisory committee meeting that had been convened by the FDA in conjunction with the safety of Prozac. More specifically, when such people speak about the absence of any cause-and-effect relationship between, on the one hand, the use of Prozac and, on the other hand, increased tendencies involving suicidal thoughts and/or behaviors, the aforementioned individuals tend to paint themselves into a corner.

More specifically, there is no evidence to prove that SSRIs have a cause and effect relationship with depression. The data is, at best, all correlational.

There is no cause-and-effect evidence to demonstrate that depression is caused by the absence of serotonin. There is no cause-and-effect evidence to demonstrate that the absence of serotonin is directly tied to the phenomenology of depression. There is no cause-and-effect evidence to demonstrate that the presence of extra serotonin in the synapses is responsible for changing the phenomenology of a person in a manner that removes all traces of depression.

As indicated earlier, whatever evidence exists between SSRIs and depression is correlational in nature – that is, there seems to be a positive relationship between the presence of an SSRI and a reduction in reported symptoms of depression. However, there is absolutely no biochemical mechanism that has been hypothesized (or proven to exist) that is capable of showing, in a step-by-step manner, that the absence or presence of serotonin is responsible for, respectively, the presence or absence of depression.

In other words, the members of the FDA advisory committee who were supposedly considering the possible merits and liabilities of Prozac were asking for a form of evidence and manner of proof from those who had their doubts about Prozac that the proponents of Prozac could not, themselves, supply. In addition, those members of the advisory committee seemed to have a very biased and limited view concerning the nature of science.

Because of their collective blind spots (and by referring to it as a ‘blind spot’, I am offering the benefit of a doubt that might not be deserved), the members of the FDA advisory committee – like the members of the clergy that Galileo invited to look through his telescope – were unwilling to take a look at anything that was not already a fixed and unchangeable part of their worldview. Furthermore, because of their collective “blind spots”, unsuspecting people would continue to die as a result of Prozac being prescribed for them or administered to them.

Science does not necessarily exist simply because an alleged scientist says something. Science does not necessarily exist when a

group of appropriately credentialed individuals makes a claim of some kind. Science does not necessarily exist just because certain people with technical credentials and political authority speak out about what they consider to be the sort of evidence that will, and will not, be acceptable to a given community of researchers.

Science only exists when there is a relentlessly rigorous and critically reflective attempt to establish the truth in a way that accounts for all the available data that bears upon a given situation and, in the process, provides a fully defensible account of whatever questions and problems have arisen during, or as a result, of the aforementioned attempt to establish the truth. What the FDA advisory committee was doing on September 21, 1991 in conjunction with the hearings on Prozac was not science because none of the individuals on that advisory committee exhibited any indication that they were committed to the process of trying to establish the truth in the manner outlined above.

The individuals on the advisory committee and some of the credentialed individuals who made presentations before them might have believed that everything they said gave expression to the scientific process. However, all they had to offer was a largely disingenuous set of words that had been salted here and there with traces of something that appeared to glitter with scientific value but was, in actuality, little more than fool's gold.

One might also raise the question of just how much homework the members of the advisory committee actually did in preparation for the hearing concerning Prozac. Did they go through the 15,000 complaints that had been filed with the FDA against Prozac? Had they read the article in *The American Journal of Psychiatry* written by Dr. Teicher and his colleagues? Were they familiar with the other case studies that had begun to appear indicating there might be a problem with Prozac? Had they gone through the clinical trial data with a fine-tooth comb?

To be sure, a representative of Eli Lilly (Gary Tollefson) gave a presentation during the hearing that summarized the clinical trial data. However, one cannot really understand the nuts and bolts of an experiment until one spends some time with that material, and the members of the advisory committee obviously had not done this because if they had, then, among other things, they would have come

across the material that, for whatever reason, Gary Tollefson left out of his presentation on Prozac and that indicated there was, indeed, proof that use of Prozac was associated with a higher likelihood (nearly twice as much) of suicidal ideation and behavior when compared with the results of individuals who had been given a placebo.

Someone might try to argue that one couldn't possibly expect the very busy professionals on an advisory committee to take the time and make the effort required to do all the work that is being suggested in the foregoing several paragraphs. My response is: Why not?

What exactly are they advising about? What is the basis of such advising if those individuals aren't intimately familiar with all of the issues, problems, questions, and data that are entailed by the drug on which they are going to vote?

Without such knowledge and insight, the process of advising becomes a very macabre joke. After all, people were dying, and one might suppose that the individuals on an advisory committee might want to establish exactly why those people were dying and whether, or not, those deaths had anything to do with the drug for which they, subsequently, would be giving a vote of confidence.

Later on, following the September 1991 Prozac hearing that had been convened by the FDA, a few investigative journalists discovered that five of the nine members of the advisory committee had financial ties, of one kind or another, with pharmaceutical companies ... including one member – Dr. David Dunner -- who was a well-paid consultant for the pharmaceutical company that manufactured Prozac (i.e., Eli Lilly).

In addition, one of the speakers, Dr. Charles Nemeroff -- who had sought to discredit the case studies written up by Dr. Teicher and his colleagues that suggested there might be a problem involving Prozac -- not only was a paid consultant for Eli Lilly but owned stock in the company as well. Dr. Nemeroff waxed eloquently about the process of science and scientific proof, yet waned miserably when it came to being sufficiently honest to indicate to the audience that he had a conflict of interest on the topic about which he was speaking.

The foregoing discussion was not really about Prozac, per se. Rather, that drug provided a concrete opportunity to further explore some of the issues surrounding not only the nature of science but, as well, to reflect on some of the problems with which each of us is confronted as we try to figure out ‘the reality problem’ and struggle toward our individual take on formulating a response to the final jeopardy challenge.

To begin with, we now know that the ‘Burzynski Affair’ is not an isolated case involving a temporary, anomalous, and limited departure from the pursuit of truth. To that affair, one can add some data from a different sample set – namely, the case of SSRIs.

Those two samples provide evidence that people credentialed with degrees in technical subjects do not always have integrity. They are not always honest. They do not always exercise due diligence. They are not always tireless practitioners of something called science.

When individuals who are credentialed with some sort of technical expertise fall off the wagon and become intoxicated with their own delusional preoccupations, they do not deserve to be called scientists. Unfortunately, in the alleged name of science, such credentialed individuals are sometimes prepared to sacrifice other people on the altar of the former individuals’ own professional, political and financial self-interest, and because this happens more frequently than many of us would like to imagine, a person cannot simply relax in an easy chair, kick up her or his feet, and claim that: Science tells us ... X, Y or Z.

In today’s world, there is just as much of a willingness to blindly accept whatever comes out of the mouths of individuals who have degrees in the physical and biological sciences, as there is a willingness to blindly accept whatever comes out of the mouths of individuals who are credentialed in some theological or religious manner. However, the epistemological food chain has become compromised, and this places each of us in a very precarious position because none of us can be certain about the quality, or nutritional value, of the food for thought we are receiving through various channel ways of information.

The Burzynski affair is not about just a few individuals. The Prozac/SSRI issue is not about just a few individuals.

Each of the foregoing sample sets give expression to the jagged components of an iceberg-like phenomenon whose surface features might seem relatively limited and innocuous but, in fact, is rooted in a depth of: practices, ideas, values, beliefs, understandings, emotions, motivations, and world views involving thousands of people that are collectively capable of scuttling the existential ships that we, as individuals, might have to sail in the vicinity of such potentially treacherous entities.

The Burzynski affair turned out the way it did because there is a whole system of thousands of credentialed individuals who were prepared to let it unfold as it did and who are prepared to let similar affairs happen in the future. Whatever their thoughts and feelings about science might be, they have been willing to permit those thoughts and feelings to be dominated and corrupted by considerations of: ignorance, bias, ambition, fear, jealousy, selfishness, greed, and indifference.

Furthermore, despite some relatively minor changes in the manner in which the legal drug business is conducted and despite the occurrence of a few, small legal and political victories over the last several decades that have resulted in some grudging, acknowledgement on the part of pharmaceutical companies and the FDA that, for example, there might be a link between the use of SSRIs and an increased incidence of suicidal thoughts and behaviors, and/or violent aggressiveness toward other people, things seem to be pretty much continuing along as they did back in 1991. Credentialed individuals today not only have little additional understanding of, or insight into, the functioning of psychoactive drugs in the brain than they did a quarter century ago, but, as well, there is a whole system of vested political, financial and ideological interests in place (made up, in large part, of individuals carrying technical credentials of one kind or another) that generate significant inertial drag with respect to trying to assist people to come to a better understanding of the problematic impact that a variety of FDA-approved drugs might be having on the human mind.

For instance, you might want to reflect on the work of Dr. Peter Breggin, a psychiatrist, who has been attempting to sound a clarion call for more than thirty years. His concerns are directed toward the

way in which psychoactive drugs – that is, commercial drugs that are intended, through their acting upon the brain, to alleviate psychological suffering – are used and understood by both the medical community as well as the general public.

According to Dr. Breggin there is a condition that he refers to as “medication madness” (to be discussed shortly) that sometimes afflicts individuals who have been prescribed one, or more, psychoactive drugs by their physicians or psychiatrists. However, there is also a condition of “medication madness”, of a slightly different kind, that afflicts the understanding of the medical profession and scientific community when it comes to the issue of whether, or not, such credentialed individuals can put forth a coherent, consistent, provable theory concerning the nature of the relationship between the use of psychoactive drugs and various maladies of the mind.

Let’s take a look at the first kind of medication madness noted above. That is, let’s consider what happens to some people who are prescribed or administered various kinds of medically approved psychoactive drugs.

Dr. Breggin has engaged hundreds of cases involving the use of psychoactive drugs in a critically reflective manner. Some of those cases are a function of his practice as a psychiatrist, while other cases result from his work as a consultant for individuals who might have suffered some sort of debilitating problem due to the taking of psychoactive drugs that were prescribed by another doctor. Moreover, he also has accrued considerable experience due to his status as an expert witness in criminal cases in which medically prescribed psychoactive drugs might have played a significant role in inducing violent behavior in some individual who has consumed such drugs.

Dr. Breggin does not come to his conclusions concerning the potential relationship between certain psychoactive drugs and violent behavior through a non-rigorous methodology. His determinations are based on a fairly thorough process involving: Extensive interviews with a patient, client, or defendant in a criminal proceeding or civil trial, as well as conversations with family members, friends, neighbors, or other individuals who might have something of relevance to offer with respect to a given case.

In addition, the foregoing interviews are considered against a background of information that helps to provide something of a context for whatever has transpired. Included in the foregoing sort of information are: Educational records, medical files, employment reports, as well as whatever documents (e.g., toxicology tests, autopsies, etc.) that might be of assistance when trying to reach a thoughtful, evidence-based conclusion about matters.

Some people might not consider the foregoing methodology to be scientific. However, the use of case studies has had a long, productive presence in the annals of both the medical/psychiatric literature as well as in clinical practice.

The fact is: There are many facets of our lives that lie beyond the capacity of so-called scientific methodology (i.e., demonstrating the truth or falsity of a given hypothesis through means of experimental arrangements that are controlled to exclude any influences that might cloud the relationship between a hypothesis and data generated through the experimental process). Case studies give expression to a form of methodology that while not scientific in the experimental sense, nonetheless, can provide useful, often insightful clues concerning the nature of a given matter.

The goal is truth, not science per se. Good science is a multi-faceted set of protocols that are intended to probe for the truth from a variety of perspectives and via different methods that complement and supplement one another.

In his writing, Dr Breggin emphasizes that he is more concerned with the issue of the potential problems ensuing from legally prescribed psychoactive drugs than he is with trying to claim that medical doctors are the problem simply because they prescribe drugs that they consider to be safe and effective. I understand why Dr. Breggin might be taking such an approach because he really would like to enlist the support of the medical profession in his effort to institute the sort of precautionary principle that will help to responsibly regulate how medical doctors utilize and prescribe such drugs.

Obviously, claiming that doctors are a fundamental part of the problem rather than attempting to narrow the focus to being just about the drugs might prove to be counterproductive as far as the main thrust of what he trying to accomplish is concerned. So, he tends

to concentrate his attention on the effect of the drugs rather than the effect of the medical/academic/commercial mind set that ensures that such drugs will be prescribed.

Unfortunately, the fact of the matter is, the whole medical profession, along with the FDA, and an array of universities, pharmaceutical companies, researchers, and professional journals are responsible for, among other things, the current situation vis-à-vis the dark underside of psychoactive drugs. All of the foregoing players are spellbound by the delusion that they understand what is going on in the brain and mind when people suffer from some form of psychological disorder and, as a result, those professional individuals are inclined to recommend (or are in agreement with) the prescribing of various kinds of psychoactive drugs in order, allegedly, to engage those conditions constructively.

In any event, Dr. Breggin is convinced that psychiatric or psychoactive drugs can have a spellbinding impact on those individuals who take them. What he means by this is that individuals who are under the influence of psychiatric drugs and who subsequently become agitated, anxious, depressed, aggressive, violent, and/or suicidal tend to be oblivious to the possibility that their change in behavior and mental/emotional condition is a function of the drugs they are consuming rather than a reflection of personal pathology that supposedly exists within them independently of the psychoactive medicine being administered to them ... that is, the effect of the drugs are such that those people operate as if the thoughts, feelings, and behaviors arising within them are their own rather than a phenomenology that has been shaped, colored, framed, and organized by the presence of the psychoactive drugs in their bodies.

There is a related phenomenon going on in the minds of the medical doctors, researchers, psychiatrists, professors, and regulators who believe that such drugs have an important role to play in helping to alleviate – if not cure – the mental, emotional, and/or behavioral pathology of the individuals to whom the drugs are administered. Those professional individuals are spellbound by their various conjectures concerning how they believe the universe operates with respect to psychological and biological phenomena ... that is, the effect of their ideas about the foregoing matters is such that they operate as

if their thoughts, feelings, and behaviors were a function of the way the world is rather than merely being a function of the hermeneutical framework they are seeking to impose on reality and in the process completely obscure the latter.

According to Dr. Breggin, patients/clients who are prescribed or administered psychoactive drugs do not understand that their ideas, feelings, and behaviors are not necessarily rooted in reality but might be, in some way, artifacts of the drugs they are taking. Similarly, the doctors who prescribe such drugs do not seem to understand that their ideas, feelings, and behaviors concerning the efficacy of such drugs are not necessarily rooted in reality but might be artifacts of their delusions concerning how the mind operates and, more specifically, might be artifacts of their delusions concerning the way in which psychoactive drugs supposedly operate in the brain.

Earlier in this chapter, I explored, in a limited way, a few of the questions that swirled about Prozac back in the 1980s and early 1990s. Those same questions can be directed toward the pharmaceutical successors to Prozac – such as, Luvox (fluvoxamine), Zoloft (sertraline), Paxil (paroxetine), Celexa (citalopram), and Lexapro (escitalopram) – because all of those drugs are variations on an SSRI theme ... that is, they all revolve about a process of inhibiting the re-uptake of selected forms of serotonin back into the axon bulb of surrounding neurons, thereby keeping the concentration of serotonin high in the synaptic areas between neurons.

The aforementioned drugs all came after Prozac hit the markets. Nevertheless, none of the underlying, more up-to-date research in 'support' of those later drugs is any more capable of answering -- in a rigorously justifiable manner -- questions concerning the specific nature of the cause-and-effect dynamics that allegedly ties psychoactive drugs to various kinds of mental or emotional disorder than was the case in relation to Prozac.

In other words, we still don't know how the absence of a particular kind of serotonin causes a given form of psychological pathology. Moreover, we still don't know how the presence of some specific form of serotonin brings about a change in the kinds of phenomenology that tend to be associated with such disorders.

Furthermore, there have been a number of studies that generated results indicating that SSRIs aren't necessarily any more effective than a placebo [a substance whose physical ingredient(s) is (are) considered to be inert with respect to brain functioning]. Double blind studies (neither the subjects nor the doctors know who is getting what) have been conducted that demonstrate that placebos are nearly as – if not as – effective in the treatment of conditions such as depression as is one, or another, brand of SSRI.

If substances that have no discernible impact on brain functioning – i.e., placebos – can operate as effectively as SSRIs can, then what does this say about the serotonin theory of depression? Conceivably, the administering of SSRIs work – to whatever extent they do – because of the placebo effect inherent in the patient's or client's expectation that they will be helped by the doctor and her/his prescribing of a drug in and of itself (that is, quite independently of whatever action the drug actually has on their brains).

At the very least, the waters of understanding are muddied by the presence of the placebo issue. No one really knows what is taking place, and, therefore, quite possibly, the presence or absence of serotonin might be completely irrelevant to the actual dynamics of either the presence or absence of depression.

The foregoing comments should not be construed in a manner that suggests I am trying to claim that SSRIs have no impact on the biochemistry of brain functioning. Rather, whatever effect(s) the presence of SSRIs has (have) in the brain is not because the etiology of depression has been discovered and worked out, and, as a result, serotonin has been proven to be at the heart of those dynamics.

Indeed, Dr. Breggin believes that psychoactive drugs like – but not restricted to – SSRIs can have a tremendously problematic impact on brain functioning. After all, his notion of medication madness -- or the manner in which a patient, subject or client can become spellbound by the effects of a given psychoactive drug – alludes to the kind of problematic effect he believes psychoactive drugs are capable of having on certain individuals.

SSRIs do affect brain functioning. They just don't necessarily affect that functioning in the way various clinicians, academics, and

researchers have conjectured to be the case in relation to, say, the condition of depression.

Therefore, to whatever extent SSRIs have an impact on the phenomenology of depression, that impact might be entirely coincidental and indirect. For instance, if I have a pain in my arm and someone comes along and punches me in the jaw, knocking me out, the pain in my arm will, at least while I am unconscious, disappear.

Nonetheless, one cannot suppose that knocking people out should be considered to be a treatment for arm pain or that being knocked out addresses any of the possible causes underlying my arm pain. The process of being knocked out is entirely incidental to the issue of the arm pain.

Similarly, the presence of an SSRI might, like a blow to the head, mask certain symptoms of say, depression, just as the blow to the head brought about a cessation (at least temporarily) with respect to the pain in my arm. However, that process of masking is unrelated to the actual problem (depression), just as the blow to my head that masked the pain in my arm was unrelated to the underlying dynamics of my arm pain.

In short, the presence of the SSRI doesn't necessarily have any causal relationship with, nor does it necessarily address any of the underlying causes of, the condition of depression. Moreover, the impact of the activity of the SSRI in the brain might be purely coincidental as far as its relationship with depression is concerned.

According to Dr. Breggin, the use of a wide variety of medically prescribed psychoactive drugs, when taken in conjunction with various kinds of medical diagnoses, is capable of pushing individuals into a condition of neurological toxicity. There is an array of symptoms that might ensue from such toxicity – including: Delusions, hallucinations, agitated behavior (akathisia), dysfunctional memory, insomnia, anxiety, compulsive ideation, irrational thought processes, radical shifts in emotions, and so on.

There is a very sound basis for claiming that the foregoing symptoms can be attributed to the toxic effects of the psychoactive drugs being prescribed or administered. (1) Despite the relative absence of those problematic symptoms prior to taking the medically

prescribed/administered drugs, nevertheless, those kinds of mental, emotional and behavioral symptoms tend to arise following the taking of such drugs (although it might be a matter of days, weeks, or months before the symptoms show up), and (2) when an individual is taken off those drugs, the problematic symptoms tend to disappear.

The technical terms for the foregoing processes are: ‘challenge’ and ‘dechallenge’. Challenge and dechallenge tend to be followed by a third process known as: ‘Re-challenge’, that is designed to determine whether, or not, certain symptoms will reoccur once a person begins to take the drug at issue again.

Sometimes there is a complicating dimension associated with (2) above (i.e., being taken off a drug). More specifically, removing psychoactive drugs from a person’s system might bring about another form of disorder known as ‘discontinuation syndrome’.

Discontinuation syndrome is brought about in the following manner. First, a psychoactive drug initially causes a toxic, biochemical imbalance in an individual’s brain/body for which a problematic, symptom-laden adjustment ensues (i.e., medication spellbinding). However, when that drug is removed (i.e., the person stops taking it), another symptom-laden biochemical adjustment occurs (i.e., discontinuation syndrome), and this tends to interfere with a person’s being able to return to a condition of relative normalcy (that is, not having their thoughts and behavior being shaped by the toxic effects associated with taking, or going off, the psychoactive drugs that have been prescribed for, or administered to, an individual.

Putting aside the problems surrounding discontinuation syndrome, the primary point being made here is that taking the foregoing sorts of psychoactive drugs sometimes leads to a condition of involuntary intoxication in which a person becomes unable to exercise control over the thoughts, emotions, and behaviors that are being manifested through the individual. While in that condition, a person has difficulty: Distinguishing between right and wrong, or refraining from violent behavior (toward himself/herself and/or others), or reflecting on matters with any semblance of appropriate, ethical and rational deliberation.

Involuntary intoxication, as the term suggests, is not a case in which a person understands beforehand that he or she will become

mentally spellbound after taking prescribed drugs or that she or he also might become engaged in problematic and/or violent behaviors as a result of taking those drugs. Rather, having been led to believe (by the medical establishment, the media, and one's doctor) that taking the prescribed drugs will help the person's mental/emotional condition, the drug or drugs is (are) taken in good faith ... with little, or no, understanding and appreciation that the prescribed drug(s) has (have) the potential to induce an individual to enter into a dysfunctional, impaired condition that was not of his or her personal choosing.

To add insult to injury, while under the undue influence of the psychoactive drug that has been prescribed or administered, a person believes there is nothing wrong with the problematic thinking and behavior that might be taking place while on the drug. The individual assumes – despite considerable evidence to the contrary -- that everything is normal and that she or he is functioning properly.

The aforementioned condition -- in which a person who has been prescribed or administered psychoactive drugs believes that he or she is doing fine even though, to varying degrees, the individual is dysfunctional emotionally, intellectually, and behaviorally -- is referred to by Dr. Breggin as "medication spellbinding". A person who is operating out of a condition of medication spellbinding suffers from impairment in her or his capacity to appreciate what is occurring in his or her life or such an individual is unable to observe himself or herself in any sort of objective, impartial, or self-critical manner. Such individuals tend to rationalize inconsistencies, and/or spin their situation in an attempt to justify what is going on, and/or they confabulate (make up stories) about events because they can't remember what has been taking place or can't make sense of what is transpiring.

For example, under the influence of a prescribed drug, an individual who is suffering from medication spellbinding might become apathetic about life but perceives or interprets that apathy (due to rationalization and confabulation) as an improvement in his or her life. A person in a condition of medication spellbinding might interpret life events in the foregoing way because the sadness, depression, and/or anxiety that had been present prior to taking psychoactive medication was difficult to deal with since, perhaps, the

individual had no effective coping strategy through which to engage those feelings, or the persons did not have the ability to place those feelings in a manageable perspective.

In effect, by becoming indifferent or apathetic or removed from life's events through the condition of medication spellbinding, one's normal, existential concerns or emotions have become blunted. As a result, the psychoactive drug has taken away -- among other things -- an opportunity to try to work through those kinds of problematic experiences and come up with an effective way to deal with them.

The psychoactive drug hasn't cured anything. It merely has masked the presence of a problem while simultaneously leading an individual to believe that camouflaging a problem -- so that one won't recognize its presence or appreciate its significance -- is the same thing as addressing that problem.

A person might feel better about life. However, the feeling is illusory because there is nothing of substantive value connected to it.

One has been anesthetized, but one believes one is fully aware. One has been cognitively impaired, but one believes that one is functional and disregards, re-frames, or rationalizes, whatever facts are inconsistent with one's dysfunctional assessment of the situation.

In light of the foregoing considerations, one might ask the following question: Why do medical doctors and psychiatrists prescribe SSRIs when they actually don't have any idea about what is actually transpiring in the human beings to whom they are prescribing or administering such drugs? Naturally, if SSRIs had been proven to be completely safe, then one might argue that because there is no harm in providing such drugs, then, why not give those substances the opportunity to see what, if anything, of a constructive nature they might be able to accomplish?

Unfortunately, from the very beginning some warning signs concerning the safety – if not efficacy -- of those kinds of drugs had begun to emerge. For example, aside from some of the problems noted previously in this chapter, very early in the testing phase of Prozac, Eli Lilly, the manufacturer of Prozac, had discovered that when one uses SSRIs to artificially maintain high levels of serotonin in the synapses, the brain will actually take steps to resist or counter that tendency by

shutting down the production of serotonin and/or decreasing the number of serotonin receptors on the membranes of neurons.

The undermining of serotonergic functioning might continue on long after a given psychiatric drug has been discontinued. In other words, the presence of SSRIs brings about the very condition (the absence of serotonin) that those drugs were supposed to address or resolve.

Individuals such as Dr. Peter Breggin and Dr. Martin Teicher have tried to persuade people to critically reflect on an array of evidence (both experimental and clinical) that runs contrary to the way that medicine in America was, and is being, practiced. Since then, other researchers have added their voices of concern in relation to whether, or not, SSRIs are either safe or effective.

So, again, one needs to raise the question noted earlier. Why do medical doctors and psychiatrists prescribe drugs about which they really are almost completely ignorant?

Even Dr. Martin Teicher – who later sounded a warning about the possible adverse effects of SSRIs – was prepared to give SSRIs a try in the beginning despite the fact that there was no viable proof that depression was caused by the absence of serotonin. Moreover, even if one were willing to try to argue that the absence of serotonin was tied to the presence of depression, there was no plausible account about why levels of serotonin were depleted in the first place, and, therefore, it was quite possible that the absence of serotonin was, in some way, one of the residual effects of depression rather than being the cause of depression.

The degree to which medical doctors are apparently prepared to fool around with, and experiment on, the wellbeing of their patients, is deeply disturbing. Medical doctors and psychiatrists alike are completely ignorant about what, if anything, serotonin has to do with depression, and, yet, they readily buy into the idea that SSRIs are the key to the problem and are quite prepared to act on their speculations irrespective of the cost to their patients/clients.

The actions of those medical doctors and psychiatrists are almost delusional – if not something worse. A delusion is when someone harbors a false belief about the nature of reality and resists evidence

that runs contrary to that belief, and while no one has put forth definitive proof that depression is not a function of serotonin (so one could say that the serotonin hypothesis has been proven to be false), nonetheless, no one has provided any proof, either, that depression is a function of serotonin, and, yet, medical doctors and psychiatrists, on the basis of almost complete ignorance, have decided to either prescribe or administer a drug they knew little, or nothing, about (see pages 388-389 for a bit more on this issue).

Actions that are rooted in delusional thinking are bad enough. Actions that are rooted in an ignorance that credentialed people seek to pass off as if it is were based on knowledge when that is not the case seems, somehow, to be more problematic and dysfunctional than a delusion because such framing actions appear to be an intentional attempt to mislead people rather than just harboring a sincere belief in relation to a false premise or idea.

The professionals were intoxicated with their own ignorance concerning the nature of the relationship between a given drug and its effects on the human brain. In effect, the professionals were deeply ensconced in their own form of medication spellbinding or madness ... except the form of medication madness with which they were afflicted (i.e., the willingness to prescribe and administer drugs about which they knew almost nothing) was responsible for inducing another form of medication madness in their patients/clients ... and, therefore, constitutes an iatrogenic problem

The possible implications of the foregoing considerations for the reality problem and the Final Jeopardy challenge are pretty straightforward. Ideas are like drugs ... they affect the way we think, feel, and behave.

One might believe that the contents of one's thoughts, emotions, or actions are an expression of one's own critical, informed analysis of a given situation, when, in reality, everything might be the result of a process – such as occurs in medication spellbinding when a person undergoes involuntary intoxication by imbibing a psychoactive drug – that has been imposed on one through indoctrination, propaganda, or some other prescribed form of undue influence through which one loses the capacity to make free choices concerning the

appropriateness or functional value of one's thoughts, emotions, or behaviors.

One should seek to avoid inducing other people to enter into the conceptual/spiritual counterpart to an involuntary condition of medication spellbinding, and, as well, one should seek to avoid any tendency that might lead to permitting one's own person to be so induced. All too many of the people with medical and technical credentials seem to be far too eager to impose on others a form of medication madness (world view spellbinding) concerning the nature of reality (or how one should respond to the Final Jeopardy challenge), despite considerable ignorance in this regard ... and there will be a great deal of discussion in the rest of the book about precisely this issue.

Chapter 12: The God Gene

Near the very beginning of an article about the ‘God gene’, Dr. Hammer, a molecular biologist by trade, speaks about an inherited capacity for spirituality. The very first problem that I see with this idea is that it seeks to reduce spirituality down to material or physical phenomena. Even if one were to assume, for the sake of argument, that there is a genetic component to spirituality, why should one suppose this component is causal or essential in nature, as opposed to being merely modulating, or helping to give expression to, the process in some way?

For example, Dr. Hammer discusses the gene VMAT2, which stands for ‘vesicular monoamine transporter no. 2’. There are a number of different kinds of neurotransmitters associated with monoamine production -- among them are: serotonin, norepinephrine, and dopamine ... all of which are mentioned in the article.

Many of these kinds of neurotransmitters play a role in coloring mood, but, some of them also are implicated in psychotic symptoms. Thus, one theory of schizophrenia is that some of the symptoms of psychosis -- such as hallucinations and problematic affect (either too much, or too little) -- might be the result of an excess of dopamine. When neuroleptic drugs are given, these drugs affect the quantity and flow of the dopamine neurotransmitter.

What is not explained in such theories is how the chemical imbalance came to be in the first place. Excess dopamine production is the result of something else causing such an anomaly within brain biochemistry, and, as such, the levels of dopamine in a person’s system does not necessarily constitute the cause of schizophrenia but might, itself, be caused by something else.

Staying, for the moment, with schizophrenia, there have been a number of genetic studies done in conjunction with this disorder. What they have found can be summarized in the following way:

(1) if you have a sibling or parent with schizophrenia, your chances are one in ten of also having schizophrenia;

(2) among identical twins, irrespective of whether they are raised together or apart, if one of them suffers from schizophrenia, the

likelihood that the other twin will also suffer from schizophrenia is one in two;

(3) if one has an identical twin with schizophrenia, the odds are six in ten that the co-twin will be similarly afflicted if they shared a single placenta while in the uterus;

(4) children who are adopted and who have been raised by someone who develops schizophrenia very rarely develop schizophrenia themselves.

Taken together, the foregoing suggests there might be a strong genetic component to the etiology of schizophrenia. However, item 2 and 3 both indicate that genetics is not enough to explain the presence of schizophrenia -- for, if this were the case, then 100 % of the co-twins would be schizophrenic if the other twin suffered from schizophrenia, and this is not the case.

Item (3) above also indicates that a cause of schizophrenia might have something to do with what is transmitted via the placenta during pregnancy. One suggestion in this regard involves an, as yet, unidentified viral agent that is passed from mother to child (children) via the placenta.

Consequently, although genetics might predispose us to certain conditions, so does life. To say that genetic factors are correlated with psychotic disorders and/or spirituality says absolutely nothing about the causal mechanism.

Identical twins share precisely the same genetic structure. Yet, not all twins will manifest the same mental, emotional, or medical condition, and, therefore, the answer (even in cases as well-researched as schizophrenia) tends to be quite complicated and messy.

Spirituality is more than mood. It encompasses knowledge, understanding, intention, character, identity, and behavior as well. Are we to suppose that VMAT2 -- the so-called 'God gene' -- is responsible for these other dimensions of spiritual being as well?

The human brain consists of billions of neurons, and these billions of neurons are interconnected by billions of more synaptic junctions that constitute the microscopic spaces where neurons exchange information in the form of neurotransmitters. What neurotransmitters are to be released from these axon terminals, and in what quantities,

and when, and for how long, and whether or not such neurotransmitters are to be reabsorbed (called re-uptake) back into a neuron, and so on is an enormously complicated business that scientists are not even remotely close to resolving into any sort of definitive, clear picture.

The flow of neurotransmitters is a function, in part, of the summation histories involving the firings of billions and billions of action potentials within the neurons of the brain. When certain threshold levels are reached, neurons fire, and when such levels are not attained, then the firing of neurons is inhibited (no one knows, yet, how these threshold values come to be established for different neurons in the first place).

One can really throw a monkey wrench into the grand theorizing that goes on concerning the biochemistry of the brain when one considers the work of John Lorber who, among other things, studied people suffering from hydrocephalus that arises when the ventricles in the brain become blocked in some manner, thereby preventing the flow of continuous circulation of cerebral-spinal fluid. Instead, what happens in people with this condition is that the blocked cerebral-spinal fluid begins to accumulate within the ventricles of the brain. In time, the brain begins to be squeezed against the skull, and if this goes on long enough, the brain is almost compressed out of existence, with just a thin millimeter-thick residue left lining the interior of the skull ... the rest of the skull cavity is filled with cerebral-spinal fluid.

Usually, these individuals suffer from profound mental retardation. However, Lorber came across a few people who, despite having no brains, functioned quite well -- in fact, one of them was an honors graduate in mathematics from Cambridge University in England. Articles about this were written back in the 1970s-1980s with titles like: 'Do you need a brain to think?' and appeared in such prestigious, peer-reviewed journals as Science. So, even if one were to come up with a theory that captured the entire neurochemistry and physiology of the brain so that one could trace from beginning to end how different thoughts, emotions, and behaviors came into existence, one would still have to account for the fact that such theories don't apply to those people who, seemingly, function quite well without the

complexities of action potentials, neurotransmitters, and synaptic junctions.

Dr. Hammer talks about the implications of VMAT2 for the idea of spirituality. Taken out of context, this fact seems interesting. Placed in context, one has to wonder just what it is that he thinks he has discovered with respect to the issue of human beings and spirituality.

The good doctor speaks about the use of a "self-transcendence scale". He says that this scale seeks to measure a person's sense of 'at oneness' with the universe in a way that is independent of religious beliefs. Dr. Hammer goes on to say that the self-transcendence scale actually consists of three different sub-scales.

One of these sub-scales is known as: 'self-forgetfulness' that purports to be an index of an individual's capacity to "completely lose themselves in what they're doing" -- both with respect to everyday activities, as well as in relation to spiritual activities. According to Dr. Hammer, those individuals who score high on self-transcendence tend to be less preoccupied with themselves. They tend to be more focused on everything outside of themselves. In addition, those who score high on the self-transcendence scales supposedly "see the connections to things".

Aside from glossing over precisely what "connections" are being seen by such self-transcendent ones, and whether, or not, there is any relation between such connections and the 'truth' or reality of things, one might also question the whole manner in which self-forgetfulness is being characterized. For example, why should one accept the idea that someone who has forgotten oneself should automatically be more focused on everything outside of oneself ... this certainly is not true for those who suffer from late-stage Alzheimer's disease or various other forms of severe dementia?

In the Sufi mystical tradition, the condition of fana is not a matter of being more aware of either oneself or the external world. Rather, the condition of fana has been characterized as being such that the presence of Divinity is so overwhelming that both one's sense of self and the external world are eclipsed ... there is only awareness of Divinity's presence ... nothing else. One also wonders what sort of set of neurotransmitter transmissions via VMAT2 -- the God gene -- give expression to the condition of fana?

Perhaps, just as one can speak about a television's capacity to receive signals without confusing that capacity with the signals (signals that are quite independent of the television set) being generated (into a picture) by the television set, so too, maybe, while VMAT2 affects -- to some degree -- the quality of a 'spiritual' signal being received, that gene does not cause such a spiritual signal. More importantly, the existence of VMAT2 does not preclude the possibility that many, many, many other factors -- both material and non-material -- might also be affecting the experience of the 'signal' to which the Divine might be giving expression.

According to Dr. Hammer:

"The best interpretation is that the monoamines are affecting higher consciousness. By higher consciousness, I mean the way that we perceive the world around us and our connection to it."

"Affecting higher consciousness" is not the same thing as causing higher consciousness. One can, if one wishes, permit VMAT2 to have a modulating role without, in any way, supposing that it plays a central or causal role with respect to spirituality.

Eating too much, or sleeping too much, or being with people too much, or being too self-involved can all affect higher consciousness. This is why there is something called "suluk" (spiritual journeying) that encompasses, among other things, a discipline for trying to suppress the problematic modulating effects on higher consciousness that such activities have.

However, trying to reduce this all down to the activities of the VMAT2 gene seems ultra-reductionistic. Proceeding in such a reductionistic manner also would seem to have limited heuristic value as far as coming to understand the essential nature of spirituality is concerned.

According to Dr. Hammer, a second component of the 'self-transcendence' index is suppose to involve a psychic element known as "transpersonal identification." This is said to refer to having a sense of unity with the rest of the universe.

Leaving aside, for the moment, the question of why one should refer to this sense of oneness with the universe as a psychic element -- thereby, possibly confusing the occult with the mystical and/or the

psychological with the mystical -- let us assume that I have such a feeling. Or, let us suppose that I answer all the items on the 'self-transcendence' index which suggests that I have a sense of being one with the rest of the universe.

Let's ask a question about this. What is the reality of my sense of things?

By this, I am not asking whether, or not, we are at one with the rest of the universe because this raises the further question of what is the relationship between the 'universe' and Divinity. Conceivably, one could have a sense of connectedness with the universe that is not necessarily spiritual in nature if there is a distinction between the universe and That which has made the universe possible and which lies beyond the universe.

Instead, the aforementioned question is about whether or not I have behaviorally realized the spiritual station of oneness with the rest of the universe. In other words, am I in a position to give behavioral expression to the knowledge, insights, wisdom, discipline, and stations, that are made possible by such an alleged realization of oneness or connectedness.

I am willing to wager that if one were to have a billion people undergo the self-transcendence index talked about by Dr. Hammer, then, at best, not more than a very few might actually be able to walk the walk and not just talk the talk with respect to real mysticism. Furthermore, it strikes me that someone who was actually realized might not be much interested in taking such a test in the first place.

People tend to be very poor judges of where they are -- in reality -- spiritually speaking. This is one of the reasons why authentic guides are necessary since, among other reasons and as someone once said, the one who would step onto the mystical path without an authentic guide has Iblis (Satan) for a guide ... and, undoubtedly, Iblis counsels many people to interpret the results of an index like the self-transcendence to mean that when they feel or believe they are one with the universe, then they should assume that they have actually realized this condition.

Dr. Hammer also speaks about a third sub-scale of the self-transcendence index that is known as "mysticism" or "spiritual

acceptance". According to Dr. Hammer, this sub-scale touches upon such things as one's belief about whether, or not, everything can be explained by science, or whether one is open to the idea of phenomena such as ESP, or whether one feels that one's life has been changed by mysticism. Again, one might ask the question of what, if anything, such a sub-scale has to do with either spirituality or mysticism ... as a reality and not just a belief system.

One doesn't even have to touch upon the issue of mysticism in order to be able to agree that there are all kinds of things that science cannot explain. For instance, science can't explain consciousness, or intelligence, or creativity.

In fact, science can't explain the very processes that are used by human beings to do science ... for example,; how do ideas come into being? From where do insights come? What is the source of logic? What makes talents such as art, music, writing, and invention possible? How is language possible?

Science is often very good with setting up linear systems of mathematical description that are capable of reflecting some of the facets of experience to an extent where certain kinds of limited problems can be solved. Unfortunately, most of the physical universe is non-linear in nature, not linear, and, as a result, much of science -- despite all of its accomplishments -- is, for the most part, looking at reality in a rather limited fashion.

Once one throws spirituality and mystical issues into the fray, things get really confusing and problematic ... very quickly. Science can't proceed unless one accepts its assumptions that spirituality is a physical phenomenon and that material instruments (whether physical or mathematical) can be devised that are capable of accurately probing the realm of spirituality.

If spirituality is not a physical phenomenon, then what good is a discipline that demands that everything be reducible to physical phenomena before one pursues developing theories and doing experimentation with respect to such issues? One cannot assume one's conclusions, and if spirituality is a non-material set of phenomena, then there is absolutely nothing that modern science, as presently conceived, has anything of value to say about such matters ... and, of course, this explains why so many scientists are so insistent on either

reducing spirituality down to material/physical phenomena, or dismissing all things spiritual as being unscientific.

This sort of dismissal of spirituality is supposed to have import. After all, if something is not scientific, then its reality is, supposedly, not worth pursuing and the 'substantive' nature of such phenomena does not belong in the realm of the 'important' discourse of the sciences.

How self-serving of scientists. They discover a phenomenon that is entirely beyond their capacity to understand or even study with their methods and instruments, and, so, they relegate such phenomena to the dust bin of the trivial, uninteresting, unreal, and unimportant.

Or, they do the condescending two-step dance in which they say that although spirituality is not unimportant, nonetheless, it is not scientific, and, therefore, not of much value when it comes to trying to understand fundamental things about 'real' issues. Many scientists are like the drunk who was seen crawling around beneath a street lamp looking for his keys and when asked if that is where he lost them, he replies: "No, but this is the only place where there is light."

Dr. Hammer indicates that scientists rounded up a bunch of people and had them take the self-transcendence measure. These researchers, then scoured the genes of such individuals looking for differences, and they found that the gene VMAT2 was correlated with people who also scored high on the aforementioned self-transcendence index. The monoamines that are synthesized through the activation of this gene have, according to Dr. Hammer "a lot to do with emotional sensitivity."

Now, apparently, spirituality is to be defined as being a function of "emotional sensitivity." In fact, the neurotransmitters that are synthesized through the activation of the VMAT2 gene are implicated in a lot of different functions ... not just emotional sensitivity.

Moreover, one might keep in mind that nothing has been said about what causes a VMAT2 gene to begin expressing itself in the first place. Therefore, at, best, VMAT2 activation is a result of something else, and not necessarily a cause, if an of itself, of anything else.

For example, dopamine is involved in the regulation of muscle movement. That is, in order for muscles to be used in a controlled fashion, there must be adequate supplies of dopamine available.

Tardive dyskinesia is an affliction that is caused by the way in which certain drugs -- for example, chlorpromazine, a first-generation neuroleptic given to schizophrenics -- deplete the supply of dopamine in the brain. So, while the depletion of dopamine does seem to help reduce certain symptoms of schizophrenia (such as auditory hallucinations), unfortunately, in the process it also might interfere with normal muscle functioning, and, consequently, in some patients who are given such dopamine-depleting drugs, they develop uncontrollable tics and tremors.

This is an irreversible process. Once the damage is done, its results remain even if the person discontinues taking the drug.

To oversimplify mysticism and spirituality as merely variations on a condition of emotional sensitivity -- as Dr. Hammer does -- is one problem ... a huge one. To oversimplify neurochemistry and to say that monoamines only function as mood stabilizers -- as Dr. Hammer does - - is another big problem. To fail to say anything about whether the group of people who were rounded up for the self-transcendence/VMAT2 gene correlational study was a randomly selected group and, therefore, capable of, possibly, reflecting something about populations in general is a third problem. To fail to note -- as Dr. Hammer failed to do in the article -- that correlation is not necessarily an index of causation is a fourth problem. And, to try to claim that the self-transcendence index is an accurate measure of spirituality or mysticism is a fifth problem ... also a very substantial one.

Toward the end of the interview with Dr. Hammer, the person conducting the interview asks why the doctor does not wish to use the VMAT2/self-transcendence study as a basis for saying anything about the existence of God. Dr. Hammer replies that he feels that such research is really agnostic with respect to the question of whether spirituality is all in the mind or due to the presence of some higher power. He goes on to point out that the research concerning the so-called God gene is really only about the way in which the mind operates and, as a result, perceives things.

I remember when I was going through an oral defense of my honors thesis when I was an undergraduate. One of my examiners was Robert Rosenthal -- famous for, among other things, the Pygmalion

Effect (roughly, and over-simplistically perhaps -- the expectations of teachers concerning students influences both student performance as well as the evaluation of such performance). At one point, in response to something I said in conjunction with the issue of proving God's existence – he said words to the effect of: "To prove the existence of God, all one has to do is take a group of people and ask them whether they believe in God." I replied that this didn't prove the existence of God; it only proved what people believe about the idea of the existence of God.

Similarly, the whole idea of the 'God-gene' really has not much to do with anything. At best, it reflects the beliefs of some researchers, such as Dr. Hammer, about their interpretation of that research concerning the correlation of the VMAT2 gene and how people score on a self-transcendence scale.

The short version of their understanding is this: there is a gene (VMAT2) that, when called upon to do so by some other dimension of the human being, synthesizes monoamines that, under some circumstances, have been implicated in affecting mood, and, possibly, emotional reactivity. In addition, there are certain people who score highly on one, or more, of the sub-scales of a self-transcendence index who, statistically, have been shown to be correlated with (and no indication was given in the interview of just what the strength of this correlation was, so we have no way of knowing if where it was between 0 and +1) with people who also have the VMAT2 gene.

It is only the worst kind of loose use of language, scientific methodology, and extrapolation that results in calling VMAT2, the 'God gene'. The gene really has not been shown to have anything to do with spirituality, mysticism, transcendence, or anything similar unless one accepts the assumptions underlying the self-transcendence scale as being accurately reflective of what spirituality, mysticism, and transcendence involve ... and that scale is just not a good, reliable, reflective instrument with respect to any of these possibilities.

What is the meaning of the correlation between the presence of the VMAT2 gene and spirituality/ mysticism/transcendence? The truth of the matter is we don't know.

Bad science leads to problematic conclusions, and that is precisely where Dr. Hammer has brought us with his talk of a 'God-gene'.

Furthermore, contrary to his contention that all his research shows is the way the mind perceives things, the fact of the matter is he really hasn't even demonstrated this. Quite a few more empirical pieces of the puzzle of perception, interpretation, and understanding will have to be filled in before one will be in a position to make such a claim.

Chapter 13: Emergent Properties and the Mind

In the worlds of medicine and psychology, neurobiology is enjoying tremendous popularity and success by virtue of the many discoveries concerning the roles of, among other things, various classes of neurotransmitters, as well as of neuromodulators such as endorphins, enkephalins and neurohormones (neuropeptides) in brain functioning. Some scientists are claiming that the promised land of a complete mapping of the brain with all its intricate electrical and chemical pathways might be near at hand.

As a result, age-old secrets underlying consciousness, intelligence, language, creativity, personality, sexuality, and identity supposedly are being revealed almost on a daily basis. For example, one popular theory of brain functioning suggests there is an increasing amount of evidence that appears to indicate that all of the complex, higher functions that traditionally have been considered to distinguish human beings from most, if not all, of other forms of life on Earth, can be conceived as no more than emergent properties arising out of the trillions of interactions taking place in the billions of synaptic junctions of the nervous system -- transactions that, ultimately, are rooted in, or based on, the activity of a fairly small number of neurotransmitters and neuromodulators, together with some relatively simple (although quantitatively vast) electrical circuitry.

Roughly speaking, an emergent property is a quality exhibited by a given system that could not be predicted on the basis of just looking at the basic components and processes that tend to characterize that system. On this view, the sheer number of interactions entailed by the activity of a small set of neurotransmitters, neuromodulators, along with a few different modes of electrical rhythms, is as important, if not more so, than the biological components and kinds of process that are interacting with one another.

Concepts such as self-organizing systems, reiteration, dissipative structures, non-linear dynamics, chaos theory, parallel processing, feedback, and so on are the watch-words in theories of emergent properties. In effect, amazing new, unforeseeable, qualitatively different functions are said to be capable of arising out of the complexity of interactions of a relatively small and simple set of underlying components and processes when these properties and

processes come together in the right set of conditions that are governed by the principles believed to be inherent in a confluence of, for example, non-linear dynamics, dissipative structures, cybernetic feedback systems, phase transitions, and so on.

A number of years ago Karl Popper developed an approach to the philosophy of science that came to be known as "falsificationsim". Essentially, Popper was concerned with the issue of how to demarcate or distinguish defensible science from metaphysical systems and/or pseudo-science.

Briefly stated, and in somewhat oversimplified terms, the criterion that Popper settled on to establish such a line of demarcation was the way he believed the enterprise of science was rooted in processes of empirical observation from which one could deduce certain ideas, theories, and possibilities that could, in turn, be tested and, therefore verified -- or not -- when considered against the backdrop of empirical evidence. More specifically, he believed that while, on the one hand, there was no number of positive results from the foregoing sort of open-ended set of empirical probes that could prove a given theory, law, or principle was true, nonetheless, on the other hand, just one contra-indication was enough to bring into question the validity or truth of any such theory, principle, or law.

Thus, Popper maintained the essence of science resided in its tendency to focus in on the challenge of falsification. In other words, the test of a science -- as opposed to metaphysical speculation or pseudo-science -- involved a willingness for any given instance of exploration to expose itself to empirical, deductive judgments that entailed being measured against available evidence by means of experiments and tests that yielded data that could be shown to be either consistent or inconsistent with the theory, principle, idea being considered.

If a system of thought was not subject to being falsified in the foregoing sense, then, according to Popper, this was a strong indication that the conceptual framework in question was more likely to be an instance of metaphysical thinking or some sort of pseudo-science than it was an exemplar of authentic scientific activity. Similarly, if a given hypothesis, idea, theory or law could be shown to be falsifiable by experiment in the context of available empirical

evidence, then, on this basis, one had good reason either to reject such a hypothesis in its entirety or to require its proponent(s) to return to the drawing board and re-work the hypothesis and/or theory in a way that eliminated the aspect that had been falsified through some form of empirical demonstration.

As with most things in the philosophy of science, there were both important insights contained in Popper's idea of falsification, as well as problems. In effect, when Popper's philosophical framework was itself subjected to a rigorous round of falsification by other philosophers of science, his system exhibited a variety of lacunae and problems in the context of available evidence concerning activities that were considered to be part of "science" -- both historically as well as in some of its modern forms.

For present purposes, the ultimate validity of Popper's system of thought is unimportant. What is important is that he provides an idea - - namely, falsification -- which can be used to help critically reflect on the aforementioned theory of emergent properties when the latter is applied to the field of neurobiology.

For instance, what is one to make of the idea of emergent properties when considered in relation to some findings of Dr. John Lorber from a few decades ago? Lorber was a British clinician who, a number of years ago, generated some interesting data that raise a lot of questions for many facets of neurobiology -- especially the notion of emergent properties.

Dr. Lorber was working with people who were hydrocephalic. These are individuals who have a problem with the flow of cerebral-spinal fluid in their nervous systems. Normally, cerebral-spinal fluid flows in a continuous loop that links the spinal column and the brain. Among other things, this flow runs through a series of four ventricles or cavities within the brain.

Sometimes -- whether due to congenital defects or post-birth trauma or a combination of the two -- a blockage arises at some point in the flow of the cerebral-spinal fluid that causes the fluid to accumulate in one or more of the aforementioned ventricles. As more cerebral spinal fluid is produced and accumulates in this ventricle system, it begins to exert pressure on the brain.

Since the brain is surrounded by the skull and, therefore, the brain has, in a sense, no place to go, the pressure being exerted by the cerebral-spinal fluid that is accumulating in the brain's ventricle system begins to compress the brain against the skull's interior surface. Given enough time and/or if -- when possible -- a shunt is not put in place to relieve this pressure, the brain is slowly squeezed into a volume consisting of just a few millimeters spread around the inner surface of the skull.

If the increasing pressure of accumulating cerebral-spinal fluid is not relieved within a certain critical time period through the use of a shunt or other medical procedures, the damage appears to be largely irreversible. In fact, usually, the untreated effect of this process of hydrocephaly is severe retardation.

I said "usually" above because Dr. Lorber discovered some rather amazing exceptions to the general rule. Some of the individuals he studied who suffered from hydrocephaly were quite normal in their functioning, and there even were some college graduates among this subset of exceptions.

For instance, one of the individuals in Lorber's study had earned a honors degree in mathematics at Cambridge University. Yet, when a scan was done of this individual's head, the scan indicated that almost the entire brain had been squeezed out of existence. All that remained was an extremely thin strip of neural matter running around the interior of the skull casing. Lorber wrote up an overview of his studies and submitted them for publication in some reputable journals of science. His work survived the peer review process (e.g., *Science* magazine) and found its way into print with titles such as "Do You Need a Brain to Think?"

In the 19th century, the unfortunate Phineas Gage made clinical history when he survived an accident that resulted in an iron rod penetrating his brain, but later he began to show marked changes in personality, temperament and mental functioning. These clinical findings with respect to Gage were part of a vast array of empirical data that accumulated during the next century that indicated that there seemed to be a very strong relationship between the location of certain kinds of brain trauma and the nature of the dysfunctional

character in language skills, mental abilities, personality, and so on which subsequently manifested themselves in such individuals.

As outlined previously, Popper believed there was not any number of positive findings that could prove that a given hypothesis or theory was true, but, yet, one negative finding could falsify a theory or hypothesis. Thus, in the present context, despite the fact there is an extremely imposing array of data that ties brain functioning to localization of brain activity, one has to ask what is the significance of Lorber's clinical findings with respect to hydrocephaly that appear to provide some contra-indications to the idea that thinking, logic, consciousness, understanding, and language are necessarily "caused" by neurobiological activity?

Is there, somehow, sufficient brain matter left intact in some of Lorber's hydrocephalic individuals that they are capable of normal, if not above normal, functioning? If so, why are the vast majority of people who suffer from hydrocephaly severely retarded? If so, what is the critical mass of neural material that is necessary such that below this amount, retardation occurs, and above it, normal functioning ensues?

Is the determining factor in whether retardation or normal functioning occurs a function of the sequence of brain degradation in the sense that one sequence of degradation leads to retardation, while another sequence permits normal functioning? Or, alternatively, since there is some evidence indicating that sudden degradation of neurobiological integrity leads to greater and longer-lasting dysfunctional conditions than does the same (or sometimes a greater) amount of degradation occurring over a longer period of time, is the end result of any given case of hydrocephaly a matter of the amount of time that elapses before the degradation process reaches its final state – does relatively rapid degradation lead to a more severe dysfunctional state than a slower process of degradation?

If, as Lorber's findings suggest, we don't necessarily need a whole lot of neural matter to function normally, then why do we have a three-pound universe residing above our neck consisting of billions of cells and trillions of interconnections? If, as Lorber's findings suggest, brain functioning is only "correlated" with higher mental functioning, what are the "causes" of such functioning?

Whatever the answer to the foregoing questions might be, one idea appears to be in need of being re-worked. In other words, some of the individuals in Lorber's various studies -- the ones without most of their brains, and, yet, still able to function normally (or better) -- seem to indicate that whatever causally underlies our higher mental faculties, the hypothesis of emergent properties would seem to have been falsified in, at least, a few cases.

Presumably, in a brain that has been reduced from roughly 1300-1700 cubic centimeters down to a volume consisting of only a few millimeters dispersed over the interior surface of the skull casing, a substantial alteration has taken place in the level of complexity of the system. In such cases, one no longer necessarily has the same vast number of intact cells and synaptic interactions taking place within a few millimeters that had been present in a full-volume, three-pound brain.

If this is so, then whatever the cause of our higher cognitive functions might be, there appear to be some instances of such abilities that do not seem to be a function of so-called emergent properties that arise out of the sheer number of neural transactions that characterize a normal brain. This does not necessarily mean that emergent phenomena of some sort do not occur in such contexts, but, only that, one is going to have re-conceptualize what is meant when one claims that higher cognitive functions are an example of emergent properties in action.

More specifically, one must come up with a fairly specific explanatory framework of just how non-linear dynamics, dissipative structures, phase transitions, chaotic systems, reiterative processes, and so on are capable of generating consciousness, logical thought, understanding, language, and/or creativity through neurobiological activity involving just a few millimeters of brain matter . Right now, the notion of emergent properties is little more than a weak metaphysical way of confessing that we really have no idea how -- or even if -- any of our higher cognitive abilities arise out of the interaction of neurotransmitters, neuromodulators, and neuronal electrical circuitry.

Yes, as is attested to by a great deal of medical and scientific evidence, there is a definite correlation between such neurobiological

activity and cognitive functioning. But, correlation is not necessarily indicative of causality, and when one has empirical data such as that which has been provided by John Lorber that appears to falsify certain aspects of the theory of emergent properties in neurobiology, then one has a fairly clear warrant for re-thinking this whole conceptual approach to understanding the nature of the mind.

Chapter 14: Sheldrake's Theory of Morphogenetic Fields

The mechanistic theory of life holds that all properties of living organisms can be completely accounted for in terms of physical and chemical laws. On the other hand, vitalist approaches propose one must posit the existence of some non-mechanical causal principle (or set of such principles), in addition to the mechanical principles of physics and chemistry, in order to explicate the various facets of the phenomenon of life. Finally, there are holistic or organic theories of life that attempt to explain the phenomenon of life as a function of emergent properties.

Emergent properties are believed to manifest themselves at certain levels of hierarchical complexity. Their appearance cannot be anticipated on the basis of the principles that are operative on lower levels of complexity.

In effect, emergent properties are said to manifest themselves when certain kinds of hierarchical complexity reach a sort of critical mass and begin to generate phenomena as an expression of the way the whole system interacts together. Consequently, emergent properties are considered to be by-products of the complexity of a given system taken as a whole, rather than the result of some sub-system of mechanistic principles.

Rupert Sheldrake considers the idea of morphogenetic fields to be an example of the organic approach to theories of life. In general terms, morphogenetic fields are believed to be the agencies that are the source of various kinds of structure, form, shape and organization that are manifested in living systems.

According to Sheldrake, morphogenetic fields transmit their structuring influences across both space and time such that there is a cumulative structuring effect from one point in time to another, as well as from one point in space to another. However, these influences are only passed on to, or affect, systems that are "similar" in some sense.

The hypothesis of formative causation plays an important role in Sheldrake's model. Essentially, this hypothesis says that the degree of repetition that is associated with a given morphogenetic field will

affect the intensity of the influence of that field on similar fields with which it comes into contact.

On the basis of the hypothesis of formative causation, Sheldrake says one could expect or predict that something of the following sort will occur. When a given species of animal learns a new form of behavior, then, subsequent members of that species will exhibit, if raised under conditions that are similar to the original group, a tendency to learn such a behavioral form more quickly than when the new behavioral form was first introduced into that species. Furthermore, within certain limits and up to a certain point, the learning curve will accelerate with each successive generation of the species that is taught the behavioral form at issue.

In addition, Sheldrake maintains that the acceleration of the learning curve will be affected by the quantities of species members that are involved in the original, and subsequent, learning experiences. In other words, if one uses only a few members in the original, and subsequent, learning trials, then, the influence of the morphogenetic field that is set in motion will be relatively weak compared to the strength of the morphogenetic field that will be generated if one had used thousands of members in the original, and subsequent, learning trials.

There are a number of questions that arise in relation to the foregoing. For example, if what Sheldrake says is true, then, why don't the subsequent generations of adherents of a given religion learn their religious tradition more quickly, more deeply and more completely than do the early adherents of that tradition? After all, it is almost universally acknowledged that the early adherents of a religious tradition are often the best exemplars of that tradition- best in the sense of having most completely and most deeply mastered the various aspects of the tradition. One might even argue the earlier adherents also pick up the tradition more quickly than subsequent generations of adherents because they have direct access to the individual who is the prophet or avatar or saint who introduced the tradition.

In order for Sheldrake to put forth a tenable position, he is going to have to be able to offer a plausible way of resolving the foregoing problem. For instance, one way of addressing the aforementioned

difficulty might be to suppose there are other morphogenetic fields in existence that are antagonistic to the spiritual morphogenetic fields being generated through a prophet and his followers. As a result, the influence of the spiritual morphogenetic field might be dampered, modulated or curtailed by the existence of other kinds of morphogenetic fields that are antagonistic to the first kind of field.

However, if one were to adopt the foregoing position, one would be faced with a further question. Given the presence of antagonistic morphogenetic fields, how does one account for the emergence of a morphogenetic field that runs counter to the already existing fields? One might suppose that the inertial character of the already existing, antagonistic systems would be too much to overcome for the fledgling morphogenetic field.

One also would like to know whether or not the rate or intensity with which a given morphogenetic field is generated will be affected by the truth value, if any, being manifested through that field. In other words, is the character of transmission of a morphogenetic field at all affected by the structural character of the content of what is being transmitted through that field?

If the morphogenetic field is value neutral such that the correctness or incorrectness of what is transmitted is immaterial to the rate or intensity or extent of field generation, then, one will have to keep in mind there might be a lot of morphogenetic fields in existence that could prove to be antagonistic to one another since their truth values conflict with one another. Getting a 'true' morphogenetic field either started or sustained might be difficult because, in a sense, it will be swamped by so many 'false' morphogenetic fields. Such pseudo-fields give expression to structures that have, ultimately, a dissipative effect with respect to the establishing and strengthening of a given field that accurately reflects some aspect of reality. On the other hand, introducing, transmitting and sustaining structures such as rumors, myths, or false theories, might prove to be easier since there not only tend to be so many more of these sorts of positions relative to the number of true fields, but one might wish to argue there is a certain similarity among all these false ideas, myths and so on by 'virtue' of their aspect of falseness.

The answer to the question of whether or not the extent of accuracy characteristic of a given morphogenetic field will have any effect on transmission rates, intensities, range and so on will have a variety of implications for not only educational issues but cultural issues as well. Both cultural processes and educational processes are quite structurally complex.

Consequently, in each case there likely are a wide variety of morphogenetic fields that complement, compete with, supplement, overlap with, reinforce and/or conflict with one another. The stresses, strains, and tensions that are introduced by such a variety of morphogenetic fields will have to be taken into consideration in trying to come up with a coherent, consistent, and constructive, set of educational and/or cultural programs that will be of intellectual, political, moral, economic, legal, emotional and spiritual value for the individual.

When biological development is described as epigenetic, reference is being made to the manner in which certain biological systems increase in complexity, both with respect to organization, as well as form, over time. Mechanistic, vitalistic and organismic theories of life all acknowledge that many biological systems manifest such epigenetic properties, but these theories differ radically in the way in which they attempt to account for what makes it possible.

The term entelechy comes from a Greek word referring to an entity that carries within itself a goal toward which that entity tends. The term was introduced by Hans Driesch, an embryologist, who believed there were many facets of development, reproduction, regeneration, etc., that could not be explained satisfactorily by mechanistic theories of life.

For Driesch, entelechy represented a non-physical, vitalistic, causal factor that operated on the physical-chemical aspects of biological systems- shaping, regulating, and organizing those aspects into various sorts of organelles, tissues, organs, and bodies. Although the biochemical substances and processes that make up genes, chromosomes, metabolic pathways, and so on, constitute the material medium through which morphogenesis is given expression, the

ordering principle responsible for the regulation of the morphogenetic process is, according to Driesch, entelechy.

However, the idea of entelechy was not intended by Driesch to be a metaphysical principle. He believed it was a purely natural, causal phenomenon, capable of acting on material substances. Furthermore, although Driesch did not consider entelechy to be a manifestation of any form of energy, he maintained this principle did not violate either the first or second laws of thermodynamics.

Driesch contended that not all events on the micro level of biological systems are fully determined by mechanical principles. He believed there was indeterminacy in biological systems at the micro level, even though the events that took place on the macro level could be observed to obey various statistical laws.

The principle of entelechy was posited by Driesch to operate within the parameters of indeterminacy existing on the micro level. This principle would impose its ordering process on physical-chemical systems by regulating the phase relationships that determined when a given micro event would be given expression. Through a process of constraining and/or enhancing such events, entelechy organizes biological activities in accordance with its own ends-oriented ordering principle.

Sheldrake does not automatically dismiss the idea of entelechy. However, he is dissatisfied with its vitalistic orientation that requires a non-physical principle to operate on, in some inexplicable way, physical systems.

Holistic or organismic theories arose against the backdrop of the same sorts of problems that had led to various vitalistic theories of life being proposed. These problems were reproduction, regeneration, and development. However, rather than resort to some mysterious vitalistic principle, holistic theories were rooted in ideas like morphogenetic fields and the chreode. The latter term was introduced by C.H. Waddington and referred to the way in which embryological processes seemed to be canalized toward certain structural ends as a result of the manner in which the epigenetic landscape was laid out over time.

Sheldrake considers theories such as Waddington's to be largely descriptive, rather than explanatory. He even points out that Waddington himself treated the idea of a chreode as little more than a descriptive convenience.

Sheldrake states that those people who attempt to equate entropy with the idea of disorder are mistaken. He points out that according to the third law of thermodynamics, every pure, crystalline solid at absolute zero will have an entropy value of zero. Since there is no thermal agitation at absolute zero to disturb the system's thermodynamical properties, there will be no element of disorder introduced into such a system. Therefore, there will be no entropy present.

However, if one takes two pure, crystalline solids, such as salt and hemoglobin, although their entropy values are equivalent at absolute zero, the two differ vastly in the structural character of their complexity. Consequently, one cannot equate complexity or degree of order with entropy.

Sheldrake also speaks of instances in which order and entropy values will go in opposite directions. In other words, sometimes a series of biological events will occur that result in an increase of entropy. Nevertheless, at the same time, these events also bring about an increase in morphological complexity and order. Again, the indication is that entropy and disorder are not necessarily covariant entities.

The term "formative" is used in Sheldrake's hypothesis of formative causation in order to distinguish the kind of causation that he has in mind from the sorts of causation that are rooted in the physics of energy. Although morphogenetic fields have an association with physical systems of energy, such fields are not themselves a function of, or expression of, energy systems.

On the other hand, Sheldrake contends that the morphogenetic field is a spatial structure akin to other fields such as the electromagnetic and gravitational fields. Like these latter sorts of fields, the morphogenetic field makes its presence known through the spatial forms and structures to which it gives expression.

Sheldrake contends there are a vast range of different kinds of morphogenetic fields. Essentially, there will be a different morphogenetic field for each kind of form that exists.

All the elementary particles will have their individual morphogenetic field, as will different atoms, molecules, cells, organelles, tissues, organs, species, and so on. Furthermore, just as organisms are said to be hierarchically organized at every level, so, too, morphogenetic fields are hierarchically organized. In fact, each morphic unit of a given level of organismic hierarchical organization will be regulated by its own particular morphogenetic field.

According to Sheldrake, the morphogenetic process only can arise when a morphogenetic germ is present. A morphogenetic germ is an existing, organized structure or system.

Morphogenesis occurs when the germ develops into a more complex structure or system through the effect that an associated morphogenetic field has on that structure or system. Although Sheldrake contends that a morphogenetic field becomes associated with a morphogenetic germ as a result of similarity of form between the two, he doesn't explain where the morphogenetic field comes from in the first place.

Moreover, he does not provide an account of how the field and germ become associated at the time of morphogenesis. Or, if the field and germ are always associated, he does not elaborate on what switches the field on and off at different times, or on what coordinates the switching on and off of a variety of different, interacting germ/field systems.

As noted previously, Sheldrake does indicate there is a whole hierarchy of morphogenetic fields. However, this doesn't so much solve the foregoing problems, as much as it merely provides a means of evading them.

Even given such a set of hierarchically arranged morphogenetic fields, one would still like to know: (a) where they come from; (b) how they are generated; (c) how morphogenetic germs and fields become associated; and, (d) how the non-physical morphogenetic fields are able to influence, or act upon, physical morphogenetic germs.

In Sheldrake's words, "the morphogenetic germ is a part of a system-to-be" This means the morphogenetic field that is associated with that germ is partially active and partially potential or virtual. In other words, in so far as the germ exists, it has an associated morphogenetic field surrounding it that is capable of operating on the germ and inducing the process of morphogenesis in it. In this sense, the associated morphogenetic field is active, and the interaction between the field and the germ generates a system that is beginning to manifest itself morphogenetically.

However, there are still aspects of the germ-field interaction that have not, yet, been activated, and, therefore, according to Sheldrake, the germ-field constitutes a kind of form in waiting. Consequently, under the appropriate circumstances and at the opportune time, these currently non-activated aspects of the germ-field system will be given expression and the full structural character of what once was a 'system-to-be' becomes a fully realized, operating germ-field system.

In short, Sheldrake believes the morphogenetic field contains the formal blueprints, so to speak, for the morphogenetic process of unfolding or becoming. By acting on the physical/material medium of a given morphogenetic germ, the field induces that germ to undergo morphogenesis in the directions and ways prescribed by the blueprint or virtual form inherent in the associated morphogenetic field.

Sheldrake speaks of the morphogenetic field as containing a virtual form which, in time, is to be given expression through its influence on the physical/material medium of the germ. However, looked at in another way, the morphogenetic field is already an actual form waiting to operate on the structural character of the morphogenetic germ so that the form of the field can be manifested on, or given expression on, another level of scale- namely, in the physical/material world.

Therefore, one is not so much dealing with a case in which something that is virtual becomes actual. Rather, what Sheldrake is referring to seems to be something that is already actual and, then, subsequently, becomes manifest on a different level of scale.

The germ is not a geometric point without any internal structure that suddenly produces complexity where previously there only had been pure simplicity of the most fundamental sort. The morphogenetic

germ has a spectrum of ratios of constraints and degrees of freedom covering a range of differentiated functions, properties or characteristics.

Consequently, morphogenesis is a process that takes already complex structures (even at the level of, relatively speaking, simple morphic units) and by altering certain aspects of the spectrum of the ratios of constraints and degrees of freedom, brings about a transformation of the character of the structural complexity that is being given expression. Thus, what had been, inwardly, a complex structure but, outwardly, appeared to be a relatively simple morphic unit, now, under the influence of the morphogenetic field, becomes, outwardly, manifested as a complex structure. The germ, in other words, had always been structurally complex, but what had been hidden complexity now has become manifest complexity.

According to Sheldrake, there are two broad types of morphogenesis. One type is referred to as aggregative. The other type of morphogenesis is called transformative.'

In aggregative morphogenesis a number of independent morphic units are brought together to form a more complex morphic unit. In the case of transformative morphogenesis, a given morphic unit becomes transformed, under the influence of the morphogenetic field, into a more complex morphic unit.

However, this distinction between aggregative and transformative morphogenesis seems somewhat arbitrary since, on some level of scale, one probably could construe virtually every process of morphogenesis as a bringing together of a variety of previously independent morphic units. Even in the case of transformative morphogenesis, one might well argue that the transformation takes place as a reordering or reorganizing of various morphic units within the morphogenetic germ, and as such, constitutes the bringing together of a variety of independent units to give expression to a more complex form.

Sheldrake likens morphogenetic fields to the orbital pathways of particles that are described by quantum mechanics as probability distributions. One cannot give specific details about the precise

location and velocity of a given particle within its orbital and, therefore, one is required to work out a probability distribution that shows the likelihood of finding the particle in question at any given location in the orbital.

So too, Sheldrake believes there are a variety of indeterminacies associated with the morphogenetic field. As a result, he proposes the morphogenetic field be construed as a probability structure. This probability structure gives expression to a set of distributed values concerning the process of unfolding of structural complexity in association with a given morphogenetic germ.

From the perspective of this essay, probability structures are a function of the way a given kind of methodology engages an aspect of ontology or the phenomenology of the experiential field and, as a result of this engagement, generates an interpretation of that engagement process. Probability structures are the methodological means one uses to keep track of how various ontological structures' spectra of constraints and degrees of freedom express themselves over time.

Morphogenetic fields (assuming, of course, that they actually exist) and wave phenomena both give expression to a latticework of phase relationships that establish a ratio or spectrum of ratios of constraints and degrees of freedom that are capable of giving expression to particular kinds of structural character under a given set of circumstances. Probability structures, of one description or another, are attempts to map various dimensions of such morphogenetic fields.

The amino acid sequence that constitutes a given protein takes on a tertiary structural form by folding into a three-dimensional configuration. A polypeptide chain of amino acids only becomes a functional protein when it has assumed a certain three dimensional configuration. Moreover, each distinct protein has a characteristic tertiary structure.

Because this folding process occurs more quickly than would be predicted if one assumed it was taking place as the result of a random search through possible energy configurations, Sheldrake suggests the difference between actual and predicted folding time indicates the

folding process follows certain preferred paths. He interprets this to mean there is a morphogenetic field present that is placing constraints on the manner in which the folding process will work its way through the energy configurations available to the polypeptide chain. Such a preferred path is referred to by Sheldrake as a chreode (cf. Waddington) or canalized pathway.

Sheldrake also briefly discusses the way in which the processes of symmetry breaking, phase transitions and dissipative structures frequently display a wide diversity in the structural character of the outcomes of these sorts of phenomena. In cases such as these, there are a large number of energy configurations that are possible. Although one often can predict the general thermodynamic character of the outcome of these processes, one cannot predict the structural form that will manifest such a thermodynamic character.

In other words, the physical and chemical laws governing a given system present a range of energy or thermodynamic configurations that are possible under the conditions that prevail in the system. The morphogenetic fields select from among those possibilities that are permitted by chemical and physical laws under a given set of circumstances.

He points out, however, that not all of these cases of change in form necessarily involve morphogenetic fields or the process of formative causation. Sometimes transitions in form are the result of purely random events. On other occasions a particular change of form might occur because it represents the structure that gives expression to the condition of minimum-energy or maximum stability.

Moreover, Sheldrake believes morphogenetic fields, when they are present, do not act in opposition to chemical or physical process. He contends they act in concert. Indeed, such physical and chemical processes become the medium through which the morphogenetic field manifests its effect.

Sheldrake's admission that there are instances of transition in form that are not the result of morphogenetic fields again raises questions about the origin of such fields, as well as about how a morphogenetic field comes to be associated with a given form or

morphogenetic germ. In addition, one might wish to ask why there aren't morphogenetic fields associated with such things as minimum energy states, or whether one can really speak of any process being random.

In the latter case, one might wonder why one couldn't construe the so-called 'random' process as being part of a system-to-be. What Sheldrake refers to as random events might be a system-to-be that is merely idling within certain parameters of constraints and degrees of freedom until an appropriate morphogenetic field imprints a blueprint of formative causation on such a process.

Indeed, one might suppose the entities or elements or objects that are caught up in the 'random' process constitute morphic units that already are operating under morphogenetic fields. As such, they might be passing through an interim phase until some higher hierarchical morphogenetic field comes along and organizes these individual morphic units into a more complex system.

Sheldrake outlines two broad approaches to answering the question of where morphogenetic fields derive their form. One possibility is that morphogenetic fields are expressions of eternal, fixed forms of the sort that either Plato or Aristotle talked about, each from his own perspective. The other possibility that Sheldrake outlines is actually not an answer at all. It leaves, instead, the issue shrouded in the mystery of the unknown.

In this second possibility, Sheldrake says no scientific answer can be offered as to why a morphogenetic field of a given form first arose. Nonetheless, once such a field has arisen, it is capable of transmitting its influence across time and space to bring about the transformative or aggregative morphogenesis of some morphogenetic germ(s).

Furthermore, Sheldrake maintains his hypothesis of formative causation is concerned with the effect that the role that the repeating of forms plays in morphogenesis. Consequently, he believes the origin of forms is a non-issue as far as the idea of causative formation is concerned.

While Sheldrake can chose to whistle past the cemetery if he likes, as long as he refuses to treat the problem of origins as a clear and present issue, his perspective becomes permeated by a large degree of

arbitrariness. Not only is he unable to explain the origins of the forms of such fields, he cannot account for how they transmit their influence, or how they come to recognize a given morphogenetic germ as a resonant form with which to become associated.

Later on he uses the term "resonance" to suggest how a given morphogenetic germ, entity or system "recognizes" similarity in another morphogenetic germ, etc.. Nevertheless, in the context of Sheldrake's discussion of morphogenetic fields, resonance is a term that gives the illusion of an explanation without actually possessing the reality of such an account.

Resonance becomes like a black box in which something takes place that permits non-physical fields to interact with, and influence, physical systems. Yet, one never comes to understand what the nature of the resonance is that is set in motion between non-physical and physical systems.

Resonance is a term used in science to describe situations in which the structural character of the vibration of one system acts upon some other system because the oscillating character of the latter system has a natural frequency that is very similar to the oscillating character of the first system. Resonance is a selective process in as much as it only occurs within fairly specific parameters of oscillating character.

Sheldrake believes the interaction between a morphogenetic field and a morphogenetic germ is a case of morphic resonance. However, unlike the sort of resonance that occurs in purely physical systems, morphic resonance does not involve energy in any way. On the other hand, like instances of energetic resonance, morphic resonance does revolve around the oscillating character of systems, that means that it is a dynamic, rather than a static, process.

Morphic resonance, according to Sheldrake, gives expression to forms of vibration that are spatial-temporal in character. These three-dimensional oscillating forms are capable of being transmitted across space and time, imposing, within certain limits, their morphogenetic imprint onto a given morphogenetic germ or morphic unit.

Although the idea of an order-field has certain 'similarities' to Sheldrake's idea of a morphogenetic field, there are also some obvious

differences. One of the most fundamental of these differences concerns our contrasting conceptions of the structural character of the field.

For example, whereas Sheldrake speaks of action at a distance, the dissertation speaks in terms of contiguous transmission of order-field effects. In addition, whereas Sheldrake describes formative causation in terms of a three-dimensional spatial-temporal oscillating resonance, the structural character of the order-field's mode of oscillating transmission is through the dimension of time.

Time is one of the dimensions (but not necessarily the only one) that is held in common by all structures, structuring processes, dialectic interactions, morphogenetic transitions, phase transitions, dissipative structures, symmetry breaking events etc.. This aspect of commonality might make temporality an ideal medium through which to transmit certain kinds of influences, especially those involving phase relationships, sequential events, oscillations, periodicities, aperiodicities, chaotic dynamics, and so on. All of these influences play key, pivotal roles in virtually all - if not all- physical, material, biological, mental, and emotional processes, as well as in many, but not necessarily all spiritual experiences.

Everything in the physical/material/mental world gives expression to some sort of structural character. Structures are manifestations of a spectrum of ratios of constraints and degrees of freedom. These ratios of constraints and degrees of freedom are an expression of certain kinds of dialectical activity that occurs between, or among, various dimensions- space and time being just two of these dimensions.

Phase transitions and morphogenetic transformation constitute a selection from, or alteration in, the spectrum of ratios that constitute a given structure. Such transitions or transformations occur by means of phase relationship states in which phase quanta are exchanged. (For now, one might characterize phase relationships as expressions of the way different aspects of ontology interact with one another while in certain states, conditions, and cycles of manifestation. These states, conditions, and cycles constitute the phases of an object or process during particular modes of being that give expression to various dimensions of possibility inherent in an object's or process' being.)

Phase quanta are the carriers of force that bring about a change in the way a given spectrum of ratios gives expression to itself, or that brings about a change in the very character of the spectrum itself, either by adding ratios, or taking away ratios, or by modifying the existing ratios in some new way. Phase quanta represent oscillating modes of temporality. In other words, they are temporal wave forms whose structural character specifies a ratio of constraints and degrees of freedom but that is coded for in terms of phase relationships.

Ultimately, phase is a matter of a temporal order that codes form(s) or structure(s) in terms of how the constraints and degrees of freedom that constitute that (those) form(s) are temporally related to one another within the context of unfolding or being manifested. Indeed, phase is a point-structure whose ratio of constraints and degrees of freedom is expressed in a temporal waveform.

As such, any form or aspect of form (of whatever medium) can be represented by a temporal wave of a given phase structure. In fact, one might argue that any structure, in whatever medium, is, in part, a manifestation of the presence of a temporal wave that is moving through that medium and helping to shape the character of such a structure.

When phase quanta are exchanged, this might affect the spectrum of ratios of constraints and degrees of freedom that constitute a given structural character. Thus, the order-field acts on structures by ... along with other dimensional means ... transmitting its effects through the phase quanta that are carriers of temporal force.

As such, temporal force becomes a transmitter of certain aspects of the underlying order-field. Phase quanta are the means through that temporal resonance manifests itself. Morphic resonance is a species of temporal resonance.

Sheldrake believes all past systems that are similar to a given system existing in the present will have a shaping effect on the current system. However, since not all of these systems are precisely the same, he contends there will be an averaging process that takes place.

During this averaging process, those aspects of all the past systems that are held in common with the current system will be enhanced. The degree of enhancement will depend on the degree of

similarity. Sheldrake contends that whenever there is variance with respect to some given structural theme, a certain amount of blurring will occur due to the way the variance is distributed over the morphogenetic field rather than localized or concentrated in a well-defined region that is capable of providing sharp resolution.

The above-mentioned variance distribution is why Sheldrake describes the morphogenetic field as a probability structure. It describes the probability that a given morphic unit or morphogenetic germ, with which the field becomes associated, is likely to be affected by the field at different points in that morphic unit or germ.

The foregoing position appears somewhat problematic in several respects. For example, how similar do things have to be in order for there to be an enhancement or reinforcement effect? What is to prevent someone from arguing that since everything shares a certain degree of similarity with everything else, therefore, all structural themes, in every morphic unit or morphogenetic germ, will be reinforced, so some extent, by various morphogenetic fields? Alternatively, given that everything is dissimilar to some degree, what stops the aspects of dissimilarity from acting as a dampening effect on the process of reinforcing various structural themes?

One could argue there is a far greater amount of dissimilarity than similarity, as one goes from situation to situation. If this were the case, one might wonder why the themes of dissimilarity don't just swamp the themes of similarity during the averaging process, thereby preventing structural themes from ever being sufficiently reinforced to have any appreciable morphogenetic influence on subsequent morphic units or germs.

The foregoing theme might be 'reinforced', to some extent, by Sheldrake's contention that the effects of a morphogenetic field are not attenuated by either space or time. In other words, Sheldrake does not believe the morphogenetic field is a function or expression of either mass or energy. Therefore, he feels such fields will not be vulnerable to the same deterioration of quantity and quality to which physical phenomena are subject when propagated across space and time.

In any event, if the effects of a morphogenetic field are not attenuated by space or time, then, this would seem to indicate that the opportunity for dissimilarities to influence morphogenetic events,

through the averaging process, becomes that much greater. This is the case since such themes of dissimilarity will not be attenuated in their strength or intensity by factors of space and time.

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