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Health as Self Actualization

Kurt Goldstein, in his classic work "The Organism" defines health as self-actualization. Illness or injury, as impairment, reduces the freedom for self actualization, creating conflicts between the self and the environment. In the face of illness and injury there is a spontaneous reorganization of the self to perform as closely as possible to prior levels of performance. To the degree that this is not possible, actions may be taken to change the environment, often by moving to a new one. With intelligent persons, the problem gets more complex. There can be psychological impairment caused by early dysfunctional solutions to trauma manifest in failure to fully develop in some areas and the associated repetition of dysfunctional behavior. These behaviors are developed to manage conflict with the environment and to avoid further trauma. Oppositions or conflicts within the self are secondary manifestations of conflicts with the environment. They dissolve once fully self-actualizing behavior is chosen. There usually are concomitant, incorrect interpretations of the self and of situations. Correcting these errors is a transformation of the self and of the environment for the self. We will understand these changes as changes in the operational situation. Using the example of depression, we will provide a model of psychic health and healing based on self actualization.

The context of the discussion is the notion of the organism and of performance as holistic. By understanding what performance is we can evaluate the aptness of this notion of health. Philosophically we need to understand the notions of cause and emergence in understanding the possibility of performance as well as the components of performance: operations and acts. This requires the development of a complex, explanatory model that we can only sketch in this context. The understanding of depression in terms of that model will illuminate the fundamental relations, though the generality of the model will not be substantiated in these particular instances.

1. The Possibility of Actualization: Laws, Emergence, and Holism

1.1 Causal Laws

It is commonly accepted that of the four Aristotelian causes only efficient causality is scientific. This notion is a carry over from mechanism and related conceptions of efficient causality as the universal and necessary condition for the existence of a thing or event. The emphasis on universality and necessity carried over into Twentieth Century views of explanation exemplified by Hempel's deductive nomological model where what is to be explained is deduced from causal principles. For some Anglo-American philosophers this also is the structure of confirmation. However, if we understand some of what have been purported to be laws of nature, we find a different interpretation of explanation. Consider, for example, Galileo's law of falling

bodies where the speed at time t is equal to 32 times t squared. This does not provide us with the cause for the body falling. Rather, it is a mathematical relation discovered in concrete, mathematically ordered data. The formula is an account of what a free fall is. It corresponds to Aristotle's notion of formal cause. A number of "laws" can be understood in this way. For example, physicist's still do not know completely what kind of force gravity is. They cannot explain why two bodies are attracted to each other. But we do have precise mathematical formulas for measuring gravity, which tell us something about the relationships between the bodies.

Part of the issue is that these "laws" are general and abstract from particular situations. This has two implications. The first is that the law metaphor is only approximate. The relation is law-like because it is general and abstract. A thing within a situation is subject to multiple relations and conditions. The instantiation of the relation, or "law", varies unsystematically from the ideal relation.

Secondly, if one considers the relations only as abstract the mechanistic notion of universal relations necessarily linking relata becomes possible. This notion of system has developed into one of the major cognitive science models of mind as cybernetic. The computational model is more general and flexible, but, at root, relies on the same types of rule driven relations. The cognitive fallacy is taking the ideal universality and necessity as pertaining to real rather than ideal relations. As ideal they pertain to mathematics and symbolic logic, both of which deal with formal relata.

1.2 Emergence

If we return to the particular situations, we may think that we can account for an event by tracing back a causal chain of events. Any attempt to do so, just as any attempt to predict occurrences in a situation encounters an expanding tree of histories of elements. In the ideal historical reconstruction these histories converge on the situation. In the predictive situation, they diverge. The foundations of statistics rest on the notions that different histories can lead to a limited set of results, as in flipping a coin, and that there is no set of laws linking these histories. This leads to the inverse insight that, because there are no links among the histories, they do not make a difference. So in a set of situations in which there are only two outcomes (heads or tails) and there is no reason one should occur more often than another, the ideal frequency of events would be .5 for each. However, precisely because the sets of events leading to the outcomes are unsystematic, one would not expect that the ideal frequency would be attained all the time. For different types of distributions based on different types of events, ideal frequencies can be assigned to probability distributions themselves. Again, we would expect an unsystematic divergence in any set of actual distributions.

This notion of distinct histories is sufficient to grasp the notion of ideal frequencies, but it is not sufficient to grasp the form of world process and complex organisms. To understand situations, we cannot think only of some sets of historical threads converging to yield a particular aggregate of things and events at a particular time. Because there are multiple conditions for all occurrences, each event in the ideal historical thread can have multiple conditions converging just as the event for which we are attempting an historical explanation does. We have aggregates yielding aggregates. This fundamental fact of the unpredictability of events due to non-linear process

underlies chaos theory. However, we can discern order in situations and in some cases we can provide historical explanations. It is to these notions that we now turn.

The structure of two hydrogen atoms and one oxygen atom alone does not explain why they combine to form a water molecule. That explanation is historical. Rather, the explanation of the structure tells us why they *can* combine. To understand why they *did*, we need to understand why they were in the states where they *could*. In cases where the efficient cause includes the unsystematic convergence of conditions, the emphasis shifts to the formal cause as efficient and external relations decrease in significance. This is quite a different universe from the mechanistic or systematic or fully intelligible. It is not simply that things and events are contingent and that knowledge of them is factual. It is that efficient causes as external are not sufficient to explain many things and events.

This accounts for the fact that emergence cannot be explained in terms of antecedent events. Organizations emerge because they can. The event itself is invoked to explain it. There are conditions for emergence, but they are not sufficient to explain it. When these conditions result from unsystematic convergence there is no set of relations, which account for their existence at this particular place and time. When an organization emerges, the organization itself must be invoked to explain its existence. This is because complex organizations are of multiple elements and, concomitantly, multiple relationships. While each relationship can be explained in terms of the relations of the elements to one another, the set of relationships cannot be. Consider, for example, where the same elements can form different structures. Thus, we find a similar situation in organizations that we found in histories. In histories we can conceive of a causal chain, but there is no overarching intelligibility to the whole. In organizations there is an overarching intelligibility, but it is not explained by the individual relations. Rather it is the interrelation of these relations. Just as we can have different histories with different elements, so we can have similar structures with different elements. Thus, both histories in the sense of process and emergent organizations occur because they can.

Similarly, in a weaker sense of organization or system or structure we have cycles of aggregates or populations, such as weather systems, waves, ecologies where there are global impacts and qualities that cannot be explained simply in terms of the populations' elements, but which relate to its size, coherence, and so on. Thus, aggregates of different materials, such as sand, can only attain piles of certain sizes. These constraints can be explained in terms of the physical and chemical properties of the sand, though the constraints leave open the characteristics of the particular aggregates.

The emergence of organization is iterative, so that we can have organizations of organizations. This has led to the notion of organizational hierarchies as a model of complexity. The organization chart of a corporation is the perfect example where workers are organized in terms of departments, departments in terms of divisions and the whole is directed by the office of the chief executive. Using this analogy to understand organisms, we have biochemical processes organized in cells, cells organized in terms of organs, and organs related to one another through biochemical and neural systems. Understanding organisms hierarchically provides support for the classical conception of understanding as analysis and synthesis. We conceptually distinguish the parts of an object or process through analysis and then relate these parts to one another through synthesis. Building a house is an analogous process. Here we have another instance of the structure of a type of understanding being taken for the structure of organisms and

organic processes. In fact, organisms do not evolve from the confluence of parts into a structure. Rather the evolution is of a prior unity. In development, the organism builds itself. Thus, the analysis into parts, though extremely important, is misleading if it leads to the lack of understanding of the whole, as in reductionism.

The simplest instance of the emergence of complexity is where new processes emerge requiring more materials. Thus, there is differentiation and integration of function in organisms through the emergence of organs and increase in size. Though there are hierarchical relations, these are in the context of a matrical organization where different components can interact in different ways at different times. We find a matrical organization in the brain. There are major modules that are interrelated to one another though complex neural pathways emanating from and entering into each module. Within the modules are areas of functional specialization such as the visual centers. "In the visual cortex, for example, at the level of brain maps there is a functional segregation into areas, each responding to different stimulus attributes such as color, motion, or form." (Edelman, Daedalus, p.49) We find a similar matrical structure in neural organization.

The advantage of a matrical structure is that different organizations can emerge. It has an openness and adaptability that a stable hierarchical structure does not. Returning to our notion of hierarchical organization needing more elements, we can see that with a matrical structure a variety of hierarchical organizations can be supported without the addition of more elements. In the brain these different combinations seem to be supported by the growth of new synapses conditioning more adaptability and refinement of function.

This suggests a third strategy for conditioning the emergence of higher organizations. This is the differentiation within present modules. This is the evolutionary strategy evident in the evolution of the human brain. While brains of other mammals are symmetrical with the right and left hemispheres supporting corresponding functions on the left and right sides of the bodies respectively, the human brain has variability in the hemispheres. This is an instance of the general "strategy" of evolution, or evolutionary differentiation.

1.3 Holism and Evolutionary Differentiation

The evolutionary "strategy" was for systems, which support key activities to become differentiated from one another. This differentiation was possible due to the emergence of greater complexity. For example, the reproductive, metabolic and motor functions became differentiated within the cell. The development of a nucleus in the cell provided a more complex and more specialized structure. As the cell membrane provided boundary conditions within which the cell could perform its functions, the nucleic membrane provides the same function within the cell. Not only does this secure advantages in the life cycle, it also provides a greater flexibility for evolutionary innovation since evolutionary changes can occur independently of one another within the systems within ranges that can be assimilated by or accommodated to by the other systems. A similar process occurred with groups of cells. The unity of cells as one organism evolves into partially independent systems of cells that perform key functions. These systems may be or have operational or organizational centers that have some autonomy with respect to other systems. The organization is modular where many of the processes within the modules are separated by

boundaries from processes in other modules but where rich interactions can occur via biochemical processes. As these systems became more autonomous from one another, they became subject to more regulation, as systems evolved to coordinate the activities of the systems. The same process has been reiterated with respect to those systems. A case in point is the evolution of the motor system. As muscular groups became increasingly differentiated from one another, they also became more coordinated through the evolution of the nervous system. The nervous system itself was subject to the same general evolutionary principle as neural centers evolved to support the various senses and movement. It appears that differentiation and new coordinations are linked.

A key point is that the unity of the organism is maintained. This is illustrated by the fact that in animals, no self organizing processes survive death and those that do (i.e. the growth of finger nails) soon stop. This means there is no fully independent process in the organism. Everything is interdependent. If non-related processes emerge there are complex processes that occur to eliminate them, such as the triggering of cell death and the processes of the immune system. Diseases such as cancer and viral infection survive and reproduce by mimicking the organism's protein or by affecting the processes that would destroy alien protein. However, neither survives as actual process without the living organism.

The holistic interdependence of the organism suggests that the notion of hierarchical structure is misleading. Rather than the image of the organism or systems being structured like a pyramid with the central operator being at the top, a more apt image is an inverted pyramid which represents the development of the organism with the top of the pyramid representing the latest configuration. The latest configuration is the organism as a whole with a potentially integrable set of operations. Any distinction of levels is abstract, partitive, and potentially misleading.

1.4 Complex Systems as Stochastic

The correlate to classical laws in understanding organizations is the system. The notion of system is subject to similar limitations in understanding the concrete situation. The situation is unsystematic. Since living systems are open, meaning that elements of the environment are components within their systematic cycles, they need to be adaptable in the situation in two major ways. First, if there are multiple cycles where the environmental elements are available unsystematically, then the cycles need to occur as the elements are present. If multiple elements for multiple cycles are available, then some selection criteria, or means of selection, are needed for cycles to emerge without conflict. This requires internal regulation of cycles. Second, if there are environmental elements which can disrupt the cycles and put the organism at risk, then there need to be processes or structures aimed at excluding or destroying these elements or repairing any damage they have done. Within a complex system the same types of threats and opportunities can be present as a result of the systems own activity. This variability permits evolutionary change beyond mutations of DNA.

Since development is the emergence of new cycles, schemes of recurrence or performances, the same situation occurs at each point. This means that each point in development is a possible occasion for variation depending on the situation, which is multiply and complexly conditioned. (Emergence of Complex Systems, pg. 54-5) It is multiply conditioned since there is more than one condition. It is complexly conditioned

since the conditions result from the processes of other elements and since their occurrence may be coordinated or "timed".

Considering that systems can be in states other than their current one, it is not paradoxical that systems rely on a lack of system for their functioning. Their potentiality for reintegration could rest on having some unintegrated elements at any one time. However, it is also possible to conceive of a system with multiple states with no unintegrated elements at any time. So lets discuss some of the virtues of the unsystematic aspects of complex systems and some areas where they can be exploited in biological systems.

The simplest case is a set of similar elements where the existence of the set permits operations, or has qualities, which the individual elements do not have. Consider a set of muscle cells constituting a muscle fiber. The strength of the muscle fiber is related to the muscle cells, but the relation is not reductive. Up to a certain point, the loss of individual cells will not affect the strength of the fiber. Likewise, a threshold is reached where more cells may interfere with effective action of the fiber. Thus, there is a range, which constitutes the effective number of muscle cells within a fiber. Dealing with the individual cell itself as individual, it either is there or it is not. Thus, the notion of range does not apply to it as an individual, though it may apply to processes within it. The fiber itself has a range of extension or flexion, which is effective. Beyond that range it suffers atrophy or tears.

The functional independence of the group from the individual permits a turnover, or renewal, of individuals within the group without loss of function. It also permits greater flexibility in controlling the operation of the group, since the activation of the individuals can occur within ranges and since all individuals within the group do not need to be activated for all operations of the group.

Individuals within a group can be related to individuals within another group permitting situations in one group to cause a corresponding situation in a different kind of group. In other words, a population can create or contribute to a situation, which is related to other situations in other populations. A population of cells creating hormones in a gland for use by other populations of cells in other parts of the body is an example. Again, it is not the individual, per se, that is important, but the number of individuals and their collective state. That collective state does not need to be a higher level of organization but can be understood statistically.

Stochastic relations can be qualities that the group can have that the individual does not have. The relations are not isomorphic to relations obtaining in the individual since, clearly, the individual is not composed of a population of itself. It is simply one element, or variable, within the group. Thus, stochastic relations cannot be understood reductively, or in terms of the individuals and their immediate relations. This type of structure corresponds to the mass action of aggregates noted in the last section.

Stochastic relations provide some means of understanding the linking of situations to one another, even if they are of different elements. If we consider stochastic relations obtaining among the parts of an individual, then we have some understanding of the qualities or properties of the individual in terms of them. This provides some explanation of how unpredictable qualities can arise within things, providing a type of emergence complementary to that of higher levels of organization. It also provides some explanation of dysfunction, since the level of production of biochemicals, for example, may not be

sufficient to support the activities of the threshold number of another population. Consider the production and the levels of neural transmitters in the brain and their relation to mental illness.

The stochastic relations among situations provides some understanding of the visual system. In the retina are an aggregate of rods and cones, which are specialized to some extent to respond to different facets of the visual field, such as direction of movement and intensity and wave length of light. The aggregate of neurons in the optic nerves radiates onto other visual processing centers. These other centers are more complex than the initial processing center. They deal with feature recognition and other higher integrations of visual input. They in turn are related to other neural centers for other types of operations. The state of the population of neurons emanating from the eye conditions, but does not determine, the state of the neurons in the other centers. In fact, their state is conditioned by the inputs. Thus, though the inputs are single, as a population they may constitute a pattern, which is matched by the patterned response of the rods and cones.

The lack of an overall organization permits the system to be open enough to handle a range of visual experience. Also, it is the lack of an overall organization between centers that permits a range of combinations of operations. The existence of stochastic relations, then, makes a system more open, more flexible, and more unpredictable.

In the visual field, for example, the positions of structures in relation to the eye are not static. We see them from different angles, in different light and so on. This means that different rods and cones are involved in seeing it at different times. Different sets of neurons are involved as the image is constituted, yet the same image is presented for consciousness. The neural function can be understood as a dynamic pattern of operations, which can be actualized across a network of neurons. Though the network may map fairly tightly to the sensory sources, since the sources themselves are equipotential with respect to providing elements for structures, or gestalts, the network must be able to handle this variability. The neural network makes patterns possible, but it's action is not sufficient to explain why the particular patterns are as they are.

We have concentrated on events or relations between events, and their statistics. Tthe timing of events and the relations of these to one another can also be systematic or unsystematic. As unsystematic the organism's organization in terms of them may require the development of the proper timing and sequencing.

Returning to the matrical notion of the brain, we can understand how neural structure enables performance. Corresponding to the neural network is the matrix of operations, which it supports. Consider first that neural networks, or centers, or areas perform different operations. Second, they have pathways that intersect permitting the coordination of these operations. Third, the operations can be combined in various ways yielding a myriad of possible combinations. Since the same operation can be combined with numerous other operations, there is a matrix of possibilities constituting the flexibility of the system. This provides us with an initial understanding of the possibility of actualization and of the body as enabler of performance.

2.0 Self Actualization

2.1 Performance

For us, self actualization is the free, conscious, coordinating of operations and acts in a performance. A performance has a beginning and an end. It is the smallest concrete intelligible unit of activity in terms of which operations and acts derive their functional meaning. As we develop, performances become more intelligent and meaningful. The body, and particularly the brain, enables performance via the flexibility of processes embodied in performance. In other words, operations are available which can be freely and creatively combined.

The most general definition of an operation is that it transforms itself or something else. For example, the operation of multiplication transforms the multiplicands into a product as addition transforms numbers into their sums. The operation of unscrewing a lid transforms an unopened jar into an open jar.

Operations can form groups. Thus, the mathematical operations of addition and subtraction can be a group where each reverses the other's result. Sets of motor operations permit us to assemble and disassemble machines. By cognitive operations we synthesize ideas and analyze them into their parts, and so on. For Piaget, this is the full meaning of operation. Operations are matrices of acts that are reversible. However, we will use operations in a looser sense. Operations can be either reversible or irreversible. In neural and organic development, for example, transformations occur which last a lifetime.

We also acknowledge that there are biological operations such as the functions of mitochondria in metabolism, the migrating of neurons to their final sites in neural development, or the transmission of a neural impulse by a neuron.

The role that operations play within organized processes is their function. This notion of function is not teleological since it is normative only in the sense that it is a part of an organized process. Either “X functions” within the operation or it does not.

With humans and many animals we can identify performance with goal directed behavior. While acts do not include other acts, performances can include other performances. In fact the baseball performance is the set of acts and operations in the whole play. Likewise, speaking can be part of a larger performance such as acting in a play or teaching. The performance of individuals on a team can be distinguished from the team performance, though the distinction is not adequate. That is, while there is a difference between the individual’s performance and the team’s, the team’s performance includes the individual’s.

Human performance is meaningful. In most performances, including athletic ones, we are aware of the intelligible context, which usually includes some rules or standards of behavior. Not only do we want to win the tennis match, but also it is important that we do so appropriately. Wining the match has a meaning, as do many of the plays, points and so on. More profoundly, human performance includes acts of meaning in bodily expression, speech and so on.

2.2 Skills

As learned, operations can become coordinated and performed relatively automatically. What once was performed singly and with effort becomes coordinated and performed effortlessly as an ensemble. Examples are learning a complex motor skill

or a new language. Similar events occur in having a set of insights that yields an explanation of a set of observations. Once the insight is had, it re-occurs easily. This is because along with the intelligibility that is discovered, there is an integration of feelings, images, memories and so on in terms of the intelligibility. These can be more formally expressed through concepts, which result from insights into how to economically express the insight in such a way that, other things being equal, another person can understand it, also. When one is within the appropriate intellectual context, these psychic integrations re-emerge providing the conditions for the insight to occur readily. In learning motor and language skills insights occur which integrate on an operational level, that is, in terms of motor and language operations, the corresponding subsidiary operations yielding the comprehensive acts.

Skills are a complex of operations, which are intelligently combined in performance. For example, if we understand the role of DNA we can respond to varied questions, often in innovative ways. Explanatory understanding is a cognitive skill. In ordinary expression and speech we have a similar flexibility. As a complex of operations our skills have an indeterminate range. When we do not have a ready response we improvise. Thus, within the complex there are various degrees of mastery and effective freedom. In a masterful performance, there is a mediated immediacy of anticipation and acts. Though not automatic, it is virtually non-deliberative. The next act is "obvious". Attention is focused only on the task at hand.

A performance is a coordinated sequence of acts. It is very difficult to determine where one act ends and another starts. The sweep of the arm to tag a baserunner in baseball can appear to be one act. In reality there can be adjustments as the player reacts to the runner sliding into the bag. Each one of these is quickly chosen and, due to the skill of the player, yields a seamless performance. Speaking articulately without noticeable pauses, hesitations, or rewording would be another example. The speaker can be making a number of decisions in response to his audience's reaction and the rate by which his expression is forthcoming. With a skilled speaker these are not noticeable. Skills enable multiple performances. Skill is to performance as a tennis stroke is to a particular tennis shot.

The development of intersubjective skills typically is a spontaneous development of complexes of operations. Skill development can involve formal processes, as in education, or informal processes only. The informal processes include imitation or mirroring where we model our actions on those of our caregivers and accept their explicit and tacit evaluations of us, grasped in expression and action. Just as we do not know all the elements that make up a skillful performance even when we have been trained, so we do not know all those that make up our regular and recurrent daily self interpretations and evaluations in imagined and real intersubjective situations. The situation is lived in terms of these habitual, or virtually automatic, thoughts and feelings.

2.3 Freedom

Freedom is a quality of acts. It can be deliberative or nondeliberative. It can be nondeliberative in three different senses, as skillful, as "impulsive", or as predeliberative.

Freedom is most commonly associated with acts issuing from decisions, where the decisions are the results of a degree of rational deliberation on alternatives in terms of desires, preferences, or values. We also can act freely without deliberation. This basic freedom is found in many animals who also can act intelligently and at times deliberately within the context of their drives, interests, feelings patterned by biologically enabled behavioral systems. This independence of freedom from knowledge is the basis of the moral imperative in humans, where we experience an exigence to have our doing match our knowing. Acts, then, are free, but they can be chosen more or less responsibly.

By deliberative consciousness I mean the determination and evaluation of alternatives that precedes decision and action. By pre-deliberative actions I do not mean simply non-deliberative acts, but acts which typically precede deliberation and responsible actions or which are spontaneous actions within the process of arriving at a decision and performing the chosen actions. The distinction between pre-deliberative and deliberative consciousness is not sharp, but fuzzy, since there can be some minor deliberation occurring in pre-deliberative consciousness. However, the deliberation is typically tacit and regards operational alternatives immediately present as the intimation or nascent emergence of an operation or set of operations.

Spontaneously pre-deliberative freedom is associated with the directing of attention, the pursuit of understanding and judgment and the virtuosity of action. It also is manifest in inattentiveness, flight from understanding and reasonableness, inhibition of feelings, and indifference towards expression and performance.

Pre-deliberative freedom is similar, but distinct from, most free skillful acts. It is similar in that there is an inadequate distinction between the performance of the act and the choice of it. Though skillful acts can be chosen in the moment with little or no thought, they differ from spontaneous pre-deliberative acts in that the choice is the result of practice or training. Pre-deliberative freedom is more immediate and spontaneous. It is similar to non-deliberative, impulsive behavior. As we noted it also accompanies the more inward operations of paying attention, understanding, judging, believing.

2.4 Peak Performance

Peak performance requires concentration and single mindedness. There is a “loss of self” in the detachment from anything else. All conscious subsidiaries are integrated in terms of the performance. This degree of detachment and concentration can be learned. It also can occur spontaneously as exemplified in the marvelous English phrase, “death concentrates the mind”.

Peak performance and can be accompanied by peak experiences, positive or negative, pleasurable or not pleasurable. Normal performance has a similar structure, but there typically are other aspects of experience and concerns that are distracting. Performance is impaired if these concerns are so strong that we cannot concentrate sufficiently to accomplish our tasks. For example, we “fall to pieces” or “cannot get it together”. Sometimes this occurs because we have a values conflict where it is difficult to concentrate on the mundane because we have a larger concern. Other times it occurs and we do not know why. This is one symptom of neurosis or psychosis. For example, difficulty in concentrating is one symptom of depression. Illness or pain also can affect concentration. There is a spontaneous reorganization of consciousness to deal with them,

but the reorganization does not permit peak performance. The whole person is affected by the inability to fully focus on the task at hand.

Performance includes an aesthetic appraisal. In a positive experience this can lead us to doing things for their own sake. The greatest works of art are those which evoke ever richer self transcendence.

Performance also involves meaningful evaluation. We evaluate how well we perform, understand the performance in terms of our self-meaning and so on. These constitute evaluative (how well I did according to some standard), aesthetic, and valuative or moral appraisals. These typically are not differentiated, but are compact. They can be either explicit or tacit, that is, insights and judgments can be expressed in some form such that the person could provide an account of the process, or not. The evaluations can be emotional. We can interpret the performance in terms of how we feel. Conversely, we our feelings about the performance can follow from our evaluation, in the broad sense, of our performance. We also can be affected by others evaluations. These evaluations can be regular and recurrent in similar situations, or situations that are perceived as similar. They can become automatic, just as skillful operations do. This is especially true in intersubjective situations.

2.5 Development of the Given

Self actualization occurs within a context. An initial approximation of the context is to understand it in terms of focal and subsidiary operations. We attend from the subsidiary operations to the focal object. The subsidiary operations also include elements of consciousness which are not specifically attended to and which are not subsumed in a focal integration. For example we can have many things "on our mind" simultaneously, but only attend to them singly. In skillful anticipation we are ready to perform a variety of actions to deal with possible changes in the situation. In each case, a context is "given".

What is for consciousness spontaneously, without effort, is typically considered to be experience, or "given". The fact that it seems to occur for us, or to us, without effort does not mean that it occurs without our participation. If subsidiary operations emerge to support freedom, then our free orientation in attentiveness, questioning, understanding, judging, deciding and performing condition what becomes "given". For example, our experience is usually intelligently patterned.

On a more fundamental level, there is the development of capabilities to have types of sensitive experience. These occur during key developmental periods when the conscious person or animal is motivated to perform types of acts focusing on particular experiences that utilize the physiological and neurological processes that yield the transformations that make the capability operative, learned, or habitual. An example is infant’s interest in viewing patterns that develop the striate cortex, that is instrumental in the vision of horizontal and vertical lines. Learning to walk and to speak also are examples. The vision example is more to the point because it is clear that it transforms experience as spontaneous.

"Given", then, is a relative term in two senses. First, it develops. Second, in healthy performance, the given changes dynamically in terms of conscious operations. For example, if we try to answer a question, conscious operations over which we are

exerting no control, like the imagination, spontaneously change (this is not to say that we cannot control the imagination too).

The constitution of the given results from both nature and nurture. As noted, neural development proceeds in many cases from conscious performance. Second, human conscious performance initially requires a social context and proceeds in the context of caring behavior, much of which is complementary to developing behavior of the infant and young child. An example is the effectiveness of complementary babbling behavior by the caregiver in the development of language. In fact, throughout language development there is regular complementary feedback from other speakers that provides the occasion for additional phonetic, pragmatic and semantic insights. Third, there are periods of sensitivity in development where basic skills are learned. These periods correspond with neural and physical development. If learning does not take place during these periods it becomes difficult and sometimes impossible to have similar learning occur later. These include forms of attachment to caregivers. In many cases where it occurs later it is not as effective as it would have been had it occurred sooner. Typically this learning and development does not take place due to constraints put on the child or the lack of complementary skills in the primary caregivers. Despite these lacks, the person does develop a personality and is spontaneously integrative though the learned complexes may impair future development and self actualization. In successful development we can have the emergence of vocations where individuals clearly know and are motivated to pursue some life work. The notion that we were born to do something provides an important clue to the nature or nurture debate. The fact is that nurture is nature in that we nurture each other and we all develop by being nurtured. When this occurs successfully, the social context offers opportunities for full self-actualization. In this way, baseball stars who love the game could truly be said to have been born to play baseball. With the critical correction of the teleological implications, we can understand our development and lives in terms of organized self actualizing performances, both personal and social.

3.0 The Unity of Consciousness

3.1 The Unity of Consciousness as Given

The interdependence of the organism's processes is understood in the context of performance, either as enabling performance or as a component of it. In animals differentiation of behavior occurred. Most generally the behavior regards the homologues of movement, eating, reproduction, and fight or flight and so on. Here too we find complex coordinated relationships, which indicate that mind and body are not separate, but, at most, refer to different types of coordinated operations of a unity. Different complexes of operations emerge at different times to actualize motivational cycles

Consciousness, as a quality of operations, can differ depending on operations. There is still a quality about the operations that permits them to be present in a unified conscious field. Though multiple levels of organization may complexly condition that presence, for consciousness it can appear unmediated and immediate. If consciousness is a quality of operations, and operations are disparate and supported in different neural areas, how can consciousness be unified? The neural architecture supports the unity of

consciousness with the multiple pathways to and from the operational areas. There are two other types of unity, operational and intelligible, which neural organization enables.

We can take a clue from the evolution of the brain. In the more primitive organisms neural networks evolved which coordinated sensing and motor activity. The brain evolved from these networks. Since the beginning its role has been as a central coordinator or control. Rather than consciousness emerging as disparate and in need of unification, the disparateness of operations emerged as differentiations within a pre-existent unity. Assuming that consciousness is at least conditioned by neural activity, then conscious operations became more differentiated as the neural support for them did.

If consciousness is a quality of operations, then would not each operation have its own consciousness? The principle of evolutionary differentiation would indicate that they do not since differentiation occurs within a pre-existent unity. Consciousness is a global property enabled by the operations of large linked populations of neurons working in parallel. Modularity applies to neural function, permitting some independence of modular function from that of the whole, but the "independent" operation is understood as related to other operations that enable performance. For example, multiple questions can be handled simultaneously by neural processes though we are not currently focused on answering them. This is the well-known "incubation" period prior to insight. The insight is not chosen, but occurs spontaneously, often when we are not actively pursuing it. Also, the development of long-term memory is a quasi-autonomous process, though its operation may be manifest in dreams.

The arguments for multiple consciousnesses rest on experiments with split brain patients and cases of multiple personality disorder. The "multiple consciousnesses" of split brain patients are revealed via experiments where input is restricted to one side of the brain. If it is not restricted, the performance in response to questions is integrative. The fact that integration does not occur in all cases when brain processing is isolated due to the experimental set up and the severing of the corpus callosum is evidence for the holistic functioning of the healthy brain and reduced self actualization resulting from impairment. Multiple personality syndrome is a behavioral solution to trauma which "works" because there is a unity of consciousness within which the personalities emerge. The unity can be understood in the reintegration of the personality. Again, this illustrates not that there are separate consciousnesses, but that psychological disorders can involve isolation of performative complexes thereby inhibiting full self-actualization.

There is no consensus on how neural operations are related to conscious operations. Our position has been that neural operations both constitute and enable the conscious operations. Freedom and physiology are inadequately distinguished. The analysis so far has been heavily weighted towards a non-reductive materialism. The fact that neural process leaves open how it is to be organized in its operation illustrates its relatedness to external and internal aggregates in sensing and behavior conditioned by our immune system (see the discussion of the biological conditions of depression in 5.3). As enablers, neural processes leave their interrelationships open for organization by freely performed conscious operations. Since the organization is done in terms of conscious elements, this is not a case of the brain organizing the brain, or the brain organizing the body, but of free conscious operations organizing consciousness, brain and body. Consciousness is limited insofar as it is enabled. It would make sense, then, that

conscious neural processing be distributed throughout all the operational areas known to enable conscious operations.

If we assume (which we must for other philosophers) that all mammals are conscious when awake, then the simplest mammalian nervous system supports consciousness. It is likely that some part of the common neural structure holds part of the key to the neural support for conscious behavior in all mammals. One candidate is the reticular formation at the top of the brain stem. It is in a central, relatively protected location, develops early in embryonic life, fires when we awaken and supports much of alertness and attention.

There are problems with centering consciousness in any one neural area. For instance, much of the reticular formation can be removed, but the person will still be conscious. Though the quality and degree of attention can be affected, recovery can occur. Also, consciousness is of different types, depending on what one is conscious of. For example, we feel throughout our body. Consciousness extends throughout the kinesthetic system. Through work with electrical stimulation of the brain of surgical patients, it has been shown that stimulation in particular areas give rise to experiences of particular types, memories, feelings, elicitation of expressions. In most cases they are experienced as non-contextual. Experiments have shown also that there is broad activity across the neural cortex with eventual localization in the appropriate Brodmann area as one decides to perform a motor act. Also, it has been found that as one pays closer attention to an aspect of experience or the content of a conscious operation, the area that supports that operation exhibits more neural activity. This implies that attention may be supported in each area by somehow increasing the intensity and specificity, or focus, of the experience.

If this were the case, then we would find that some of the functions supported in the common mammalian brain are supported also in the areas that evolved later. A key example is the visual processing centers of the neocortex. This is the last major area of the brain to develop and is largest in primates. The visual centers enable color vision. In conformity with the principle of evolutionary differentiation, these centers are not higher integrations of other visual processing. Rather each adds elements or capabilities to the visual field. Linkages with other visual areas enable richly patterned visual experience. Linkages with other major areas of the brain, including the reticular formation and the motor system, indicate that these areas evolved in the context of greater differentiation and integration of performance. In fact, it is hypothesized that color vision evolved in primates since it conferred a selective advantage to animals that lived in trees. Along with binocular vision it provided superior depth perception along with more highly differentiated visual experience, which in turn enabled superior hand eye coordination.

This distribution of function combined with the matrical neural architecture would explain much of the difficulty in localizing consciousness and attention. Just as vision is a unitary field constituted by multiple operations of large populations of neurons so consciousness is a field coincidental with parallel and interrelated processing among neural operational areas. If we ask how consciousness is related to its neural "base" we need to take care not to commit the fallacy of distinguishing in fact what is unitary in actuality. Consciousness ***is*** the operating of the neural system.

The same distribution of function occurs with memory. Memory is distributed throughout the operational areas since it is required for the repetition, anticipation and

refinement of operations. This would explain why some types of recovery of operations are possible since the networking would support alternate patterns of activation and integration of distributed operations. Thus, consciousness can be understood using Edelman's metaphor as the remembered present.

3.2 The Operational Unity of Consciousness

If consciousness is a quality of operations, then the unity of consciousness must be found in the unity, or interrelations, of operations. Since the unity is a unity for us, for consciousness, then, the principle of unity must be found in consciousness. Even though the unity may have a neural basis in the complex matrical organization of the brain, in its presence for consciousness, it must have a conscious manifestation. Lonergan's view of cognitional structure plays a role here. As we ascend the "levels" of cognitional operations three things occur. First, the higher level sublates the lower. It preserves and transforms it. Second, the transformation is the situating of it within a broader context, where that context is constituted by the operations of the subsequent stage of knowing or deciding. (The notion of context permits dropping the spatial metaphor of levels.) Third, the central operator in the process, the pure desire to know, is a constant on all levels. However, while the pure desire remains the desire to know being, on the level of understanding it is oriented to intelligibility, on the level of judgment to the unconditioned and on the level of freedom to the good. In the functioning of the pure desire we have the notion of a single intentional stream unifying the emergence of cognitive and moral self-transcendence.

The basic relations Lonergan provides for understanding self-transcendence can be used analogously to understand the unity of consciousness. As conscious, we can trace voluntary acts back to an unmediated, for consciousness, operator, or actor. To arrive at my ends, or goals, my decisions are mediated via my body and external means. But for consciousness, this actor is simple, or unitary. When I make a decision, I am the act of decision.

Now, in humans, attention typically is sublated by intelligence. However, our attention can shift depending on other factors, such as an object whizzing past our ear, or the creaking of beams while walking on a shaky roof. Attentiveness is the fundamental conscious operation that is sublated by questions and the subsequent cognitional operations. Attentiveness also brings aspects of our experience to the fore. Waking up is a process of becoming more attentive. We also could argue that dream consciousness is a form of attentiveness. Though we always are attentive to a greater or lesser extent while awake, there is an element of freedom in attentiveness. We can choose to be more or less attentive and we can choose what to pay attention to. Indeed, one of the goals of meditation is to "purify" and gain more control of attentiveness.

If the freedom to pay attention is a fundamental freedom of consciousness, then we can understand the intentional unity of consciousness. We saw earlier that neural activity increases in those areas of the brain that support the operations to which we attend. Given the matrical structure of the brain we saw that attentiveness could be an operation supported by a number of areas. When we attend to something in particular the core consciousness of attending is supplemented by the consciousness of the particular operation. For us the content emerges within consciousness. The neural pathways

provide a physical link. Transformation of attending in subsequent operations would be the emergence of those operations, the activating of the neural networks supporting them and the attending to them. That is, the operations would include paying attention as part of them. Thus, the operational and neural context expands. This explains the basic unity of consciousness as experiencing, or attending.

3.3 The Unity of Consciousness as Intelligible

There is also the integration of higher level conscious operations. This takes us into areas such as the integration of multiple insights into an understanding of ourselves, theories, the integration of skills, the network of common sense judgments by which we live our lives, and so on. These operations form a *de facto*, operational unity because they are sequences of, or a continuum of, operations sublating a common operator, free attentiveness. Understood operationally, these provide an intelligible context for performance. The intelligible context, though resulting from understanding, judging and deciding, is not fully known. The intelligible context, which, structurally, includes both self and other, is not necessarily the unity of consciousness as intelligible for us. That unity we typically understand as the intentional operational unity, ourselves as self-understood more or less adequately. Our understanding of ourselves, then, can vary from the full intelligible context constituted by operations not known or acknowledged as the self. The emergence of complexes not acknowledged as the self can lead to bewilderment or breakdowns of performance. "I do not know what got into me! I am not myself today. I am at loose ends."

Understanding is intelligible as the understood. This does not mean that understanding is extroverted, rather that an understanding of understanding is a secondary phenomenon. To understand understanding we must first have understood something. Thus, there is no pure understanding of understanding. Rather there is an understanding of an insight into X. We can distill the common elements and develop a general model, but the model needs to be applied in any particular instance that would be a further differentiation that the model as general does not specify. This does not mean that we cannot have self understanding, but that all self understanding is relational. When we get insights into ourselves, these typically are of ourselves in relation to the other.

To understand itself, intelligence needs to discover itself. The first clues are difficulties in sensory motor operations, errors, the intensity of the emotions in both frustrated and successful understanding, the subsequent flood of ideas following from key insights, and so on. The identification of understanding with the self is not a simple process. There is a *de facto* identification with the effort of understanding, but the achievement is not controlled. It has been identified with everything from the actions of the gods to clairvoyance.

Understanding is a type of consciousness. To this point, we have understood consciousness as material. Since nothing is intelligible in itself unless it also is intelligent, understanding always is conscious. Though it has material conditions and may not be possible in humans without appropriate images and symbols, the intelligibility of images, symbols and experience transcends the materiality of all of them. If understanding were itself material, then, unless it were material in the same sense that the understood is, it's materiality would make the understanding intentionally different

from the understood. There is no way that one could isolate the material difference of understanding so that we could account for the variation of the understanding from the intended object, providing us with the intelligibility of the object alone. That would simply be a different understanding with its own significant material difference. The independence of material difference is evident in insights in geometry where exact images are not required and any number of similar images will do. The particularity of the image makes no difference. This is the reductio version of Lonergan's argument for spirituality on the basis of independence of understanding from the empirical residue.

Though intelligibility is immaterial, it is the intelligibility of images, symbols and experience. There is an operational linking of neural and spiritual operations. Just as freedom emerges because it can, so does intelligibility. It emerges as understanding is transformed with the evolution of the brain from the generalized coordination of performance in the immediate situation to the mediation of immediacy through memory and the imagination in animals and the additional mediation through symbols in humans. The possibility of the brain being transformed in terms of insight rests on the fact that performance, as the coordination of operations, is the transformation of the body. In general, learning is the retention of the conditions for the operations enabling performance. This occurs through the transformation of current processes. Spirit emerges in human development, and, subsequently, when we dream and awaken, and our biology enables and is transformed in terms of meaning.

If material difference were significant, an identity of understanding with the understood would be precluded. This gap would be permanent, since there would be no understanding that could grasp the nature of this difference with certainty since any understanding would differ materially from the understood, and hence, intelligibly. Self understanding would be materially mediated. With material mediation of a material process there is no possibility of self-identity between the process and its result. Either the process yields a product to which it is mediately related, or the process is transformed, yielding a different process. With material mediation, then, the notion of identity is not possible except as a nominal empty concept. Identity is formal, not material. Since there is no form that is not material, identity is meaningless. This is illustrated in attempts to identify meaning with material expression and truth with sentences. If we interpret "This sentence is false" as false, it is true and vice versa. The solution is that truth is of propositions and propositions are immaterial. Thus, "This proposition is true" would be an empty proposition since there is no proposition to which the sentence refers. Thus, if understanding were material, there would be no absolute self knowledge where there is an identity of the knowing self and the self that is known.

The identity of intelligence and intelligibility in understanding is the intentional nature of knowing. This is also the case in judgment where we can know that the known does not depend on knowing for its being, though our understanding of being may be in reference to our knowing.

If unity is grasped in an insight which relates elements to one another as being one, then the unity of consciousness as intelligible is the unity of consciousness as understood. The unity of the self would be the self as understood. However, there is a unity of consciousness that is given in which different elements may not be understood as parts of consciousness or the self. Thus, the unity of consciousness as understood can vary from the unity in itself. The same is true of the self. There is a remote intelligible

unity of consciousness in the sense that it is one consciousness that is understanding. However, the intelligibilities are not fully interrelated and do not constitute an intelligible whole.

Hence, the unity of consciousness as intelligible for us is typically a unity within consciousness. The same is true of the self for us. There typically is a gap between ourselves as we are for ourselves and in ourselves. This gap is bridgeable in principle, but permanent in practice.

4.0 The Self

4.1 Intentionality and Self Presence

Though we can intelligently and selectively focus on an object, usually the content is not freely constructed. The operations which constitute seeing which we do not have control over are conscious, but they are conscious as the seen content. This is the identity between seeing and the seen in act. It is an instance of what Polanyi terms the phenomenal quality of tacit integration where the subsidiaries are experienced in the focal object. Since vision is a neurological process, we can claim that we are experiencing both a brain state and the seen object.

Given this analysis, we can better understand intentionality. Fundamentally, in consciousness, the operation and the content are given as a single operation. Consciousness is a quality of the operation, and the operation is the presence of the content. It is by understanding that we come to distinguish the content from the operation and consciousness from both. This is possible through two generalizations. The first is that the sensitive operation is in some sense the same though the content may differ. The second is that different kinds of operations are conscious so that consciousness is always present though the operations change. But to use Heidegger's terms, this revealing can be concealing since the identity of operation, content, and self can be overlooked or "forgotten" as one mixes and matches concepts that have lost their concreteness. More fundamentally, the operations themselves are oriented to what they are not, the intended object. This fundamental extroversion is integrated within behavioral systems, which have goals other than their self-presence or self-understanding.

Mind, body and consciousness are three complementary and overlapping perspectives of the self. Ideally, eventually they will be understood explanatorily as one. The self is the whole. As self actualizing, we act within the self constituted operational situation.

Consciousness adds the presence of the operation for consciousness to the process. This is possible because consciousness is given to itself along with the operation. Consciousness is intrinsically self-conscious. As presence, it too is present. Thus, there is no operation of reflection, insight, knowledge or freedom, which is required to establish self consciousness in this technical sense. It is through acts of understanding and judgment that consciousness comes to be distinguished from the operations. But this is a very abstract understanding.

A sense of self develops due to the presence of consciousness in multiple operations. This sense of self is possible only because consciousness is present intrinsically to itself. The evolutionary contribution of consciousness is not simply to

permit a higher level of organization to emerge, but to permit a self-present level of organization to emerge. This permits a higher and qualitatively different self control of organisms. The types of control are the conscious operations themselves, and they can differ by species. Most importantly, consciousness makes freedom possible, for there is a field of mediated immediate alternatives that can only be present as different for consciousness. In other words, consciousness is the only context in which difference, per se, can make a difference.

There is no outside for consciousness. It cannot be adequately understood using visual metaphors. Rather inside and outside are within consciousness. What is "outside" consciousness are the physical chemical aggregates that become part of a neural populations processing either immediately, as in smell, or mediately as in touch, hearing, vision and kinesthetic sensing. The aggregates are not information. Rather than processing information, neural processing constitutes sensitive experience. The physical chemical aggregates are not part of that processing beyond the initial relationship.

Understanding neural processing raises the epistemological issue of the objectivity of sensitive experience. We must go through a perceptual idealism to realism if we are to explain neural function adequately. That process needs to be performed in the context of a critical realism where one already has gone through idealism with respect to meaning and being and from an explanatory viewpoint. The overcoming of perceptual idealism is the rooting out of the last major vestiges of the confrontational view of knowing and the attainment of the scientific explanatory differentiation of consciousness with respect to ourselves and being. A critical realism is necessary to understand self transcendence in knowing, which is how reality "comes into being" for us.

The model of the operational situation provides the explanatory context. The operational situation is defined as the complex of factors that can be organized to perform acts and the context for the organism in which this occurs. The context also is constituted in terms of the organism's operations. Performances occur unsystematically in the context of the operational situation. There is no overarching performance that organizes all performances.

In light of our previous discussion of the possibility for self actualization, this has a number of implications. If we consider attentiveness, intelligence and so on as focusing on a figure against a ground, or a part within the whole, the whole is not the unity of consciousness but the operational situation. The figures are the correlates of attention within the performance within the situation. The operational situation is not an intelligible unity since it is unsystematic. Rather it is a *de facto* unity given the interrelations of the elements to the organism, which is a unity. The operational situation provides a field of operations or a field of consciousness.

Since the constitution of the situation for consciousness is intentional, the operational situation is the self. Extroverted performance can be understood systematically through sets of self constituted relations. There is heuristic value in considering consciousness as solipsistic as an image for understanding sophisticated performances requiring free coordination of operations with respect to events in the situation. We do not control all the events in the situation. This is reflected in the concomitant lack of control that consciousness has over sensing. When we know something as other, it too becomes part of the background of things and events that exist independently of our operations. The paradox of intentionality and self transcendence is that for them to exist for us as

independent of us, we have operations by which they are for us as they are in themselves. If, in fact, we are correct in our prior judgments, then we should have minimal issues when the situation is constituted virtually immediately by our recognition of key features. However, if we are not, then there is some divergence, which can result in impaired performance. Now, since a whole intentional and behavioral complex can be instantiated through one or more judgments, if we are not cognizant of the process, and we know that the situation is divergent, then we can appear to ourselves to be out of control, irrational and so on. We typically are not cognizant of the fact that the situation is self-constituted until we experience and understand some of these variances.

Performances can be unintelligible, or not explicitly intelligible, to us as we perform them. The question "How did I do that?" relates to skills. "Why did I do that?" relates to behaviors. It is the underlying tacit subsidiary operations, which we meet as they are made explicit. It is our selves that we meet when we understand why we did something.

The environment for extroversion is not experienced as chosen nor is it typically understood as self-constituted. Much of it is constituted without choice, and, where choice has been involved, it is overlooked. This is the world of knowing as extroversion or "confrontation". We also treat the "inner world" in this way. We typically find both domains objectified via visual and spatial metaphors.

4.2 Metaphors of Extroversion

A first approximation to metaphor is given via an understanding of analogy. Analogical understanding posits some isomorphism between two separate intelligibilities. Metaphor uses language and images suitable for understanding one set of intelligibilities to understand another set for which there is no direct isomorphic relationship. Whereas the relational structures of what is related analogically can be the same (i.e. in functionalism), the relational structures joined by metaphor are not the same, nor may they be known. Thus, there are two dangers with using metaphor. Since metaphor has an imaginable component, the relations can be misunderstood because the image is not appropriate. Secondly, because it is easier to embody metaphorical meaning than explanatory due to the imaginative and emotional link, one can be led to thinking that understanding the relations metaphorically is at least equivalent to, if not better than, understanding them explanatorily. We will elaborate metaphor's symbolic role in the full psychological sense later.

For example, spatial metaphors commonly are used to understand feelings where some feelings are superficial or shallow and others are deep. More to our purpose is an understanding of metaphors for knowing. The metaphors of vision and light are the best known. Understanding and knowing are expressed by "seeing the light", "illumination", "viewpoint", "world view" or "I see". The iconic light bulb symbolizes insight. The visual metaphor overlaps with the spatial metaphor for knowing and the known. "Objects" are "in the world". The mind is "inner" and the world is "outer". "Objects" "stand over and against" us. In some cases experience is of appearances while the thing in itself is "behind" the appearances.

There are good reasons why these metaphors are apt. We are embodied knowers in performative situations. There is good reason to believe that knowing for its own sake

evolved from the role of knowing in action where truth and value were not goals per se but the successful solution to a problem in living was. However, if knowing is understood in terms of these metaphors, grasping an adequate explanation is difficult. We need to transcend the imaginative correlate of the metaphor. Though it may be useful to initially identify insight as "seeing the point", the spatial implications of the metaphor result in problems. For example, much energy has been expended on bridging the gap between the knower as inner and the object as outer. Once it has been bridged, both are somehow inner, though one is still outer. So the metaphor begins to break down rather quickly. The limitations of understanding and knowing sometimes are phased in terms of viewpoints. We each have our individual viewpoints. How do we get "outside" them to understand another's? The explanatory viewpoint has been likened to a "God's eye view", which we cannot have since we are confined to our narrow viewpoint of which we cannot get outside. Rather than demonstrating the limitations of knowing, these metaphorical uses illustrate the unrestricted scope of knowing. How can we know our viewpoint is narrow or that God has a viewpoint? We need to transcend our particular embodied situation to make these distinctions. Again the literal interpretative bent of the metaphor lands us in paradoxes and contradictions that cannot be resolved in terms of the metaphor.

"Within" the mind as "inner" we find a "stream" of consciousness that is "on the surface". "Beneath" it, we find the field for "depth" psychology, the unconscious. In some cases we find a situation similar to understanding "outer" objects. Consciousness is of the phenomenal mind, or the appearance of mind, while the real mind or the real person, is "deeper", not experienced in itself and somehow accounting for or causing the appearances.

Other metaphors for understanding and knowing related to meeting problems of living are "grasping", "fitting" or "good fit". The metaphor of "fit" trades on the intelligent resolution of problems where how to make something fit requires insights that find pragmatic and, sometimes, kinesthetic verification in realizing a "good" fit. So "good fit" as a general metaphor refers to a set of insights that "hit the mark".

Because our initial understanding of understanding and knowing is in metaphorical terms and because our understanding develops within a performative context, to shift to a fully explanatory view requires a transformation of images for knowing to those which mediate explanatory understanding. In turn, these images are transcended in the intelligibility of explanatory understanding, though they may be required for understanding to recur. At this point, though, we can indicate that the emergence into a full science of consciousness involves a personal transformation where one goes through a perceptual idealism to an understanding of the objectivity of experience and a concomitant epistemological idealism to a critical, or self-knowing, realism. With the shift from metaphor as link to the embodied performative situation to intelligible distinctions and relations, there is a reorientation in our notions of relevance, reality, and objectivity from the palpable to the ineffable, from the imaginable to the intelligible, though the embodied, performative situation remains, and a shift from relying on the material embodiment of meaning, in a semiotic relationship for example, to the intelligent recognition within an intelligible performative situation. Again, this corresponds to the shift from the literal metaphorical interpretation to an explanatory understanding of the intelligibility the metaphor strains to express.

4.3 The Self as Other

The self is both self and other. We are the other intentionally. We also are the other insofar as the other is elemental within schemes of recurrence. Loss of the other is loss of the scheme and hence loss of self. Thus, we become one with the other complexly since the relationship is in terms of our diverse but integrated operations.

A fundamental issue we have regarding understanding the self as the other is that the self typically is identified with the psychological ego, the "I" or ourselves as intelligible for us with varying awareness and knowledge of our concomitant free operations. The self as other than the ego can be understood in various ways. It can be the transformed self in terms of training and education that we find in skills where there are operations that occur "automatically" in support of our choices. There is the self as other as intentionally constituted via understanding and implicitly affirmed as independent in knowing as self-transcendent. There are concomitant psychical processes that transform the self in terms of the known as independent. There is the world of experience as other as psychically constructed via the senses and behavioral complexes. In all of these processes the self is a participant, though our freedom is limited. Typically the limitations are understood in terms of the "ego" and the inability to fully perform or to transform the context for performance.

The other is for the self structurally. This means that we are ourselves, intrinsically, in relations to the other. We develop for intersubjectivity. When we are born we are continuing intersubjective relationships which began in the womb. There is the well-known relation to the mother. There also are relations to others that the baby can hear. It is not unusual for the child to recognize and respond to voices of other family members at birth. Sensory-motor development, including play, is performance oriented where performance includes operations on the environment, often for others. Understanding is initially the grasping of relationships in immediate experience. It soon develops to understanding of a world beyond immediacy. One first step is knowing that an object still exists when it is out of sight, for example (Piaget's conservation of the object).

When we understand there is no issue of solipsism since we understand the other as independent from us, irrespective of whether the particular relationships are real or not. When we know we assent to the reality of the relationships. Implicit in the structure of judgment is the independence of the conditions for the existence of the relationships from the conditions for knowing. People know that things do not exist simply because they know them, though they cannot explain why.

5.0 Health, Impairment, Healing

5.1 Health

For Goldstein, health is self actualizing performance adequate to the challenges of the environment. Ideally "…an organism is normal and healthy, in which the tendency toward self-actualization is acting from within, and overcomes the disturbance arising from the clash with the world, not out of anxiety but out of the joy of conquest. How often this

most perfect form of actualization is a fact, and whether it exists at all, we leave open to question."" (Goldstein, p. 239) Illness, disease and injury, on the other hand, impair performance, typically at the site of the problem. This impairment is dangerous since it effects the ability of the person to meet the challenges of the world, and, in his terms, it "…endangers self actualization" or our existence. In reference to previous performance it is the disordering of processes. In some cases, there may be no immediate impairment or breakdown, but they will occur if the illness persists.

The psycho-physiological response is anxiety, which is the sense that we cannot cope with the new situation. Anxiety for Goldstein emerges when performance is in question, not as the result of some interpretation of objects. This distinguishes it from fear. This is why anxiety as initially experienced has no object. I have noticed that eventually the understanding of the situation about which I am anxious will often emerge, but it typically is not anything of which I have been directly thinking. In fact, my conjectures are almost always wrong. It is only through disinterested attending that the understanding emerges. On the other hand, once we have experienced anxiety in a situation, we can fear its re-emergence. This becomes a motivator for creatively avoiding the occurrence of the situation.

Anxiety also occurs in situations where we are healthy and where our ability to cope is suspect, which Goldstein characterizes as shocks or catastrophe. Self actualization in these cases requires the courage and ingenuity to reorganize our performances and ourselves to deal with the situation. As we do so successfully, we develop.

. Goldstein claims there really is only one need, self actualization. Since all the other "needs" are interrelated, in discussing individual needs we really are focusing on one particular figure against the ground of the whole. He views Freud's notion of drives and instincts as an understanding of conscious elements that have become isolated from the whole in the person's development. As unintegrated, they tend to assume a life of their own which impedes successful performance as the demand for their actualization can create periodic or chronic unease. For example, Goldstein interprets Freud's death instinct not as an instinct, but as a part of a particular dysfunctional mode of self actualization. It occurs in depression and if the depression is cured, the "instinct" goes away.

5.2 Psychological Etiology of Depression

The self is the operational situation. The self is for itself as within a situation that spontaneously is given, or already out there and in here now. The self is explicitly for itself as the ego (the "I"), or freedom, and the known complex of operations by which, and in the context of which, we perform. The "I" also has meaning, which initially is understood, through our understanding of what others tell us about ourselves and of how they treat us. We also gain self understanding in our intersubjective performances. Much of the early familial drama for the child is the development of attachments. As the person develops, different types of behaviors emerge depending on how attachment issues are dealt with in the family. The failure to develop an early attachment may lead to psychopathic behavior or personality disorders. Attachments that are "not good enough", that is where there are serious questions regarding one's safety in the family concerning abandonment or abuse, or regarding self-worth and desirability, can result in chronic depression. These are situations

where attachment is associated with loss or the threat of loss. Of course, this is not just any loss, but the loss of the ones we want most to love us as we are and on whom we rely for our life and well being. The evolutionary reasons are clear. Loss of the attachment relationship is life threatening. Consequently, our initial inclinations are to do almost anything to preserve the relationship. Giving up hope is virtually unthinkable.

Because we are intelligent, we try (need?) to make sense of these situations. This is tough because some of the best minds still are trying to understand what occurs. Because we are young with limited cognitive skills and reliant on our family for our welfare and, to some extent, for our self-interpretation, there often are multiple, inconsistent interpretations. Also, since the interpretations are situation dependent and since the situations may not make sense to begin with, our understanding is likely to be wrong and ultimately confusing. No one can explain absurdity or failure. Thus, while there is anger towards others and hurt associated with attachments gone wrong, there usually are similar feelings regarding us as the cause of the failure. In fact, parents often tell children it is their fault either directly by telling them they are bad or good for nothing, or indirectly through threats of leaving them behind if they do not hurry up and so on. This lack of self worth is attenuated by lack of attention. In addition to not getting basic needs met, the person does not learn the skills to get the needs met. Rather, there is developed some uneasy dynamic equilibrium where we work to avoid the trauma while meeting the needs. The problem is that the needs cannot get met unless the risk is taken that they may not get met, a risk which can mean risking a similar trauma as in childhood. When the situation is understood as hopeless, but we do not give up, the structural double bind of depression emerges. A performative double bind occurs when we behave in ways that condition others to not want to meet our needs, though our actions are intended to get our needs met. Then a self-fulfilling prophecy results. A third type of double bind stems from contrary expectations. An example would be if one's parents only gave praise and attention for excellent performance but also put down the child for being too proud or egotistical. In addition the child may not think they are worthy of praise, though they seek it. This double bind is common among high achievers who never feel fulfilled by their accomplishments, or who feel they are fakes.

In the terms of cognitive psychology, there are basic core beliefs that are constitutive of the situation for us. If we view the situation holistically, these beliefs affect the whole person, consciously, psychically and biologically. We will explore some of these relations in the next section. In intersubjective situations, for example, we may always be on our guard since "You can't trust anyone". This stance, though cleverly concealed from others and perhaps not noted by the person, permeates all interactions conditioning the probabilities for development of relationships. The situation is more complex than indicated so far, because there is a complex of beliefs, learned behaviors, cycles of thinking and acting and so on that constitute the context for performance.

We have considered skill and explanatory understanding as complexes. In both cases, we, as intelligent, are at the core of the complex creatively performing in response to the movement of a ball hit by an opponent or a question raised by a member of the audience. We can consider neurotic complexes as an effort to be and to conceal, or not be. We do not want to be interpreted by others in ways that open the possibility of trauma, and we do not want to perform in the ways required to get our needs met. Dysfunctional behavior is preferred. This is not clear to the person. When they do understand, they still may prefer that behavior. Courage is required to risk. Thus, the

complex involves avoidance behavior. We do not want our true motives or tendencies or feelings exposed because it puts us in a threatening situation. We avoid revealing them and are contentious with others interpretations. We also avoid the situations by physically distancing ourselves, avoiding looks, avoiding touch, avoiding places and so on. The result is that we avoid fuller and more differentiated self actualization. It would be fuller because we would meet our needs and more differentiated because we would break out of more rigid limited behaviors and thought patterns. We would become more creative in the situation.

In fact, there usually is a core of truth in the understanding of the initial traumatic situations in which our needs are not being met. The problem occurs when we generalize the interpretation and our strategies. The generalization is *de facto,* since the issue is that we have never been in an operational situation where we did get these particular needs met. In a real sense, we do not know how to identify a situation in which we can get them met and we do not know how. We can lack fundamental intersubjective skills with respect to many intimate situations, dealing with authority, and so on.

We will expand the notion of the complex by discussing feelings, images and thoughts and their interrelationship. Symbols have been defined as emotionally charged images. Emotions serve at least two functions. The first is motivational. There is a valence in emotions towards action where the likelihood of action increases with the increase in the intensity of the emotion. Emotions also are evaluative where the intensity of the emotion is related to some cognitive interpretation of the situation. Cognitive is used here in the broad sense where a visual element can invoke a behavioral response as in the attacking behavior of a male stickleback that sees a red patch to a full rational appraisal of alternatives and their selection in conformity with a set of values. We intelligently coordinate our performance. Though we can be detached and perform in a formal manner as in acting, our daily life is more immediate. The notion of skills provides a first approximation. What is missing in that notion, however, is the role of emotions. Earlier we described skill as a complex. We need to broaden the notion of complex to include the spontaneous development of intersubjectivity. Intersubjectivity is skillful, but not completely. Intersubjectivity is the context in which skills develop. We have noted that emotions have evaluative and motivational functions. We also speak of emotional energy, and it is difficult to differentiate our emotions, such as anger, from the increase in energy we experience when we are angry. As motivational they are part of the emergence and actualizing of performance. As evaluative they provide a bias towards particular responses.

Intelligence provides a greater specificity to emotions. A vague apprehension when walking on a shaky roof is transformed to a focused fear with the recognition that the beams are cracking. In this way, natural cues that invoke instinctual responses, such as ducking to ward off a blow, can become signs by which we anticipate particular possibilities. Also, other aspects of the situation can be identified as signs. Whereas animals work primarily with sensitive cues that can invoke fairly predictable behaviors, this capability in us is augmented tremendously through signs that require some grasp of meaning. Cognition of the sign, which is a thought, can invoke emotions immediately. This occurs in intersubjective situations when we spontaneously understand the interrelationships of others evaluations of us in expression and deeds to us in the context of our emotions and their meaning for us. Our subsequent interpretation of new

situations in terms of these thoughts invoke the emotions constituting the intersubjective stance. Dysfunctional behavior results when interpretations of our wanting to be helped, wanting attention, wanting love, are understood as bad, or stupid and so on in the traumatic situation. Resolution of depression involves a revaluation of our feelings and needs.

Once we have developed understandings of situations we only need recognize a sign that the situation is in a particular constellation to invoke the complex for being in the situation. In infants, for example, a loud noise associated with a prior trauma can invoke fearful crying. Likewise, in an adult an action by another that is interpreted as indifference can invoke a depression. The difference between the two is that the adult is acting in the context of meaning. The infant may be reacting normally for an infant to loud noises without any understanding. The same would be true of the stickleback. Unlike the stickleback, the child learns to recognize situations in which detachment from the parent is likely to occur. The parents' actions become meaningful and act as signs in the context of likely consequences for the child. The recognition of the sign becomes enough to elicit the situation of potential loss for the child and the prospect of trauma. In a similar way, complexes that have conflicts with the environment at or near their core accumulate layers of meaning which when understood rightly or wrongly in the situation bring the complex to bear in dealing with the transformed situation for the person.

In all these cases there is no decision that caused the behavioral complex to emerge. Rather, any decisions are made in the context of the complex, or of the transformed situation for the person. The operational situation has changed. The motivational and evaluative functions of emotion merge with the recognition in the evocation of propensities to act in particular ways, or sets of anticipations. This includes sets of simultaneous physiological changes throughout the body. For example, when anticipating an angry, critical response from a person, the fight or flight syndrome can emerge.

We exploit this natural habituation in the development of skills. However, in the spontaneous development of dysfunctional behavior, these experiences can seem alien, and we can view ourselves as out of control or helpless in the face of them. We have a behavioral complex and we do not understand, concretely and experientially, why we act the way we do. At the heart of depression we find a labile state where the person oscillates between anger towards themselves for causing the loss with the concomitant blaming behavior and self contempt, and anger towards the other for causing the loss or not meeting one's needs or desires. Suicidal thoughts correspond with flight from the pain of loss and ambivalent hopelessness that often contains some hope that suicidal behavior will work to get needs met. There can be thoughts and associated fear that the other will leave if one gets angry. Often the anger is very strong with narcissistic overtones and can be associated with murderous thoughts. Thus, outwardly directed anger can be strongly avoided due to the danger to the self in the loss of the relationship with the other person and out of concern for the other person.

In the grieving process following the loss of a spouse or child, there can be a period of depression, but usually it is worked through. People who get stuck have some hope that the bond with the other will be re-established, (Bowlby) though this usually is not explicitly known by them. Understanding depression as a reaction to loss, that includes inhibition of the grieving process, finds support in the many psychologists and

psychiatrists who have noted that curing, or healing, depression involves mourning, both for the loss of the other and what might have been in that relationship, and for the loss of subsequent opportunities for relationships which were precluded by the dysfunctional solution to the problem of loss. Further evidence of the link is that a major cause of depression in Viet Nam veterans may have been the lack of opportunity to mourn their fallen comrades whose bodies were whisked away in the heat of battle. This prevented mourning in the presence of the dead, which seems to be a key part of the process. (Achilles in Viet Nam) This account of depression has been in terms of behavior. Let us consider it in terms of neurobiology.

5.3 Biological Explanation of Depression

The functioning of the immune system illustrates the interrelationship of mind, brain and body, with the influencing of mood caused by cellular biochemical processes. The immune reaction to viruses and microbes begins before we are conscious of being ill. It is hypothesized that biochemicals produced in the process either interact directly with the brain by passing through the blood-brain barrier or by stimulating peripheral nerves, relating to the brain in a manner analogous to that of a sensory organ (Fleshner, p. 1011). This interaction probably is related to changes in the level of neural transmitters, which in turn may affect moods. The change in moods would condition behavior. With illness there are "…decreases in activity, exploration, social interaction and food and water intake…Somnolence and increased slow wave sleep can be added to this set of changes." (Fleshner, p. 1013) These changes tend to conserve energy that can be used to fight the infection.

The stress response is a complementary system. It is evolutionarily younger and utilizes some of the same processes as the immune response system while suppressing others and the immune response system in general. Rather than needing to reduce the energy expended through conscious behavior, the stress response is the activation of the organism for action. The behaviors conditioned by the immune response are counterproductive in stressful situations. (Fleshner, p. 1014) We recognize a fight or flight situation. This recognition is the activator that initiates the physiological changes. In other mammals it can be caused by more "archetypal images" such as the shape of a bird of prey high in the sky, or the actions of others in the social organization.

Depression is a response to trauma. Because the trauma for us is meaningful and situational, if we think that a similar situation is imminent the stress response can be activated. Because our thoughts can occur automatically in recurrent cycles, the response can become chronic. Thus it is not unusual for depressed individuals to be hypervigilent, irritable, quick to anger or to withdraw.

It is known that serotonin reuptake inhibitors (SRI's) can reduce the frequency of depressive moods. Though the full explanation is not known, it is hypothesized that depression can be conditioned by a lack of serotonin. By keeping a higher level of serotonin available in the nerve synapses, the probability of the nerve firing increases. This would indicate that depression is maintained by particular neural activity, with the complementary inhibition of other activity. This activity can be the result of "learning", or it can have a greater probability of "selection" due to inadequate levels of serotonin, increasing the probability of depression in some portion of the population. By taking

drugs such as Prozac and Zoloft, the lift in mood is accompanied by the reduction in depressive automatic thoughts. The depression is not cured, however, without therapy. With the drugs and therapy it is not unusual for formerly intractable cases to be resolved in a year or less.

Our approach is that the level of neurotransmitters is a factor in performance. A low level of serotonin, or a lesion, or the death of nerves leads to impairment in performance. In the case of serotonin it raises the likelihood of depression, but it is still necessary for the person to interpret the situation as hopeless. This may be very easy if ones moods are dark to begin with or there is a neurological predisposition, but the dynamics of depression as revealed in the resolution of it indicate that personal involvement probably is required, even if it is virtually determined. Also, it has been shown that depression is a side effect of drugs taken for other medical conditions. Once the drug is stopped, the depression lifts. Edelman presents a plausible explanation of how neurological "predispositions" can be understood. (Edelman, 1987)

5.4. Contrast with psychoanalytic explanation

Jung thought that the complex was unified via emotions and that the emotions were the core of the meaning of the complex. The emotions as linked to archetypal images were symbolic. Symbols were the driving force of complexes. Symbols provided the core within which the contraries and contradictions of the complex could exist. In the midst of working though a conflicted complex the client would assume different archetypal stances at different times. For example, the patient's behavior can be understood in terms of the trickster archetype in innovative resistance to the therapist's efforts to encourage the client's insight into their behavior. If we understand performance as holistic, this is exactly backwards. Rather, it is the personal, fully participative, intelligent performance of the client that is being understood in terms of the trickster. The trickster really is a type of behavior which is personified in the archetype and which may be symbolized in dreams. The trickster as interpretive symbol is metaphor. The performance is not organized in terms of archetypes but in terms of intelligence. Likewise, the self is understood primarily in terms of meaning. The complex is a set of operations performed in particular meaningful contexts. As the complex develops, both the contexts and the operations change, though an operational core is retained. The self is understood in terms of the performance, or self actualization. It is the fact that we are partially constituted by meaning that makes neurosis possible and allows us to prolong indefinitely situations that likely are resolved immediately by animals. (Kalsched)

Freudian interpretation is in terms of the primary object relations (relations to others) of the person at the time of the trauma. There is an economy of psychic energy that is retained in the complex where the energy is bound in terms of the original situation and the person's wishes at that time. The complex becomes more complex as it develops, but resolution of the conflicted complex requires the patient understanding it in terms of the original trauma and the object relations at that time. This leads to psychoanalytic interpretations such as Meloy's view of the motive of sexual killings by psychopaths. They are, in a sense, trying to kill their mother, who rejected them in the oral stage of development. (Meloy)

Now, it may be true that they want to kill their mothers and do not know it. If we view their performance as traumatically impaired, or dysfunctional, performance, the explanation gets richer. Rather than having to explain the behavior in terms of the past, the behavior is explained in terms of the conscious operations of the person. Psychopaths are generally very willing to discuss all the details, including their motivations. Understanding of the original traumatic situation is important for understanding the development that led to the situation, including the person's motives. There may be similarities of structure in the behaviors. However, sometimes the psychopath is in search of a sexual experience, and their behavior shows that they cannot have a "normal" one because their core intimate relations deal with trauma and the resulting "killer rage". There also may be neocortical deficits that are inherited. On the other hand, there are psychopaths who have families and engage in this behavior on the side. The quality of their participation in the family is suspect, however. (Meloy)

Both these examples are straw men, in the sense that I probably have exaggerated the reductive qualities of the explanations. But the point is that we need to attend to the performance as embodying the explanation just as we need to understand the development conditioning it. The performance has a primacy that is sometimes overlooked.

I do not have the time to develop other critiques. Briefly, an adequate account of conscious operations needs to provide the context for psychological theory. For example, one does not project their anger into another. Given our notion of the self, this is an incorrect explanatory metaphor. Rather, one interprets the other as rejecting or angry and becomes angry in response to the judgment. An intentional understanding of some repressive techniques, dissociation and so on needs development. This would not eliminate the role of the unconscious, but critically correct some notions of it.

The notion of the unconscious as a primary cause also needs to be critically understood. The stance advocated here, but in need of development is that the unconscious is a condition for and the potentiality for conscious operations. For the sufficiently differentiated consciousness, this provides a third stage of meaning understanding of the unconscious. This understanding in terms of potentiality for conscious operations contrasts vividly with the mythic interpretations of dreams and other conscious contents in the first stage of meaning and the multiple theories of the second stage of meaning. The latter typically confuse conscious with unconscious operations and provide the unconscious with more autonomy and power than it has. Partly this is the result of an inadequate understanding of consciousness. But the confusion is exacerbated by the absence of an accepted model and corresponding terminology for explaining both conscious and unconscious operations.

5.4 Healing through Self Actualization

With impairment there is a spontaneous reorganization of performance. Limping, for example, does not need to be learned. In the psychic realm the reorganization can be ongoing. As it proceeds a complex develops of which the person is more or less conscious and knowledgeable. Typically the complex is present compactly and tacitly. It is tacit for we unreflectively act out of the complex as an objectification of the situation. It is compact since the latest form of its development is conscious and this typically is a

condensed, dissociated experience aimed at avoiding the emergence of the fuller experience and insight. Complexes of this type develop in an effort to avoid trauma and to find a means to meet the need that was frustrated in the original traumatic experiences and our accommodation to them. Unfortunately, we cannot have it both ways. To meet our fundamental needs we need to risk the trauma anew. Part of therapy is having the person develop to the point where these risks will be taken. Resolution of the issue is found in taking the risks and having needs and desires successfully met. This is the emergence of new performances that replace the prior dysfunctional ones. These new modes are not simply a sublation of the prior modes in a higher integration. Rather the development requires identifying and relinquishing dysfunctional modes of interpretation and behavior. One moves from partial to full self actualization in the realization of the core desires or needs. If health is self-actualization, then the criterion for this dialectical process is to accept what leads to fuller development and to reject the inhibitions to development. Rather than the Hegelian dialectic of thesis, antithesis and synthesis, there is rather the understanding of the dysfunctional oppositions and the choice of the self-affirmative, developmental path. This requires new understandings of the possibilities, other people and so on and courageous decisions as one moves into those situations which had been avoided because they threatened the integrity and survival of the self. Theoretical understanding of reconciliation requires an adequate theory of authenticity and critical dialectic. Emotionally, the reconciliation can occur through love and forgiveness, though this will tend to be imperfect if the dysfunctional complexes are not resolved.

Cognitive psychology uses a model of understanding the current state of a complex in terms of the persons compact and relatively undifferentiated understanding of the environment, thoughts, feelings and their body. The therapist assists the person in differentiating feelings and thoughts. For example, it is common for the person to state a thought as a feeling ("I feel that they do not like me"). Automatic, or habitual, thoughts are identified. These thoughts often can be distilled to a set of core beliefs operative in most intersubjective situations (I am not worthy, I am not lovable, No one cares, You cannot trust anybody, It's all my fault.) which, in depression, contribute to constituting the situation for the person as hopeless. Usually there are many emotions operative simultaneously contributing to the confusion and frustration. Bodily tensions are identified. These typically are symptomatic of a broader orientation such as the "fight or flight" stress response which is appropriate to the situation for the person.

Becoming healthy after an illness or injury requires reorganization. If there is no permanent impairment, we may return to our preferred performances. If there is impairment, we are not able to perform as we did before, but reorganize our performances to approach previous functioning as much as possible. In some cases, we may need to give things up or restructure our environment. In depression, the environment is restructured and possibilities are renounced in terms of our understanding of the traumatic situation. Since the traumatic situation is an intersubjective one dealing with attachment, when similar attachment possibilities arise, they will be approached from within this interpretation. Since the interpretation accommodates the core wariness of avoiding being hurt while trying to meet ones needs it is dysfunctional. As we continue to be frustrated in subsequent situations, the interpretation becomes layered and more complex, defenses become more sophisticated and depression becomes more likely.

For healing to occur, the situation needs to be viewed as safe enough to take risks. This cannot be done in one fell swoop. Cognitive therapy encourages the transformation of the situation for the person by challenging the automatic thoughts through exercises in which contrary interpretations are entertained (List the people who do like me, list times that I did succeed, etc.). Sometimes the recognition that the situation is really different than thought changes the moods instantaneously and the depression lifts. Even if it lifts slightly, the person may become amenable to behavior experiments where they take the risk of acting differently in situations and seeing if people will react more positively to them. Also, they will see that the consequences they expect, which at core are from the original traumatic situations, do not occur. In this way a situation that was interpreted as hopeless in which the person was a victim is transformed into a more open situation where the person has viable choices that result in a greater probability of meeting their needs. The change also is a change in brain chemistry raising the likelihood that the chronically depressed person can be cured and stop taking medication. In some cases medication needs to be continued, however.

This process does not require understanding the developmental etiology of depression. It is a reorganization of the current situation in terms of meaning, being and possibilities for fuller self-actualization. As we deal with new situations, other depressive cycles may ensue and the process is reiterated in terms of the typically richer situation. We get closer to the fuller self actualization that is desired, but avoided. In this way, dysfunctional behavior can be reversed and dissociated needs, emotions and so on can become explicitly intelligible and "present" in terms of choices versus more rigid, compulsive behavior. This process lends credence to the notion of health as self actualization and of meaningful performance being the major explanatory context for human living.

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