Chapter 5 TRANSPERSONAL LEARNING AND MEMORY Learning Objectives

- 1. Define learning.
- 2. Define memory.
- 3. Identify what most behavioral models of learning focus upon as the cause of behavior.
- 4. Define the principle of "associationism."
- 5. Describe the two major kinds of conditioning.
- 6. Summarize how learning occurs in respondent conditioning.
- 7. Summarize how learning occurs in operant conditioning.
- 8. Describe three early cognitive-behavioral models of learning.
- 9. Compare and contrast information-processing models of memory and behavioral models of learning.
- 10. Compare and contrast storage models of memory, stage models of memory, and content models of memory.
- 11. Distinguish the operations of encoding, storage, and retrieval.
- 12. Tell how memory is both constructive and re-constructive.
- 13. Explain how memory changes over time.
- 14. Define state-dependent memory, learning, and behavior (SDMLB).
- 15. Provide three examples of SDMLB.
- 16. Identify three causes of SDMLB.
- 17. Tell how recovery of a forgotten state-dependent memory, learning, or behavior can occur.
- 18. Describe the neurobiology of SDMLB.
- 19. Evaluate the claim that memories are stored in the synaptic changes in the brain.
- 20. Identify and discuss three long-standing beliefs about the limitations of newborn infants that are slowly being overturned and revised as a result of new research.
- 21. Evaluate the claim that all complex behaviors start out simple.
- 22. Evaluate the claim that babies cannot learn or remember because they have "primitive" and poorly developed brains.
- 23. Evaluate the claim that babies cannot learn or remember because they cannot speak.
- 24. Explain how newborns learn in similar ways as adults.
- 25. Explain how newborns remember in similar ways as adults.
- 26. Identify the sources of evidence for the existence of birth memories.
- 27. Define childhood amnesia.
- 28. Describe the contributions of psychotherapists Otto Rank, Nandor Fodor, and Arthur Janov to the idea that emotional trauma is linked to birth memories.
- 29. Describe the technique of "ideo-motor signaling" and tell how it is used to evoke information about birth memories.
- 30. Identify and describe the techniques used by psychiatrist Stanislav Grof in uncovering the occurrence of birth memories.
- 31. Summarize the narrative reports collected by David Chamberlain and tell how they provide insight into what birth is like from the infant's point of view.
- 32. Explain the significance of birth memories for understanding the nature of human memory and learning.
- 33. Describe the relationship between out-of-body experiences (OBE) and the report of birth memories.
- 34. Describe the work of psychiatrist Ian Stevenson on children's memory of previous lives.
- 35. Tell why birthmark evidence is important in the case for memories of past lives.
- 36. List and describe the key features of cases suggestive of reincarnation.

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- 37. Explain how C. G. Jung's concept of the personal and collective unconscious provides an interpretative framework for understanding transpersonal memory and learning.
- 38. Describe Rupert Sheldrake's theory of "formative causation" and explain how it may be useful for understanding the nature of biological forms.
- 39. Describe the characteristics of systems of condensed experience (COEX) as they operate in human memory.
- 40. Define the terms "retention" and "transfer."
- 41. Summarize the techniques and practices that lead to greater transfer and how the individual can retain what is learned over time.
- 42. Identify the conditions under which loss of transfer can be minimized and how the individual can use what has been learned when and where he or she needs it.
- 43. Explain why what is good for short-term learning and memory may not be good for long-term retention.
- 44. Distinguish between the "subjective threshold" and "objective threshold" in experiments of subliminal perception.
- 45. Describe the results of psychophysical experiments conducted on the content of widely advertised and marketed subliminal tapes.
- 46. Explain why subliminal perception is not subliminal persuasion.
- 47. Tell why a person is better off opening channels of communication between conscious and subconscious using methods other than subliminal persuasion.
- 48. Describe how a peak experience is an example of an "ideal performance" state.
- 49. Describe how the experience of "flow" is an example of an ideal performance state.
- 50. Identify and describe some of the problems that can occur along the path of learning that can result in lopsided psychospiritual development.
- 51. Describe how the first step to true learning on the spiritual path involves "learning how to unlearn."
- 52. Explain why it is so important to give up ideas about the unsavory nature of the unconscious for successful transpersonal learning.
- 53. List and describe the key principles in an "education for transcendence."
- 54. Discuss the concept of "transformative education" (i.e., what does it consist of, what is learned, how it is assessed).
- 55. Distinguish between hierarchical and vertical dimensions of integral education.
- 56. Identify and describe three examples of "integral transformative practice."
- 57. Explain how focusing on positive, pleasant memories can be used to reinforce positive, pleasant memories in the present.
- 58. Describe how "reframing" a problem helps to resolve it.
- 59. Explain how conscious experience with probable events facilitates a constructive re-orientation toward memory of past events.
- 60. Provide a critique of integral transformative practice programs.
- 61. Describe the learning system called "Suggestology"
- 62. Describe the transpersonal approach to Master and Doctoral education at the Institute of Transpersonal Psychology.

Chapter Outline

TRANSPERSONAL LEARNING AND MEMORY

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- 2. Newborns learn in similar ways as adults.
- 3. Newborns remember in similar ways as adults.
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- Learning to unlearn the beliefs that impede the free flow of energy and action and 3. threaten the integrity of the personality itself.
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- D. Examples of Integral Transformative Education
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Chapter Summary

The nature of learning and memory in normal waking consciousness is examined. Learning is defined as any relatively permanent change in behavior as a result of experience. Memory is defined as the persistence of learning over time. Traditional approaches to the study of learning have included classical conditioning, operant conditioning. Early cognitive-behavioral models of learning proposed by Tolman (latent learning), Kohler (insight learning), and Bandura (observational learning) expanded the behavioral framework by incorporating cognition into our understanding of learning processes beyond the influence of environmental factors alone. Information-processing models of memory emerged with the decline of behaviorism. Storage models focus on how long information is stored (sensory, short-term, long-term memory). Stage models focus on what is done to the information (encoding, storage, retrieval processes). Content models focus on what kind of information is stored in long-term memory (episodic, semantic, procedural). Memory is a constructive and re-constructive process, organized associatively, and subject to change. Biological models of memory assume that changes in synapses are likely locations of the physical representation of memory. Learning and memory are dependent on the state of consciousness in which the information was originally learned or encoded. Examples of state-dependent memory, learning, and behavior (SDMLB) are examined.

The transpersonal nature of memory, learning, and behavior is examined within the context of memory and learning abilities the prenatal and newborn infant. Long-standing beliefs are being revised about the capabilities of the prenatal and neonatal infant. Developmental psychologists have discovered that many behaviors seen at birth start out complex, that fetal body and brain are sufficiently developed to provide a substantial foundation for learning and memory while in the womb, and that babies can learn and remember even without language. Neonates and newborns demonstrate a capacity for respondent, operant, and observational learning. They also show a capacity for episodic, semantic, and procedural memory. Evidence for the existence of birth memories comes from a variety of sources. Research of memory of past lives are suggestive of reincarnation. Several theoretical frameworks exist for helping us understand how memories of birth and past lives are possible, including Jung's notion of a personal and collective unconscious, Sheldrake's hypothesis of formative causation, and Grof's concept of systems of condensed experience.

The topic of transpersonal memory and learning naturally leads to a discussion of how to enhance human performance in these three areas. Enhancing memory and learning above the threshold of normal waking consciousness is complex, but research indicates certain approaches to training and practice can help. The goal of training programs that aim for long-term retention and transfer is to help individuals retain what he or she has learned over time and use what is learned when and where they need it. Paradoxically, what is good for short-term learning and memory may not be good for long-term retention and transfer. Learning and memory below the threshold of waking consciousness is equally complex. Studies of subliminal perception in the laboratory have identified two-thresholds of perception: a subjective threshold (verbally unaware, behaviorally aware) and an objective threshold (verbally unaware, behaviorally aw

Transpersonal psychology has long been interested in peak performance states. Maslow's notion of peak experiences and Csikszentmihalyi's idea of flow experiences are two ways of characterizing qualities of experience that contribute to peak performance. A number of programs have been developed to address the lopsided development that can occur during transpersonal learning. Qualities of mind helpful to transpersonal learning are examined, including having an open and flexible mind, and giving up ideas of the unsavory subconscious. Transformative education addresses body, breath, mind, emotions, and spirit in an *integral* way. Hierarchical and vertical dimensions of integral education are described. Examples of

transformative practice (e.g., working with the past as a way of creating a more constructive present) are presented. The Lozanov Suggestology system of accelerated learning is one example of a transformative practice program. A critique of transformative practice programs is presented. An application of transformative learning practices in higher education, specifically the doctoral program in transpersonal psychology at the Institute of Transpersonal Psychology (ITP) in Palo Alto, CA is described.

CHAPTER 5 - Transpersonal Learning and Memory

Introduction

In order to understand what is transpersonal learning and memory, it is important to understand something about the nature of ordinary memory and learning in normal waking consciousness. Transpersonal learning and memory emerges not by rising above familiar learning and memory, but evolves as an extension and expansion of what it is. Long-standing beliefs about the limitations of learning and remembering abilities of newborns and infants, for example, are slowly being overturned and revised to provide a much more comprehensive picture of learning and memory capacities *before* birth. Learning and memory also are very much dependent on the state of consciousness in which they occur. Multiple channels of awareness are continually operative just beneath the waking stream of consciousness, and learning and memory that is available in one state of consciousness will not be available in another state of consciousness. It is important to recognize, psychologically speaking, that the subconscious mind to make sense of perceptual information it receives. Subliminal perception is not subliminal persuasion.

Transpersonal psychology examines other types of learning (e.g., integral transformative education) and other kinds of memory storage (e.g., the collective unconscious, morphogenetic fields, systems of condensed experience [COEX], birth memories, memories of previous lives) that are not discussed in mainstream general psychology textbooks because such possibilities shatters the foundations of mainstream psychology's positivist, reductionist, mechanistic and materialist philosophical stance. The purpose of this chapter is to draw attention to the broad range of known and "unknown" capabilities of human memory and learning that are biologically pertinent, and to give notice of their transformative capacity so that our understanding of what is possible may be enlarged and their practical use may be encouraged in our daily life.

I. Memory and Learning in Normal Waking Consciousness

The Nature of Ordinary Learning and Memory

Definition of learning and memory. What is the nature of learning and memory as it operates in normal waking consciousness? Learning is defined as a process that results in "a relatively permanent change in an organism's behavior as a result of experience" and memory is "the persistence of learning over time through the storage and retrieval of information" (Myers, 2008, pp. 221, 253). It is important to recognize three key terms in the definition of learning: (a) "behavior" because learning cannot be directly seen, heard, tasted, smelled, or touched with the "eye of flesh" (Wilber, 1990, pp. 3-4) but can only be inferred from observable performance that is supposed to result from learning; (b) "relatively permanent change" because learning usually involves a change in behavior that can be retained and transferred across different situations; and (c) "result of experience" to distinguish learning from other changes of behavior that are the result of temporary states of the person (e.g., fatigue, drugs) and biological factors (e.g., maturation, brain injury, disease). The definition of memory highlights memory's association with learning (i.e., if there were no memory, then nothing could be learned), linear time (i.e., memory's chronological character, consecutive nature, and temporal continuity), and modern information processing models of thinking and language.

Conventional Models of Learning and Memory

Conventional psychology has identified at least four different types of *learning* that occur in normal waking consciousness, depending on whether the outer physical environment or inner mental processes are focused upon the primary cause of the physical organism's observed performance (a) classical (respondent) conditioning, (b) operant (instrumental) conditioning, (c) observational (vicarious) learning, and (d) cognitive (information-processing) learning. Conventional psychology distinguishes different kinds of *memory* depending on *how long* information is stored (sensory memory, short-term/working memory, long-term memory), *how* the memory trace is processed ("encoding" or put in memory, "storage" or retain in memory, and "retrieval" or access from memory), and *what* kind of information it is (episodic-autobiographical, semantic-linguistic, or procedural-motor; and implicit/nondeclarative or explicit/declarative). A preliminary understanding each of these types of learning and kinds of memory will provide a good foundation for understanding the nature of transpersonal (beyond ego) memory and learning (Neher, 1990).

Behavioral Models of Learning and Memory

All behavioral models of learning focus on the external physical environment as the primary cause of behavior, and are based on the principle of *associationism:* the tendency to associate, connect, or join two elements together in awareness and memory that occur together in our experience, whether it be a stimulus (i.e., a stimulus refers to any particular part of the physical environment or physical organism) and a response (i.e., a response or reaction refers to the behavior or mental state that occurs as a result of the stimulus), two stimuli, or two responses together. A number of "laws" of association have been identified (e.g., frequency, contiguity, vividness, similarity) that govern the formation of the association. The more frequently or vividly two elements appear or occur together in space or time in personal experience, for instance, the more probable or likely they will be associated together. When you recall one element (e.g., the idea of 90 degrees), the second element to which the first has been associated automatically and habitually come to mind (e.g., the idea of heat or of a right angle). Habits of thoughts and behavior are thereby established in this manner.

What is conditioning? Conditioning is regarded as a fundamental process of learning. Conditioning is based upon spontaneous associative processes whereby two stimuli become joined together in experience. Two main types of associative learning are respondent (classical) conditioning and operant (instrumental) conditioning. Respondent conditioning is regarded as a nonconscious, involuntary, automatic form of associating two stimuli together, whereas operant conditioning is viewed as a conscious, voluntary, deliberative form of associating a response with its consequence such that the behavior tends to be repeated following pleasant consequences or diminished in frequency following unpleasant consequences. Habits are a common example of conditioning at work. Walsh and Vaughan (1980) state that

The transpersonal perspective holds that people are more vastly ensnared and trapped in their conditioning than they appreciate, but. . . freedom from this conditioning is possible. The aim of transpersonal psychotherapy is essentially the extraction of awareness from this conditioned tyranny of the mind. (p. 55)

Respondent (classical) conditioning. The respondent (classical) conditioning model of learning is represented by the work of Ivan Petrovich Pavlov [1849-1936] (Pavlov, 1928, 1927/1960). Respondent conditioning is the form of learning that occurs when two stimuli (US-CS) are associated together in experience. Greatly oversimplified, Pavlovian conditioning has four key elements: (a) an unlearned unconditioned stimulus (US), (b) an unlearned, unconditioned response (UR), (c) a to-be-conditioned neutral stimulus (CS), and (d) a to-be-learned conditioned response (CR). The association between the US and the UR is biologically wired-in because it is an involuntary, physiological reflex, is therefore

unlearned, and is the basic form foundation upon which classical conditioning builds. Respondent conditioning, in other words, builds upon the reflexes we are born with. If you eat bad food (US), you get sick (UR). Cold temperatures (US) produce shivering (UR). A sudden, loud noise (US) results in a pounding heart (UR).

The connection between the US and the neutral CS is the to-be-learned association. The neutral CS can be anything you can imagine – a mailbox, a room, the smell of a perfume, a building, a person. Repeated pairings of an US-UR reflex with a neutral CS will gradually cause the CS alone to produce a modified version of the UR in the absence of the US. This *modified* UR is called a CR and tends to be similar, but not identical, to the UR (less intense, slower to appear). For example, suppose Diana became sick (UR) with the flu (US), after she ate egg rolls and Moo Gu Gai Pan (CS). Now, if she tries to eat Moo Gu Gai Pan (CS) or even thinks about it, she feels sick to her stomach (CR), because she has associated her experience of being sick with the flu (US-UR) with her once favorite Chinese dinner (CS).

Most US-UR reflexes have a pleasurable or aversive emotional component, and through respondent conditioning that pleasurable or aversive component becomes connected to the CS to elicit what is called a "conditioned emotional response" (CER). For example, suppose Yvonne's car went out of control on an icy road (US). Afterwards, she pulled to the side of the road and waited for the tension (UR) to subside. Now, whenever snow or sleet (CS) begins to fall, she feels tense inside (CER). Even cognitive stimuli can serve as CSs that elicit CERs. For example, suppose Beth watched the shower murder scene (US) in *Psycho* on television and felt very frightened (UR). Afterwards, even the thought of taking a shower (CS) frightened Beth (CER). Mammals and birds appear to be "biologically prepared" for making certain associations and may actively search out "life-critical" US-CS (respondent) and other S-R (operant) linkages (Garcia, Brett, & Rusiniak, 1989; Garcia & Koelling, 1966; Shapiro, Jacobs, & LoLordo, 1980).

When the US and the CS are no longer paired, extinction of the CR occurs, although the CR may resurrect spontaneously in response to the CS long after the conditioning process has been concluded -- a phenomenon called "spontaneous recovery." Stimuli and responses can be differentiated (or discriminated) and generalized across comparable situations so that stimuli similar in form or appearance to the original US can elicit prior conditioned responses. Memories themselves can become "conditioned" in this way. For instance, there may be some past experience that occurred where things did not turn out quite the way the individual would have liked them. As a result, when a visual image of that past experience comes into mind and the person thinks about it, he or she gets the same kind of feelings that he or she had as a result of that experience. Pavlovian conditioning can be quite complex in the form of higher-ordering conditioning and counter-conditioning processes that may be used in behaviorally-oriented psychotherapy (Rescorla, 1988).

Operant (instrumental) conditioning. Operant (instrumental) conditioning model of learning is represented by the work of Burrhus Frederic Skinner [1904-1990] (Skinner, 1938, 1953, 1974). Operant conditioning is the type of learning that occurs when we associate a response (behavior) with a stimulus (a consequence, effect, or outcome). The stimulus here is no longer defined as a part of the physical environment or physical organism that elicits a response, either reflexively or through classical conditioning. The stimulus situation merely "sets the occasion" for the behavior to occur. It does not "cause" it. What causes the behavior is not the stimulus situation within which the behavior occurs, but the *consequences* of the behavior which does not elicit behavior but *evokes* behavior. The behavior causes the consequences, which in turn, causes the behavior to either reoccur or not reoccur in the same situation in the future. Operant conditioning has three key elements: Antecedent (A) context cues or stimuli that set the occasion for behavior, the operant or instrumental behavior (B) emitted, and the consequences (C) that follow or are caused by the behavior. A stop sign (A) sets the occasion for stepping on the brake (B) that stops the car (C).

Operant conditioning is "learning from consequences." Consequences can be reinforcing as when some pleasurable stimulus is presented or some aversive stimulus is removed following behavior, in which case the behavior increases in frequency in similar contexts. If the telephone rings repeatedly (A), you answer it (B), and a friend always speaks (S^r), this A-B-C series of events increases the probability of you answering the telephone the next time it rings (behavior increases). On the other hand, consequences can be punishing as when some pleasurable stimulus is removed or some aversive stimulus is presented following behavior, in which case the behavior decreases in frequency in similar situations. If the telephone rings repeatedly (A), you answer it (B), and no one ever answers (S^p), the probability of your answering the telephone the next time it rings diminishes (behavior decreases).

When a behavior (B) is followed by a reinforcing consequence (S^r) in one situation but not in another situation, the antecedent contextual cues themselves acquire informational qualities that permit the individual to discriminate situations in which positive consequences are likely to occur following an emitted behavior (S^D) from those situations in which they do not (S^{Δ}). When a behavior (B) is followed by a punishing consequence (S^p) in one situation but not in another, the antecedent contextual cues acquire predictive qualities that permit the individual to expect non-reinforcement (S^{Δ}) and inhibit behavior. In addition to consequences and antecedent stimuli influencing behavior, the timing of consequences influences the frequency of a behavior, giving rise to a host of different acquisition and maintenance "schedules" of reinforcement or punishment that have positive and negative control over behavior -continuous schedules; fixed and variable ratio schedules; fixed and variable interval schedules; differential reinforcement schedules of high rate, low rate, and "other" behavior; compound schedules, such as chained, multiple, concurrent. Operant conditioning can be quite complex involving primary and secondary reinforcers and punishers, prompts and fading, shaping, token reinforcement and contingency contract programs. Operant conditioning intertwines in intricate ways with respondent conditioning in natural settings of everyday life (Baldwin & Baldwin, 2001). Respondent conditioned reflexes can be modified by operant conditioning, for instance. With the help of operant conditioning, Diana can learn to enjoy her favorite Chinese food again, Yvonne learns to drive more carefully on icy roads, and Beth learns to take a shower without feeling frightened.

Early Cognitive-Behavioral Models of Learning and Memory

Both Pavlov and Skinner refused to include consciousness or the concept of self in their behavioral equations and *devalued* subjective experience in order to remain in their role of pure physiologist and behaviorist -- objective external observers and experimenters dealing exclusively with outer material phenomena and the associative relationships among physical stimuli and observable responses (Pavlov, 1928, p. 38; Skinner, 1974, pp. 220-21, 225). Other early behaviorists were not quite willing to give up on mind or consciousness in either animals or humans, however, and included them as "intervening variables" that moderated the effect of stimuli on behavior.

Latent learning, insight learning, and observational learning. According to the strict behaviorism of Pavlov and Skinner, it was believed that in order for learning to occur, a behavior must occur. It was gradually realized, however, that learning could occur in the absence of a behavior. Edward Chace Tolman [1886-1959] discovered "latent" learning in maze learning behavior of rats, which only showed itself in later performance when the animals were called upon to do so, and even in the absence of reinforcement (Tolman & Honzik, 1930). E. C. Tolman (1932, 1948) went on to argue on the basis of subsequent research that both human and non-human animals act with purpose and intent and the all species have the capacity to form inner mental representations of their outer physical environment. Wolfgang Kohler [1887-1967] identified "insight" learning in the great apes in which the animals demonstrated an ability to suddenly "get the point" of a problem-solving situation and arrive at a solution, and helped present new concepts in the field of perception that re-defined modern psychology (Kohler,

1917/1925, 1929/1970, 1969). Albert Bandura [1925-present] identified "observational" learning in which new behaviors are learned and old behaviors are inhibited or disinhibited, as a result of observing other people's behavior. The observed behaviors may be modeled or imitated later depending on the consequences the model receives for his or her behavior, the competence and likeability of the model, the nature and complexity of the modeled behavior, contextual cues, and other factors (Bandura, 1977, 1986).

Information-Processing Models of Memory and Learning

The early cognitive-behaviorists demonstrated that learning can occur without behavior and without reinforcement. Apparently something *was* going on in the "little black box of consciousness" that intervened between antecedent stimuli and observable behavior. The question was how to represent it. With the decline of influence of behaviorism and the growth of interest in linguistics, human memory, and developmental psychology in the mid-1950s, animals-as-models-of-man became replaced with computers-as-models-of man (Baars, 1986). Because computers could do many of the things that humans could -- encode, store, and retrieve information, use language, and use reasoning to solve problems -- memory processes came to be seen as best understood by comparison with a computer, and learning was viewed as best represented as information flowing through a series of stages (Mayer, 1981). The information-processing approach to memory and learning was born.

Storage theory . One of the first information-processing models of memory was the "storage theory" proposed by Atkinson & Shriffrin (1968) in which to-be-remembered information was "processed" through an invariant sequence of storage systems on its way to a single long-term memory storage system. Information from the environment first entered "sensory memory" which stored information for seconds or less. We have a separate sensory memory for each of the five senses. Sensory memory very briefly detects every detail of a stimulus array, and then quickly fades unless repeated, like the reverberating echo of a question, or the fleeting snapshot of a scene barely seen, or the lingering taste of sour milk. It is the "control process" of *attention* that moves information from sensory memory storage into "short-term memory" storage (also called "working memory" with its specialized phonological, visual, and semantic memory buffers that hold and actively manipulate information under the management of "executive" control processes) that stores data for approximately 20 seconds before it fades unless rehearsed. Short-term/working memory has a limited capacity and can only retain about 7-9"chunks" of meaningfully organized items of information. It is the control processes of rehearsal and *elaboration* that moves the information from short-term memory storage into long-term memory storage. which retains information for long periods of time ranging from minutes to years. Long-term storage is theoretically infinite as those individuals who can perform extraordinary memory feats demonstrate (http://www.worldmemorychampionship.com).

Stage theory. Subsequent models came to conceptualize learning and memory not in terms of *how long* information is stored (storage theory), but *what is done* to the to-be-remembered learning or information (stage theory). Three stages of information processing are distinguished: (a) the acquisition or *encoding* stage whereby information is put into working memory and long-term memory storage, (b) the maintenance or *storage* stage whereby information is retained in memory storage, and (c) the *retrieval* stage whereby information is accessed and taken out of memory storage. Forgetting can occur at one or more of these three stages (i.e., "I didn't notice" = encoding failure; "I don't know" = storage failure; "I can't remember" = retrieval failure). Brain scanning studies have revealed biological correlates of the encoding and retrieval stages: encoding activates left hemisphere brain regions, whereas retrieval activates right hemisphere brain regions (Shallice, Fletcher, Frith, Grasby, Frackowiak, & Dolan, 1994).

Encoding. The encoding stage is initial stage of memory formation. Early theories of attention ("early selection theories") hypothesized that awareness was necessary for memory and learning, but later experiments showed that there are multiple channels of attention and encoding going on all the time,

some of them unconscious (Jacoby, Woloshyn, & Kelley, 1989; Marcel, 1980). Sensory information, for example, is automatically split up into different aspects for separate and simultaneous processing (color, shape, movement, depth) and encoded from multiple sources (visual, auditory, tactile, gustatory, olfactory, emotional, motivational, cognitive, physiological, and so forth) at a subconscious level before it reaches awareness (Kihlstrom, 1999). While it is generally true that "what gets noticed is what gets learned" and the information that we consciously and effortfully encode through the use of rehearsal, mental imagery, organization, and elaboration becomes successfully stored in long-term memory, we also automatically encode information subconsciously (Posner & Boies, 1971; Posner & Snyder, 1975). Spatial and temporal information, frequency of occurrence, and word meanings tend to be automatically and unconsciously encoded without attention, for example. The brain's capacity for parallel distributed processing (PDP) of information at both the conscious (explicit) level and at the subconscious (implicit) level simultaneously is believed to be responsible for this. The phenomenon known as the Stroop effect – the increase in time required to name the ink colors when the ink and color names do not match - is one demonstration of how word meaning is automatically and subconsciously processed and cannot be ignored and thus interferes with color naming, even though the task does not require word processing and when the individual is explicitly instructed to consciously ignore the word when naming the ink colors (Macleod, 1991).

Storage. It used to be believed that there was only one long-term memory storage system into which all information was put. Research of brain-damaged people with amnesia (e.g., Sacks, 1985) reveals that there are different long-term memory systems depending on (a) what kind of information is stored (e.g., episodic, semantic, procedural) and (b) how the information is processed (consciously-explicitly or subconsciously-implicitly). People with certain forms of brain damage who develop *anterograde* amnesia, for instance, demonstrate that although they are not capable of consciously and explicitly recalling new facts (semantic memory) or anything they have done recently (episodic memory), they can nevertheless learn certain skills (e.g., do a jigsaw puzzle) and undergo classical and operant conditioning without any conscious memory of having done so (Weiskrantz, 2000). They will verbally report they do not consciously recognize the picture of a familiar face, for example, but their physiological responses to the picture indicates recognition at a subconscious level. If they read a story once, they will read the story faster the second time, although claiming they never read the story before. Having studied the word "bouquet" during training trials, they will readily respond to the word stem "bou" "during test trials with the word "bouquet" while having no conscious recall of having seen the word earlier. These observations suggest the existence of at least two long-term memory storage systems. One is a long-term memory storage system for information that we learn (encode and store) and can verbally declare awareness of having learned it and can deliberately retrieve - called "explicit" or declarative memory. The second is a long-term memory storage system for information we learn (encode and store) but verbally declare no conscious awareness of learning and cannot deliberately retrieve - called "implicit" or nondeclarative memory.

Retrieval. The nature of retrieval processes has been long studied by mainstream psychology, especially in terms of (a) how amnesia can disrupt memory retrieval, (b) how "depth of processing" (by the physical appearance, the sound, or meaning of the stimulus information) affects retrieval, (c) how general knowledge is organized into a hierarchical structure that facilitates retrieval, and (c) how retrieval can be improved through memory improvement techniques, such as priming. Some memory experts argue that the study of retrieval processes is the key to understanding the nature of memory itself (Roediger, 2000). Retrieval is often a matter of creating or finding the right cues or prompts for recovery of the memory from storage. We can often recover a memory by mentally reconstructing or physically returning to the physical setting in which the original experience occurred – called the "context effect." The context includes now only the physical setting, but also includes the physiological and psychological state of the individual (e.g., mood, state of consciousness) during the encoding process.

Content theory. A third way of understanding memory is not only in terms of *how long* information is stored (storage theory) or *what is done* to the information (stage theory), but also *what kind of information* it is. Different memory storage systems seem to be used to store different kinds of information (e.g., what happened to you, what words mean, how to do things). Cognitive psychology commonly distinguishes three kinds of long-term memory: episodic, semantic, and procedural (Tulving, 1985). *Episodic* memory stores personal, private experiences and is tied to the time and setting in which the memory was first established and can usually be retrieved by reconstructing the context in which the experience originally occurred. Examples of episodic memory of traumas, olfactory memory, and autobiographical memory. *Semantic* memory refers to memory of general factual information and knowledge of language and the meaning of words (e.g., Define transpersonal psychology). *Procedural* memory refers to your stored knowledge of skills and how to do the procedures necessary to perform a given task (e.g., how to meditate or tie your shoes). People with brain damage can have one type of memory entirely unavailable while the other two types of memory remain accessible.

Neurobiology of Learning and Memory

Research in the neurobiology of memory and learning indicates that encoding, storage, and retrieval processes involved in learning and memory entail the action of at least two neural systems: (a) the *neuron* that involves specific molecular changes in networks of synaptic junctures, and (b) larger *brain structures* such as the amygdala and hippocampus at the limbic-hypothalamic system level (Mishkin, Malamut, & Bachevalier, 1984). Hormones released during acts of learning and memory, especially during periods of stress, will alter the encoding, storage, and retrieval of learning and memory (McGaugh, 1983). "Stress" hormones (e.g., catecholamines, norepiniphrine, epinephrine,) that modulate the retention of memory are regulated by the interior brain structures such as the limbic-hypothalamic-pituitary-endocrine system, specifically by the amygdale and hippocampus, which are involved in emotional experiences of pleasure and pain and in the storage of memories. It is interesting to note that these are the same brain structures and hormones which Hans Selye (1974) identified as also being involved in the body's generalized response to biological stress he called the General Adaptation Syndrome (GAS) (i.e., resulting in an enlarged adrenal cortex, suppressed immune system, ulcers in the gastrointestinal tract) (see also Rossi, 1986, chap. 4).

Where are memories stored? The biological approach to memory and learning hypothesizes that memories-to-be begin their journey by entering the brain through the senses (i.e., all information must come through the physical senses) and wind their way through brain circuits to either the *hippocampus* located in the interior limbic-hypothalamic-pituitary brain structure for the temporary processing of semantic and episodic memories before migrating for final storage elsewhere, or to the cerebellum located in the brain stem for the forming and storage of procedural skill and respondent/operantly conditioned association memories. All forms of respondent and operant conditioning of associations, and all episodic, semantic, and procedural memories are somehow encoded and stored in the complex pattern of changes in the strengths of synaptic interconnections among neurons in neural networks located throughout the brain (e.g., medial temporal lobe, neocortex, and elsewhere). Synaptic changes occur as a consequence of the repeated neuronal stimulation that occurs as the result of experience. The to-be-remembered learned information forms a memory by creating a physical representation of itself -- the "memory trace" -- in the brain's neural network at those junctures where neurons communicate with each other via neurotransmitters (e.g., serotonin, acetylcholine). Increased stimulation and activity of particular neurons forms and strengthens new interconnections with other adjacent neurons, makes the neuron more sensitive to future stimulation, and causes it to release more neurotransmitters – a phenomenon known as "longterm potentiation (LTP). LTP is believed to be the biological basis for learning and remembering associations formed during respondent and operant conditioning (Lynch & Staubli, 1991). Synapses are regarded as the likely candidate for the memory trace because of the sheer number of synapses (10^{13}) .

Their relatively low energy demands (basal metabolic rate) are believed to be sufficient to store the huge amounts of information people are usually exposed to in the course of a lifetime under various conditions of consciousness (e.g., coma) (Gazzaniga, Ivry, & Mangun, 1998).

Other Characteristics of Memory

It is important to recognize, psychologically speaking, that the observations of neurons, synapses, and brain structures made under the microscope or brain imaging devices only make sense and have meaning in light of what is known about how memory works in everyday life. Facts have meaning only in relation to other facts. Otherwise, we would only have a large collection of facts that would stand in need of interpretation. One set of facts useful in providing an interpretative framework for understanding the meaning of the biology of memory are characteristics of memory pertaining to its constructive and reconstructive, associative, and changeful characteristics.

Constructive and re-constructive nature of memory. Usually only information that fits prior knowledge is selected for encoding into memory. Once information is selected for encoding, its gist or meaning is abstracted and all non-essential details are dropped out (i.e., we store the meaning and drop the words). Once the main idea or gist is abstracted, interpretations and inferences are made of what is said or read based on prior knowledge and these interpretations and inferences also become part of memory and integrated with previously acquired relevant information already stored. The ideas, images, and emotions that form the inner complex of a memory are actually integrated, interweaving processes whose contents are *constructed* when we encode them [put into memory] and are *re-constructed* anew every time we retrieve them [take out of memory] (Mandler, 1984).

The important role of associative processes in memory and learning. The memory of any event changes through the well-known process of *association*. Memory events become associated with one another on the basis of similar thematic structures, similar emotional content, and so forth to form larger integrated memory clusters "complexes" of memory events or what transpersonal psychiatrist Stanislav Grof called "condensed experience" (COEX) systems (Grof, 1985).

A COEX system is a dynamic constellation of memories (and associated fantasy material) from different periods of the individual's life, with the common denominator of a strong emotional charge of the same kind of quality, intense physical sensation of the same kind, or the fact that they share some other important elements. (p. 97)

Associations then not only form a basic firm foundation for classical and operant conditioning learning processes, they also help to organize our sensory and perceptual experiences and our memory of those experiences. Associations play a significant role in the encoding and storage of learned material, and in the retrieval of memories. Associations are important not only during the process of memory retrieval in facilitating the recall of specific memories by serving as effective retrieval cues, but also during the process of storage in terms of how memory events are organized. In important ways, one's normal waking experience in the present is organized by the memories of the past.

The changeful nature of memories. Memories do not exist statically or dead like finished mummies in some museum of time. Memories -- like the ideas and emotions that also form a part of all memory events -- are alive and dynamic, forever changing and growing. Nor is memory like a video camera or a sponge indiscriminately soaking up information to be later squeeze out. "Memory does not operate like a tape recorder in which we simply play back exactly what we learned. Memory is always a constructive process whereby we actually synthesize a new subjective experience every time we recall a past event" (Rossi, 1986, p. 69). Memories are very much like sensations inasmuch as they begin to change as soon as they are formed – changed not only by the filter of each individual's background and temperament, previous

memories, present state of consciousness and current mood, but also by each succeeding experience, memory, state of consciousness and mood. The memory of any event is thus shaped and colored not only by associated past and present events, but also by anticipated, expected, and imagined future events as well. Memory of the past can affect the present and the future. Memory is action, and as action memories change and are changed by the action of the individual who encodes, stores, and retrieves them.

There is no one "true" memory, or is there? There is no such thing as a "true memory" of a past event. Even the "same" event shared by other people will involve its perception from different spatial standpoints and countless colorations of diverse psychological perspectives, with each focuses of consciousness or awareness emphasizing different meanings and implications, as the "single" event begins to work upon each participant so that the event while shared is still *original* to each percipient. Who has the "true version" of the past event? Does each one of the participants have a true version or only a partial version? Do they all collectively possess it or does it not exist? The answer to these questions will have implications for our understanding not only of the nature of memory in particular, but also the nature of reality itself.

Memory formation, storage, and retrieval cannot be understood from a biological standpoint alone.

The exact sort of changes in synaptic connections between nerves that are required to form and store the information that memory contains remains a matter of debate (e.g., is it changes in the amounts of neurotransmitters at particular synapses or is it changes in the number and size of synapses that is involved in memory formation?). Optimism is nevertheless high that "cognitive neuroscientists are getting closer to solving the mystery of the physical storage of memory" (Myers, 2008, pp. 273-74) and that a purely biological explanation of learning and memory will one day be found. At the present time, however, "an explanation of memory in purely biological terms is not yet possible. We know that complex patterns of neuronal interconnectivity underlie memory function, but the manner in which memory is created is not evident from this alone" (Parkin, 1997, p. 16). And there is reason for believing that mechanistic explanations of memory and learning in terms of patterns of connections between neurons in different regions of the brain will never, in fact, account for either memory or learning (Bursen, 1978).

From a humanistic and transpersonal perspective, glowing statements about the latest direction of progress in the neurobiology of learning and memory that reduces personal experiences, knowledge, and skills to neural impulses whizzing through brain circuits taking residence in various brain structures *devalues* our subjective experience. Such a perspective, intentional or not, implies that personal experience and memories are without intrinsic value and have no meaning other than as a changes in synaptic structures, and have no substantial reality on their own outside of those structures. In so doing mainstream psychology promotes a view of our subjective nature that separates our species from its own nature, for who can trust or rely upon the random neural impulses and accidental release of neurotransmitters that somehow form the neurological stew of our private memories and individual learning? A biological perspective alone does not disclose the psychological qualities of learning and memory. The constructive and re-constructive nature of memory, the importance of various associative processes, memory's changeful and personal quality are not divulged by examination of synaptic junctures, neurotransmitters, or interior brain structures. For this knowledge, a different framework of understanding is required that combines psychodynamic, behavioral, cognitive, and phenomenological perspectives.

II. Memory and Learning in Alternate States of Consciousness

State-Dependent Memory, Learning, and Behavior (SDMLB)

SDMLB defined. "State-dependent" memory, learning, and behavior (SDMLB) is a concept originally formulated by James Braid in the 1850's to describe the "double conscious states" that occur in hypnosis (Tinterow, 1970). SDMLB refers to the general category of learning and memory in which the retrieval of learned information is dependent upon the state of consciousness in which the information was originally learned or encoded. The information has been encoded (put into memory) and store (compiled in memory) but is unavailable for retrieval from storage, except in the same state of consciousness in which it was originally encoded. It is an example of the "encoding specificity" principle "which states that recall is better if the retrieval context is similar to the encoding context" (Matlin, 2005, p. 136). Material that is learned or encoded while in a drugged state (or under water), for example, will be better recalled or retrieved from memory storage while again in that drugged state (or under water) than when one is in a non-drugged state (or on land).

What is learned and remembered is dependent on one's psychophysical state at the time of the experience. Memories acquired during a state of hypnosis are forgotten in the awake state but are available once more when hypnosis is reintroduced. Since memory is dependent upon and limited to the state in which it was acquired, we say that it is 'state-bound information.' (Rossi, 1986, pp. 37-38)

Examples of SDMLB. Two common examples of SDMLB are alcohol intoxication and marijuana intoxication. The drinker or smoker forgets what was said or done while drunk or stoned, but remembers when under the influence of the drug again. The memory loss that many women report of their experience of giving birth is believed to be state-dependent because hypnosis is sometimes successful in reversing the amnesia and helping the mother recover her memory of the event (Erickson & Rossi, 1979, pp. 282-313). Have you ever had the experience of beginning a conversation and then forgetting what you want to say? Or talking about a topic for a period of time and then forgetting why you were talking about it in the first place? Have you found yourself walking along and then suddenly stopping and "zoning out," or staring vacantly over a cup of coffee lost in thought, or "spacing out" in the middle of a lecture, or driving from home to work -- all without memory of what all transpired? These are all examples of "state-dependent" experiences involving what is called the "common everyday trance" (Rossi, 1986, p. 135). Other examples of state-bound" experiences include: déjà vu experiences, LSD flashbacks, critical illnesses, general anesthesia, accidents, dream states, frightening sexual experiences, and death or serious injury of a loved one (Fischer, 1971).

Causes of SDMLB. David Cheek (1959, 1960, 1962), a leading investigator of SDMLB, concluded based on his clinical observation and experimental evidence that any *stressful* event produces a spontaneous *trance* state of consciousness in the individual which, in turn, creates conditions for a state-dependent experience. In these terms, any one of the events measured on "The Social Readjustment Rating Scale" (Holmes & Rahe, 1967) or "The Hassles Scale" (Kanner, Coyne, Schaeffer, & Lazarus, 1981) are candidates for state-dependent memory, learning, and behavior effects (Rossi, 1986, chap. 4). The details of stressful events are difficult to recall because the associative connections that usually relate one experience to another have become blocked or dis-associated from one another. Such amnesias can be transcended by hypnosis.

Ernest Rossi (Rossi, 1986; Rossi & Cheek, 1986; Rossi & Ryan, 1986), another leading investigator in the field, characterizes *all* normal experience – waking, sleeping and dreaming, hypnotic, drug-induced, and so forth – as having state-dependent effects. Rossi (1986) states that "what we usually experience as our ordinary everyday state of awareness or consciousness is actually habitual patterns of state-dependent

memories, associations, and behaviors" and that the apparent "unity of consciousness" (i.e., one self, one world, one god, one unconscious) camouflages a multiplicity of selves and states of consciousness that we move in and out of each day (pp. 41-42).

Ernest Hilgard, a leading investigator of the dissociated state of "divided consciousness" has extensively studied experiences of possession states, fugues, multiple personalities, hypnotic age regression, repression, dreams, hallucinations, imagination, voluntary and involuntary muscle movement, automatic writing, divided attention, and the "common everyday trance." Hilgard (1986) concludes:

The unity of consciousness is illusory. Man does more than one thing at a time – all the time – and the conscious representation of these actions is never complete.... In some instances, part of the attentive effort and planning may continue without any awareness of it at all. When that appears to be the case, the concealed part of the total ongoing thought and action may be described as *dissociated* from the conscious experience of the person. (pp. 1-2)

The concept of "dissociation" is a popular one in hypnosis research to explain the phenomenon called "reversible amnesia" – the recovery or access, by hypnosis or other means such free association, of memories that are forgotten, repressed, blocked, or "dissociated" between conscious and subconscious levels of awareness. Overton (1978), who has done an extensive literature review of state-dependent phenomena, uses the term "dissociative barrier" to describe the hypothetical mechanism that keeps the information learned in different states of consciousness separated from each other, producing amnesia in the normal non-drugged state for behaviors learned while in the drugged condition, for example, impairing transfer of learning.

Retrieval of SDMLB. The recovery of the forgotten memory, learning, or behavior can occur by carefully retrieving the surrounding context, the sensory-perceptual cues (sights, sounds, sensations, thoughts, feelings), and the heightened state of emotion in which the forgotten memories, learning, and behaviors were originally encoded, acquired, and experienced. As one researcher who has extensively examined the multiple memory stores that are manifested in multiple personalities put the matter, "Information which is encoded under one psychophysiological condition is best retrieved under the same psychophysiological condition" (Braun, 1983, p. 133). The connection between mood and memory is well-recognized in cognitive psychology, and is expressed in two well-known principles: (a) mood-congruent memory – "memory is better when the material to be remembered is congruent with the person's current mood" (Matlin, 2005, p. 142), and (b) mood-dependent memory – "you are more likely to remember material if your mood at the time of retrieval matches the mood you were in when you originally learned the material" (Matlin, 2005, p. 143). Both principles illustrate how state-bound experiences can be created by strong, vivid, direct, and intense emotions and mood states that are often typical of daily life (Bower, 1981; Ryan & Eich, 2000; Ucros, 1989).

Neurobiology of SDMLB. What this means is that whatever specific patterns of emotions and arousal state are present at the time of learning *also* become a part of the general information that is encoded and stored in memory. "Memories [become] intertwined with the complex psychophysiological state associated with these hormones...become "state-bound" ...together with its associated sensory-perceptual impressions...even after the [individual] apparently returns to his normal mode of functioning" (Rossi, 1986, p. 59). Once the limbic-hypothalamic system becomes involved in any form of memory, learning, and behavior, then state-dependent factors become involved in the encoding, storage, and retrieval processes. In other words, any instance of learning -- whether it involves respondent or operant conditioning, or any other form of cognitive-behavioral learning -- that involves emotionally-ladened experience, and therefore necessarily engage participation of the limbic-hypothalamic system, are susceptible to dissociated or state-dependent amnesic effects. "Pavlovian and Skinnerian conditioning are specific varieties of SDMLB," and not the other way around (Rossi, 1986, p. 45). Hormones

accompanying normal daily experience that occur during over-arousal and under-arousal motivational states are believed to be one cause of SDMLB and of the amnesic barrier that separates memories of one experience from another. This is especially true of experiences of trauma or stress. Oxytocin, a hormone released in great amounts during the stressful experience of labor during childbirth, for instance, is believed by some researchers to be responsible for producing the amnesia that conceals a woman's memory of the process of giving birth, while the hormone vasopressin has an enhancing effect (Fehm-Wolfsdorf, Born, Voigt, & Fehm, 1984).

III. The Transpersonal Nature of Memory, Learning, and Behavior

There are many other kinds of learning not discussed here (concept learning, hypothesis learning, rule learning, problem solving, language learning, biofeedback) and there are no doubt more kinds of learning to be discovered in the future. This is a basic premise of transpersonal psychology: human capacity for learning is open-ended, flexible, and creative. Certain qualities are implied in all kinds of creativity that are generally overlooked in traditional mainstream models of learning, and so these qualities are not taken into consideration in its theories of learning (Csikszentmihalyi, 1996; Gowan, 1975; Ostrander, Schroeder, & Ostrander, 1979; Root-Bernstein & Root-Bernstein, 1999). The kind of "integral transformative education" in which transpersonal psychology is involved serves to bring some of those qualities to light, and to shed illumination upon many aspects of human learning that usually remain hidden (Ferrer, 2003). There are other kinds of memory as well not ordinarily discussed in general psychology textbooks that give notice of abilities and capacities "before ego" and "beyond ego" that lie latent but active within each person.

Ordinary Memory and Learning in the Prenate and Newborn

Due to impressive advances in technology (e.g., scanning electron microscopes, fiber optics and special lenses, spectrographs, electroencephalograms, ultrasound imaging devices) and the use of ingenious experimental designs and measurements devices invented by resourceful developmental psychologists, long-standing ideas and beliefs about the limitations of prenatal and newborn infants' learning and memory abilities are slowly being overturned and revised to provide a much more comprehensive picture of the maturity of the newborn and the development of learning and memory capacities *before* birth (Chamberlain, 1998; Verny, 1987; Verny & Kelly, 1981).

Long-standing belief #1 that is being revised: All complex behaviors start out simple. One belief being overturned that has caused misunderstanding and underestimation of the competence of prenatal and newborn infants is the idea that all complex behaviors must start out simple. Actually, many behaviors seen at birth *start out* complex and are remarkably adult-like in their functioning (Klaus & Klaus, 1998; Nilsson & Hamberger, 2004). *Hearing* functions at 20 weeks. Taste buds involved in the sense of *taste* appear at 8 weeks, swallowing is observed by 12 weeks, with taste buds fully formed at 15 weeks. The nose involved in the sense of *smell* is well formed by the 15th week. Many *visual* functions (e.g., three-dimensional vision, eye-hand coordination, reaching for something seen) are well-advanced at birth. Tactile sensitivity involved in the sense of *touch* begins at the face area around 8 weeks after conception and is well-established at all skin areas by 17-weeks. Babies have all their senses at birth and feel pain as much as we do (Anand & Hickey, 1987; Leboyer, 1975). Regular *body movements* within the womb occur at 10-12 weeks, and coordinated brain and body prenatal "ballet" movements are observed as early as the 26th week. All basic body structures including *brain* and *spinal cord* are in place by the 12th week. Complex sensory, respiratory, circadian, endocrine, and motor functions are fully operational, integrated, coordinated, and regulated, long before the cerebral cortex is fully developed.

Long-standing belief #2 that is being revised: Infants cannot learn or remember because they have "primitive" and poorly developed brains. Another belief that has caused misunderstanding and underestimation of the competence of prenatal and newborn babies is the fixed idea that infants cannot learn or remember because they have "primitive" and poorly developed brains. This is perhaps the most common explanation given for the observed amnesia of personal events prior to the age of 2-3 years (Bauer, 2002). This explanation, however, does not fully account for the failure to remember birth events in adulthood (Eacott & Crawley, 1998). Although newborn brains are only one-quarter of its eventual weight and volume, it is capable of so-called "higher" functions of learning and memory and the ability to respond meaningfully to experience (Bower, 1989; Chamberlain, 1992, 1994). Fetal body and brain is sufficiently developed to provide a substantial foundation for learning and memory while in the womb (Jones & Nathanielsz, 1985; Nathanielsz, 1992). For instance, the process of myelin sheathing of neurons which ends at adolescence begins several weeks after conception. Measurable brain electrical activity occurs at 6 weeks. Neuronal dendrites and dendrite spines are present at 20 weeks after conception. Brain wave changes in response to visual tactile, and auditory stimulation are observed by 28 weeks. Neuropeptides – amino acid compounds produced by nerve cells that circulate throughout the body and link nervous, endocrine, and immune systems,- are found in the bloodstream throughout the first and second trimester of pregnancy (Pert, 1997).

Long-standing belief #3 that is being revised: Infants cannot learn or remember because they cannot *speak.* The assumption that a capacity for language is a prerequisite for the capacity for thought has been a long-standing obstacle to recognizing the existence of newborn minds and has prejudiced perception of the evidence for animal and newborn thinking for centuries. Human thinking has become so structured in verbal terms that it is difficult for us to conceive of thinking without words. All sorts of newborn behaviors, however, show signs of intelligence and the ability to respond to a wide range of internal and external stimuli in an appropriate and purposeful way, including: alert facial expressions, attentiveness to adult speech, crying, dreaming, engaging in spontaneous play activity, engaging in social activity with others, exploring and investigative behaviors, expressions of emotions, frowning, limb movements, maternal recognition, mimicry, reaching out, smiling, showing preferences for certain sounds, motions, tastes, visual stimuli) (Bower, 1989). It is difficult to imagine any of these behaviors occurring without some sort of associated mental activity., unless one prefers to maintain the view that infants are little more than brain stem preparations or mindless zombies upon birth. Infants show the capacity for selfconsciousness and empathy, thought and communication, even in the absence of language, by the way they stop crying when they hear their own cry and in the way they are disturbed by the crying of other babies nearest their own age (Lester & Boukydis, 1985).

Newborns learn in similar ways as adults. Neonates can learn to make position changes in the womb (UR-CR) by responding to the sound of a vibrator (CS) which was classically conditioned to a loud noise (US). One-day newborns can learn through operant conditioning to discriminate left-and-right head movements in response to the sound of a bell or a buzzer to obtain a sugar solution (Spelt, 1948). Newborns are able to imitate gestures (e.g., sticking out the tongue, wide-open mouth) and emotional expressions (e.g., happiness, sadness, surprise) without previous practice or reward (Meltzoff & Moore, 1997). How easily a neonate can learn is seen in the following simple experiment.

Psychologists Anthony DeCasper and Melanie Spence at the University of North Carolina....asked pregnant mothers to read aloud *The Cat in the Hat*, a Dr. Seuss story, twice a day during the last six weeks of pregnancy. A few days after birth, the babies were given the opportunity to hear recordings of two stories, the familiar one and another Dr. Seuss story not heard before. Outfitted with earphones and a special nipple that let them change the story heard by sucking faster or slower, ten out of twelve newborns changed their speed of sucking to arrive at the familiar story. This suggests that the babies heard and remembered the story, could tell the difference between stories, and 'voted' for the one they already knew. (Chamberlain, 1998, p. 38) Newborn infants remember similar kinds of information as adults. Newborns demonstrate episodic memory in their ability to distinguish their mother's scent from a stranger (Porter & Schaal, 1995), and recognize their mother's voice (Kisilevsky et al., 2003), and in their preference for music and lullabies previously heard while in the womb (DeCasper & Fifer, 1980; DeCasper & Spence, 1986). Newborns show procedural memory for prenatal body behaviors such as thumb-sucking, breathing habits, and certain exercise movements displayed immediately after birth. Newborns display the capacity for semantic memory in their ability to learn words and discriminate old words from new ones (Kisilevsky & Low, 1998). Infants' other memory skills are equally impressive as demonstrated in the ability of 4-dayolds to distinguish novel colors and design patterns from familiar ones, of 6-month-olds to remember how to activate a crib mobile after a two week delay, and by 14 months remember how to imitate actions seen 3 months earlier (Rovee-Collier, 1999). Although infants may not be able to engage in conscious, explicit memory storage, they are capable of subconscious, implicit memory storage as demonstrated by the fact that infants only 3 months old can learn to propel a baby crib mobile by moving a connecting ribbon attached to their leg and retain that learning for up to a month (Rovee-Collier, 1997). Threemonth-old infants also show "context effects" by remembering this learned motor behavior in a crib with the same crib bumper but not when in a crib with a different bumper (Rovee-Collier, 1993).

We are born already "conditioned" to perceive reality in a particular way. The more we discover about these capacities and others (e.g., psi functioning such as telepathic communication between neonate and mother), the more it suggests that we do not emerge into physical life as a blank slate waiting for the hand of experience to write upon us, but that we arrive already "conditioned" to perceive and interpret physical reality in a particular, limited focused way with capacities that would certainly take more than 9 months to develop from "scratch," all things being equal. Transpersonal writer and channel Seth/Jane Roberts states:

the child is not born a sponge...empty but ready to soak up knowledge. It is *already* soaked with knowledge. Some will come to the surface, so to speak, and be used consciously. Some will not. ...To some extent the child in the womb is aware of the mother's beliefs and information, and *to that extent* it is "programmed" to behave in a certain fashion, or to grow in a certain fashion as a result. (Roberts, 1979a, p. 76)

The brain and heredity may be the mechanism through which these abilities manifest and transmit themselves, but is not the source or the cause of these abilities as the Jamesian "transmission theory" of cerebral action suggests (James, 1898/1956). On this view, "The mind may be working, but a compromised brain prevents normal expression...Your baby's mind is working well even while the brain is struggling to mature" (Chamberlain, 1998, p. 186).

Transpersonal Memory and Learning in Infants and Children

Transpersonal psychology has identified other types of learning and memory that build upon and extend understanding of the nature of learning and memory that is presented in introductory psychology textbooks that, in some instances, require us to revise what we believe to be true about "the outer limits" of learning and memory (Chamberlain, 1990, p. 4)

Birth Memories

Empirical and logical grounds for the hypothesis of birth memories. Once it is recognized that prenatal and newborn babies (a) have relatively well-developed nervous systems and physical senses, (b) are capable of learning and remembering complex discriminations among sights, sounds, odors, tastes, and tactile sensations both in the womb and out of it, and that (c) all learning implies memory and that self-consciousness is dependent upon the sense of continuity over time that memory provides, then the

possibility that we may have a complex personal memory available to us at birth becomes a reasonable hypothesis. The evidence for the existence of birth memories comes from a variety of sources: (a) case studies of children who spontaneously talk about birth memories; (b) explicit retrieval of birth memories during alternate states of consciousness in response to hypnosis, psychedelic drug-sessions, or during meditation and yogic-breathing techniques; (c) spontaneous emergence of birth memory during psychotherapy and psychodramas and other circumstances such as submersion in water, and (d) the surfacing of birth memories in disguised form as recurring dreams and thoughts, unexplained fears and habits.

Childhood amnesia. Most people typically cannot explicitly recall autobiographical episodes that occurred prior to the age of 2 or 3 years of age (Howe & Courage, 1997), a phenomenon that Sigmund Freud (1905/1962) called "childhood amnesia." Cognitive psychologist Margaret Matlin (2005) observes, "childhood amnesia is surprising, given the impressive memory skills that infants demonstrate" (p. 460). Might our own birth memories be stored in implicit, nondeclarative memory and simply are not available in explicit, declarative memory as we get older and become more socialized into the beliefs and expectations of our society and culture (Bauer, 1996; Gauvain, 1998)?

Emotions and birth memories. The idea that birth memories contribute something important to the understanding of human personality was strongly promoted in the first half of the 20th century by psychiatrists Otto Rank (1929) and Nandor Fodor (1949). Both psychiatrists discovered in their clinical practice that many clients' psychological and physical problems appeared to be related to reactions to trauma at birth which were revealed through their patients' recurring dreams and spontaneous flashback memories that emerged during psychoanalytic therapy. Each physician empirically documented that when (a) specific *fears* of travel, tunnels, and being trapped in close spaces, (b) recurrent *nightmares* of climbing to reach the top of an impossibly steep hill, of being underwater and struggling to reach the surface, or of being buried alive in a narrow and cramped coffin, and (c) intractable physical ailments such headaches, insomnia, fatigue, and breathing difficulties were successfully connect to memories associated with trauma at birth, then symptomatic relief spontaneously occurred. Psychotherapist Arthur Janov (1983), founder of "primal therapy," likewise documented the connections he discovered between clients' physical and emotional problems in daily waking life and pain experienced during the birth process. Traumatic birth memories of the past would spontaneously emerge into awareness in response to some anxiety-arousing triggering event in the present, which would subsequently lead to a successful therapeutic outcome once the connection between their birth experiences and presenting clinical problem was made.

Trance work and birth memories. Hypnosis can facilitate retrieval of episodic memories, procedural memories, and semantic memories, especially when the to-be-remembered event is vivid and emotionally-charged (Hilgard, 1965, 1975; Kihlstrom, 1985). Distorted memories and inaccurate recall tend to occur by the use of interviewing techniques that contain leading questions, suggestive answers, and hurry or confuse the respondent. Clinical psychologist Leslie LeCron (1954) introduced a controlled and direct way to bring up information about birth memories out of implicit, nondeclarative memory storage through the use of a technique called "ideo-motor signaling" (i.e., involuntary movement as a direct result of an idea or suggestion).

An experiment for the reader. The ideomotor finger-signaling technique can help individuals explore the reality of his or her own birth memory. The technique is fully described by LeCron (1964/1970) and is briefly presented below:

To establish finger movements place your hands in your lap or on the arms of a chair. The fingers should be outstretched and free to move. Then ask your subconscious to select any one of the ten fingers which is to lift to represent *yes*. When one has lifted then ask for another to lift to mean

no, and so forth. Be sure not to move the fingers voluntarily. If you prefer, you may designate which finger is to move. The right forefinger could mean *yes*, the left forefinger *no*; the right thumb for *I don't know*, and the left thumb for not wanting to answer. You could designate other fingers as you wish, perhaps all on one hand..... As you ask for a movement, observe your fingers closely. You will probably feel a slight tingle in the muscles of the one which is about to move, as the muscles start to lift it. It should rise towards a pointing position. Invariably you will find that it trembles or wiggles a bit as it comes up. The movement usually is quite slow at first, though it may become more rapid with practice. It may lift only very slightly or may rise to a straight pointing position.....Make sure you make no voluntary effort and when you are asking questions you should avoid consciously guessing what the answer will be. ...It is best to write out the questions you wish to ask, being sure they are clear and properly worded. Then note the answers as you receive them. (pp. 34-35)

When performed in a light trance state and in conjunction with an appropriate set of instructions and questions (e.g., "Do I remember my birth?" "Do I remember what it was like before I was born?" "Could there have been some earlier experience that set the stage for the one I have just reported?" "Is there some past event responsible for my trouble?" "Is it all right to tell me about it?" "Now that I know this can I be well?" "Is there anything else I need to know before I can be free of this problem?"). Few will find that images do not spontaneously emerge when a deliberate attempt is made to communicate with the subconscious in this way (Rossi & Cheek, 1988, pp. 27-30).

Obstetrician David Cheek (1974, 1975, 1976, 1980) has used LeCron's finger-signaling method to identify prenatal and birth conditions that appear to have played a causative role in initiating and maintaining a range of physical and psychological disorders including, compulsions, obsessions, frigidity, ulcers, asthma, emphysema, hyperventilation, sterility, migraine headaches, and painful menstruation. Again, once a connection is made by the patient at either an explicit, conscious level or at an implicit, subconscious level between a traumatic birth memory and the illness, the difficulties are spontaneously overcome. "Repeatedly LeCron and I have seen spontaneous reorganizations of reactions made by the subject without need for explanation or therapeutic effort from the therapist beyond being present in a setting of optimism" (Rossi & Cheek, 1988, p. 421). Clinical psychologist Rossi and Cheek (1988) discuss in detail the finger-signaling method as an approach to facilitate physical and psychological healing, and present many suggestions for further research regarding how to access, re-experience, review, and verbalize labor and the birth experience that exist at an implicit, nondeclarative level of memory, not usually available for explicit, verbally-oriented recall.

Breath work and birth memories. Psychiatrist Stanislav Grof (1975, 1980, 1985), one of the co-founders of modern transpersonal psychology, uncovered the occurrence of birth memories first in patients undergoing psycholytic (LSD-assisted) psychotherapy, and later in patients undergoing non-drug, breath-assisted ("holographic") psychotherapy (Grof & Bennett, 1992). Another non-drug, breath-assisted psychotherapy developed by Orr and Ray (1977) also reports how traumatic memories of childhood, birth, and before birth can be evoked through rapid breathing techniques and resolved through the use of creative, positive affirmations.

Narrative birth reports. Except for LeCron and Cheek's use of hypnotic techniques which are geared toward obtaining *informational* content concerning birth memories, most methods for recovery of birth memories focus on the revival of the *emotional* content associated with birth traumas and do not provide detailed, narrative verbal reports of birth memories which can be independently verified (Raikov, 1979). Exceptions, however, do exist (e.g., Verny, 1987; Verney & Kelly, 1981). In a collection of *prima facie* cases of spontaneous birth memories collected by Linda Mathison (cited in Chamberlain, 1998, chap. 7), toddler's initial verbal reports of explicit memories of birth occur around 2 to 3 years of age when they first begin talking and asking questions about events, people, and situations that he or she could only have

perceived at his or her own birth. Evocative depictions of what they remember from their births have been obtained from such children through the use of drawing, role playing, gesturing, and other nonverbal report methods. By ages 4 or 5, birth memories tend to fade from normal waking memory and become inaccessible for verbal report unless they re-emerge again indirectly through recurring dreams, thoughts, phobias, and so forth as an adult in later life. Childrens' reports collected by Mathison were later checked with parents and others present at the birth and found to be reasonably accurate with minor inconsistencies.

In a more controlled causal-comparative study of birth memories, Chamberlain (1998) compared the independent free-recall reports of birth memories of ten mother-child pairs. The mothers (ages 32-46 years) and children (ages 9-23 years) were both capable of hypermnesia (vivid and complete memory). They never had prior discussions among themselves of the child's birth, and no prior birth memories were reported by the child prior to the experimental hypnosis sessions which lasted 1-4 hours. Findings indicated that "in their birth memories, 'babies' now grown up describe what they experienced during labor, how they were treated by nurses and doctors, and what their parents said and did" (Chamberlain, 1998, p. xxiii). Child-mother verbal reports of the child's birth generally corroborated each other on many points (e.g., time of day, locale, persons present, mother's appearance, instruments used, type of delivery, sequence of events) with few contradictions or inconsistencies between verbal reports. Memory distortions were the exception rather than the rule and included omission of some events by one or the other participants, matched events that were out of order or sequence, limited and specific use of fantasy to include people desired but not physically present, confabulation to fill in unclear details, and misperceptions of one person for another. David Chamberlain (1998), presents a collection of other narrative birth reports which provide insight into what birth is like from the infant's point of view, and concludes:

Considering all the facts, objectively gathered birth memories appear to be genuine recollections of experience. The birth memories of my ten pairs certainly seem to be real memories, not fantasies; personal memories, not mother-memories; and are more often true than false. Within reasonable limits, these memories were a reliable guide to what happened at birth. (p. 120)

More information about David Chamberlain's work and colleagues who work throughout the world on behalf of the Association for Pre- and Perinatal Psychology and Health (APPPAH) can be found at http://www.birthpsychology.com.

Birth memories of out-of-body experiences. If birth and womb memories are actual, valid memories and, with appropriate safeguards, can provide reliable information under certain conditions (Rossi & Cheek, 1988, chap. 1), then our understanding of the nature of human memory will need to be re-assessed and revised in order to take account of prenatal and neonatal capacities for enriched and expanded consciousness. One of these capacities may be the capacity for out-of-body experiences (OBE) in which sensation and perception, learning and memory seem to extend beyond the usual boundaries of space. OBEs are reported to occur while in a dreaming state of consciousness, and by individuals who are purportedly clinically dead for a period of time as the result of cardiac arrest, violent accident, or surgical mishap, but later survive to tell us about their "after-death" experiences (Ring, 1982). OBEs also form a part of birth and womb memories as well. John C. Lilly (1978), for instance, wrote in his autobiography about his own out-of-body experience at the time of his birth. The research of Chamberlain (1998) indicates that many birth and womb memories include detailed accounts from a distant vantage point above or to the side of the subject's physical location, a quality of experience similar to what occurs in an OBE. The life, mind, and consciousness of the newborn apparently encompasses the capacity not only for in-body birth memories but for out-of-body birth memories as well.

Memory of Previous Lives

In his two-volume, 2,080-page monograph titled *Reincarnation and Biology: A Contribution to the Etiology of Birthmarks and Birth Defects*, the late psychiatrist Ian Stevenson (1997a), former professor of psychiatry and director of the Division of Personality Studies at the Health Sciences Center at the University of Virginia, reports on 225 highly detailed case studies correlating birthmarks and other physiological manifestations (e.g., birth defects) with children's explicit, declarative memories of past life events, particularly violent deaths. A concise 240-page summary (including photographs) of 112 of those cases is provided by Stevenson (1997b) in his book *Where Reincarnation and Biology Intersect*.

Why birthmark evidence is important to the case for memories of past lives. Children who claim to remember a previous life have been found all over the world, including the United States. Stevenson (1997b) asserts that cases suggestive of reincarnation that involve particular types of birthmarks (i.e., birthmarks that differ noticeably from the kind of birthmark that almost everyone has) and birth defects are especially important for the following three reasons (pp. 2-3):

- 1. The birthmarks and birth defects provide an objective type of evidence well above that which depends on the fallible memories of informants. "For many of the cases, we have a medical document, usually a post-mortem report, that gives us a written confirmation of the correspondence between the birthmark (or birth defect) and the wound on the deceased person whose life the child, when it can speak, will usually claim to remember" (Stevenson, 1997b, p. 2).
- 2. The birthmarks and birth defects derive importance from the evidence they provide that a decreased personality having survived death may influence the form of a later-born baby.
- 3. The cases with birthmarks and birth defects provide a better explanation than any other now available [e.g., genetic factors, viral infections, chemicals, chance, postnatal environment] about why some persons have birth defects when most do not and why some persons who have birth defects have theirs in a particular location instead of elsewhere.

Key features of cases suggestive of reincarnation. Soon after the child begins to speak, usually around 3 years old, he or she speaks about a previous life, and continues to do so until he or she is about 5 years old. Other key features that vary from one culture to another are noted by Stevenson (1997b, pp. 5-9)

- *Emotional intensity of memories.* "Most of the children speak about the previous life with an intensity, even with strong emotion, that surprises the adults around them. Many of them do not at first distinguish past from present, and they may use the present tense in reference to the previous life" (p. 5).
- *Death recall /family recognition* "The content of what the child states nearly always includes some account of the death in the previous life. This is particularly true if the death was violent, but occurs also less frequently when it was natural. Beyond that, the child usually speaks about the family of the previous life" (p. 5).
- *Person recognition.* "If the child has given sufficient and adequately specific details, especially of proper names and places, it is usually possible to identify a decreased person the facts of whose life closely matches the child's statements" (p. 6)
- *Object recognition.* "The child may also recognize spontaneously (or on request) various persons, objects, and places known to the previous personality" (p. 6).
- *Behavioral memory.* "The child displays unusual behavior... that is unusual for the child's family, but harmonious with what can be known or conjectured about the person of whom the child speaks" (p. 7).

- *Phobias.* "Phobias, nearly always related to the mode of death in the previous life, occur in about 35% of the cases" (p. 7), often lasting into adulthood after the child can no longer remember memories of a prior life.
- *Philias.* "Philias take the form of a desire or demand for particular foods (not eaten in the subject's family) or for clothes (different from those customarily worn by the family members... [and] cravings for addicting substances, such a tobacco, alcohol, and other drugs that the previous personality was known to have used" (p. 7), often lasting into adulthood after memories of a previous life have faded.
- *Skills.* "A few subjects show skills that they have not been taught (or sufficiently watched others demonstrating,) but which the previous personality was known to have had" (p. 7).
- *Sex-change types.* "In cases of what we call the 'sex-change' type, the child says it remembers a previous life as a person of the opposite sex. Such children almost invariably show traits of the sex of the claimed previous life. They cross-dress, play the games of the opposite sex, and may otherwise show attitudes characteristics of that sex" (p. 7).
- *Unusual behaviors.* "Particularly vivid examples of unusual behavior occur in subjects who claim to remember previous lives as natives of a country different from that of their parents" (e.g., Burmese children who claim to have been Japanese soldiers killed in Burma during World War II displaying traits typical of Japanese people but not Burmese people) (p. 8).
- *Nature of the death.* "The deaths remembered by the children are predominantly violent. The overall percentage of violent deaths in the previous life is 51%.... [This] percentage far exceeds those of violent death in the general population of the countries where the cases occur" (p. 8).
- *Persons connected with the death.* "The children often remember the other persons concerned in the death usually murderers. The children often show strong animosities and attitudes of vengefulness toward these persons, especially if they happen to meet them. The animosity may generalize to other members of the same group" (p. 8).
- *Play activity.* "Many of the children express memories of the previous life in their play" (e.g., assuming the role during play activity of a school teacher or a garage mechanic whose life they remember). . . . A few children enact in their play the mode of death in the previous life" (e.g., play at drowning) (p. 8).
- *Interval between death and rebirth.* "The range in the median length of the interval between the previous personality's death and the subject's birth extends from only 4 months among the Haida of northwestern North America to 34 months among the Igbo of Nigeria" (p. 9).
- *Characteristics of birthmarks.* "Birthmarks differ from ordinary nevi in various ways. . . [especially] when we consider the cases of correspondences between two birthmarks and two wounds. . . . Many of these (and other) birthmarks have unusual details in which they correspond to details of a relevant wound" (pp. 110-111).

Contemporary research into prenatal and newborn memory, learning, and behavior indicates that we are born equipped with highly-tailored, already built-in skills and abilities needed to meet the very specialized environments we must face our first day of life as infants (e.g., ability to learn, remember, dream, express our temperament, and communicate). From a transpersonal perspective, we are also born with the capacity to creatively add to the very quality of that life and with abilities that may be not merely the result of heredity or environment as we ordinarily think of them, and which extend mental and physical activity beyond the usual boundaries of time and space. Dr. Ian Stevenson (1997a, 1997b) provides scientific evidence suggestive that the mind of the newborn may encompass even this possibility.

Theoretical Frameworks for Understanding Transpersonal Memory and Learning

Some once said, "There is nothing more practical than a good theory" that helps us explain and make sense of our experiences, observations, and experimental findings. Three theoretical frameworks are presented that propose possible mechanisms by which birth and past life memories might be encoded and stored in memory and retrieved within a single lifetime or from one lifetime to another : C. G. Jung's notion of the personal and collective unconscious, Rubert Sheldrake's theory of formative causation, and Stanislav Grof's concept of state-dependent condensed experience (COEX) systems.

C. G. Jung's concepts of the personal and collective unconscious. Based on his clinical observations of patients' dreams and anthropological studies of the myths, fairy tales, religious symbols, and art artifacts of other cultures, C. G. Jung (1917/1967, 1934/1960; 1936/1959; 1943/1953) posited the existence of at least two kinds of subconscious dimensions in the human psyche: (a) the personal unconscious and (b) the collective unconscious.

We have to distinguish between a personal unconscious and an impersonal or transpersonal unconscious. We speak of the latter also as the collective unconscious, because it is detached from anything personal and is entirely universal, and because its contents can be found everywhere, which is naturally not the case with the personal contents. The personal unconscious contains lost memories, painful ideas that are repressed (i.e., forgotten on purpose), subliminal perceptions, by which are meant sense-perceptions that were not strong enough to reach consciousness, and finally, contents that are not yet ripe for consciousness. It corresponds to the figure of the shadow so frequently met with in dreams. (Jung, 1943/1953, p. 65)

Birth memories are contained in the personal unconscious. Although Jung did not believe in the theory of reincarnation, Grof's (1985) research on consciousness indicates that reincarnational memories (or memories of previous *lives*) would be contained in the farther reaches of personal memories at the point where the psyche intersects with the racial, ancestral memories of the species located in the collective unconscious.

Jung (1936/1959, 1943/1953) asserted that our personalities are shaped and influenced not only by personal experiences but also by the cumulative experiences of our species that were laid down within the genetic patterns that reflect the psychic evolutionary history of our species. Just as the physical evolution of our species is reflected in our physiological structure, so too is the psychological evolution of our species reflected in our psychological structure. Jung stressed the interdependence of individual minds and the availability of superior inner knowledge via a portion of the psyche he believed to be "collective" and that was shared by all members of the human race, making telepathy possible between individuals located distances apart in space and time. Each of our personal experiences, however minute or seemingly insignificant, becomes part of the knowledge of the species. We all contribute to this body of "species knowledge" and can likewise draw upon that fund of collective wisdom. Jung called this collective body of unconscious species knowledge the *collective unconscious* -- a dynamic, living knowledge bank built up as a result of eons of experience as a species. According to Jung (1934/1960)

As the name indicates, its contents are not personal but collective; that is, they do not belong to one individual alone but to a whole group of individuals, and generally to a whole nation, or even to the whole of mankind. These contents are not acquired during the individual's lifetime but are the products of innate forms and instincts. Although the child possesses no inborn ideas, it nevertheless has a highly developed brain which functions in a quite definite way. This brain is inherited from its ancestors; it is the deposit of the psychic functioning of the whole human race. The child therefore brings with it an organ ready to function in the same way as it has functioned throughout human history. In the brain the instincts are preformed, and so are the primordial

images which has always been the basis of man's thinking -- the whole treasure-house of mythological motifs. It is, of course, not easy to prove the existence of the collective unconscious in a normal person, but occasionally mythological ideas are represented in his dreams. These contents can be seen most clearly in cases of mental derangement, especially in schizophrenia, where mythological images often pour out in astonishing variety. Insane people frequently produce combinations of ideas and symbols that could never be accounted for by experiences in their individual lives, but only by the history of the human mind. (pp. 310-311)

Jung used the term *ueberpersonlich* in reference to contents of the collective unconscious in 1917 and the term was translated as ""superpersonal" in 1914 and later as "transpersonal" in 1942. In the following passage, Jung refers to the transpersonal as the "extra-human."

The [dream symbol] points specifically to the extra-human, the transpersonal; for the contents of the collective unconscious are not only the residues of archaic, specifically human modes of functioning, but also the residues of functions from man's animal ancestry, whose duration in time was infinitely greater than the relatively brief epoch of specifically human existence. (Jung, 1943/1953, pp. 96-97)

ung also used the term "transpersonal" to refer to the unconscious development of what he called the "transpersonal control-point" or "guiding function [that]. . . gained influence over the resisting conscious mind without the patient noticing what was happening" (Jung, 1943/1953, pp. 131-132). Elsewhere, Jung used to term "transpersonal" in relation to contents of the unconscious: "These transpersonal contents are not just inert or dead matter that can be annexed at will. Rather they are living entities which exert an attractive force upon the conscious mind" (Jung, 1943/1953, p. 142).

The collective knowledge and received wisdom of the collective unconscious is partially expressed in the myths, fairy tales, religious symbols, and art artifacts of the species. The collective unconscious is contained in the subconscious of each and every individual psyche and is transmitted across time and space as a kind of "spiritual DNA" (Hardy, 1987, p. 32). Each individual psyche can draw upon as well as contribute to this collective bank of knowledge. In other words, "our psyche is not isolated. It is bathed in the sea of what Carl Jung called the collective unconscious… In Jung's words, the collective unconscious is 'the precondition of each individual's psyche, just as the sea is the carrier of the individual wave'" (Ferrucci, 1982, p. 44). "The isolated individual does not exist; every person has intimate relationships with other individuals which make them all interdependent. Moreover, each and all are included in and part of the spiritual super-individual Reality" (Assagioli, 1965/1993, p. 31).

The "cosmic memory" of Sheldrake's morphogenetic fields. A second theoretical framework that could account for the encoding, storage, and retrieval of birth and past life memories is the "cosmic memory" of Rupert Sheldrake's morphogenetic field. The idea that the past experience and knowledge of an organism or species can be transmitted subconsciously from one generation to another is creatively re-formulated in the hypothesis of "formative causation" (Sheldrake, 1981). Plant physiologist Rupert Sheldrake (1981) proposes an original theory of learning and memory that can be called "transpersonal" (i.e., learning and memory processes that creatively extend and expand beyond usual physical and chemical parameters to encompass nonphysical aspects of life, mind, and consciousness). The hypothesis of formative causation proposes that the form, development, and behavior of all physical, chemical, and biological systems are organized and maintained in the particular forms that they have because of the cumulative influence of previous similar systems that have been encoded in the medium of "morphogenetic fields" that exert their causal influence across space and time.

Sheldrake argues that something more than the "timeless" physical laws, inherited properties of chemical elements and genetics, and Darwinian evolution are required if we are to understand what shapes the form, structure, development, and behavior of complex systems – from protons to elephants - and how specific forms and structures repeat themselves in the organic and inorganic world. This "something more" is "a second type of inheritance" that takes place through the "morphogenetic fields" of previous and contemporary members of the same species (Sheldrake, 1981, p. 122). The idea of "morphogenetic fields" was proposed about 60 year ago by embryologists A. Gurwitsch in 1922 and P. Weiss in 1926, extended by Conrad Waddington in 1957, and further developed mathematically by the theoretician Rene Thom in 1975. Acting as a conserving impulse of nature, morphogenetic fields act to promote a repetition of what has happened before.

According to this hypothesis, systems are organized in the way they are because similar systems were organized that way in the past. For example, the molecules of a complex chemical crystallize in a characteristic pattern because the same substance crystallized that way before; a plant takes up the form characteristic of its species because past members of the species took up that form; and an animal acts instinctively in a particular manner because similar animals behave like that previously. (Sheldrake, 1981, p. 13)

A developing human embryo would exist within the "human" morphogenetic field, for example, which would guide and control the embryo's development to take a human form and not some other. Protons, water molecules, crystals, cells, organs, sheep, fir trees, and so forth each have their own characteristic morphogenetic fields. As such, morphogenetic fields represent a kind of "cosmic memory" of previous fields that have developed based on what has happened in the past, which guides and directs the occurrence of the repetitive, constant, and habitual nature of forms, structures, and organization of organic and inorganic systems in the present. Morphogenetic fields are like *habit memory* that is built up from forms and behaviors that have happened in the past. Whenever a form is created or an organism learns a new behavior, the more often that particular form or behavior occurs, the more likely it will happen again, and will influence subsequent forms or behaviors. The structure of pre-existing forms affects the birth of subsequent similar forms by the cumulative influence of morphogenetic fields that blend or average the experience of all previous similar morphic units in a single morphic field.

Morphogenetic fields guide the development of new structures that give shape to a developing organism and can be likened to other "fields" such as electromagnetic and magnetic fields, except they are nonphysical, invisible, and detectable only by their effects. They have trans-spatial properties (i.e., fill the whole of space) and trans-temporal properties (i.e., travel from the past forwards in time) to ensure that inorganic and organic bodies take on the form assumed by similar bodies elsewhere or at some prior time. By means of a mechanism called "morphic resonance" the influence of morphogenetic fields carries across both time and space. Things that happen in the past, even if they are separated from each other in space and time, can influence similar things in the present across time and space. By being able to propagate beyond, across, and through space and time, morphic fields represent a transpersonal memory system by which past events influence other events of a similar kind everywhere else. Like concepts in physics such as David Bohm's (1983) "implicate order" and Werner Heisenberg's (1958) "subjectdependent reality," Rupert Sheldrake's (1981) theory of "formative causation" has the potential of causing a paradigm shift in biological sciences regarding our understanding of the storage and transmission of information (i.e., memory and learning) by extra-somatic means.

Grof's dynamic memory systems of condensed experience (COEX). A third theoretical framework that could account for the encoding, storage, and retrieval of birth and past life memories is found in the psychedelic research and deep experiential work (e.g., holotropic breath work) of transpersonal psychiatrist Stanislav Grof (1975, 1980, 1985, Grof & Bennett, 1992). Grof has repeatedly confirmed various aspects of C. G. Jung's psychodynamic theory of the human psyche, especially (a) the existence

of the collective unconscious, (b) its dynamic archetypal structures, (c) the operation of psychological complexes, and (d) the significance of synchronicity. One of Grof's discoveries relates to Jung's description of psychological complexes and how private memories are *organized by emotional content* at subconscious levels beneath normal waking consciousness. Grof (1975) elaborates his clinical and experimental observations in his book, *Realms of the Human Unconscious*. Memories that have similar negative or positive thematic emotional content tend to be associated together into a dynamically organized collection or cluster of emotionally relevant content of a biographical nature called *systems of condensed experience* (COEX systems). Recollection of situations dealing with physical abuse and violation tend to be organized together. The same with situations dealing with threat, separation, pain, suffocation, loneliness, helplessness, hopelessness, despair, guilt, shame, or conversely situations dealing with peace of mind, joy, satisfaction, relaxation, beautiful natural scenery would each have their own dynamically organized COEX system. The number of COEX systems are theoretically infinite, each individual and yet a part of other COEX systems of similar emotionally relevant content.

Emotions serve to organize memories. What this means is that although memories may be organized chronologically in terms of temporal sequence, they are *also* organized associatively by emotional content so that all memories that involve a strongly-charged emotion such as anger or sadness tend to be recalled together, being recalled out of the order in which they temporally occurred. A picture of one's companion animal that recently died may evoke memories of the long past death of one's favorite aunt, followed by thoughts of the anticipated death of one's parents, back to memories of one's inadvertent killing of a bird and the feelings of sadness and guilt that it engendered. This may be one reason why we tend to recall past memories that are congruent with our present emotional state (called the "mood congruence" effect) and why we tend to retrieve or remember information better when we are in the same emotional state in which its was originally encoded or learned (called the "mood-dependent" effect). It may also be one reason why current theories in cognitive psychology about how episodic, procedural, and semantic memory is organized -- hierarchically, distinctive features, prototype, and so forth -- may ultimately prove to be an artifact of experimental design and thus a misrepresentation of the facts concerning the organization of memory. Transpersonal elements of memory would also be involved, such as birth memories or memories of past lives, and any theory of memory that fails to include them would be incomplete.

Most biographical COEX systems are dynamically connected with specific facets of the birth process. Perinatal themes and their elements, then, have specific associations with related experiential material in the transpersonal domain. It is not uncommon for a dynamic constellation to comprise material from several biographical periods, from biological birth, and from certain areas of the transpersonal realm, such as memories of a past incarnation, animal identification, and mythological sequences. (Grof, 1985, p. 97)

Such organized emotionally-relevant memories would play a role in the origin of various emotional, interpersonal and psychosomatic disorders as well (Grof, 1985, chap. 4).

IV. Enhancing Learning, Memory, and Behavior

Transpersonal psychology represents one approach to enhancing human functioning and understanding excellent performance in any area. Indeed, transpersonal psychology is concerned with the study of acts, capacities, and abilities that surpass commonly accepted ideas of human limitations to reveal possibilities for personality action not commonly accounted for in general psychology textbooks. The topic of memory, learning, and behavior in normal waking consciousness and in alternate states of consciousness naturally leads to a discussion of practices designed to enhance human performance in these areas.

Retention and Transfer of Learning and Memory Above the Threshold of Consciousness

Retention and transfer. Enhancing human learning and behavior is complex, but research clearly indicates certain approaches to training and practice that can help (Druckman & Bjork, 1991; Ellis, 1965; Farr, 1987). It is not so much what the person can achieve during training or practice that matters, but whether the individual can continue to do it after training is long over, and whether he or she can implement his or her new knowledge or skill in daily life and work-a-day contexts. Is the training durable; that is, does it last? Can the individual retain what he or she has learned over time? Is the training flexible; that is, can it be applied in situations other than that in which it was learned? Can the person use it when and where he or she needs it?

Can you retain what you have learned over time? In order to improve long-term retention of initial learning, the person needs to prevent forgetting by inhibiting the factors which cause forgetting (e.g., interference, decay) during the period of time when the individual is not using the skills or knowledge she or he learned. Some interference or decay will inevitably occur with the original learning, but can be minimized in a number of ways, including:

- Increasing the cognitive effort expended by raising the criterion for success to high levels and making the conditions under which learning occurs more challenging or difficult (Hagman & Rose, 1983);
- Organizing the components of the skill to be learned into an integrated, coherent whole, coupled with verbal explanations about the "how," "what" and "why" of task performance that helps the learner create a mental model which aids in integrating the new information with what the learner already knows (Smith & Goodman, 1984);
- Continuing to train and practice after mastery has been achieved to produce overlearning and automatic performance of the behavior (Loftus, 1985);
- Engaging the learner as an active participant who answers questions, produces his or her explanations, and practices the to-be-learned skill extensively rather than passively listens and watches during the training sessions (Rothkopf, 1981; Slamecka & Graf, 1978);
- Spacing or distributing practice over a relatively long period of time (Dempster, 1990);
- Embedding formative assessments (which provide the opportunity for the feedback to improve performance) that give learners the opportunity to *practice retrieval* of the knowledge underlying the skill to be learned (Swets & Bjork, 1990);
- Providing refresher courses, training sessions, or practice periods following long periods of nonuse of the skill that include the use of creative visualization techniques, which are especially useful in the absence of the ability to physically perform the skill (Richardson, 1967).

Large amounts of actively engaged practice over time with explanations about how to achieve relatively difficult criterion levels of mastery is good. Having multiple tests embedded in the training process is also helpful. The goal is to produce the *overlearning* that makes the skill automatic and that creates a knowledge framework that relates new information to what the learner already knows. This leads to greater retention (Farr, 1987; Walberg, 1990). While rapid learning may be impeded, what is learned over the long run will be resistant to forgetting and much more likely to be retained after a long-term period of disuse (e.g., Baddeley & Longman, 1978).

Can you use what you have learned when and where you need it? The person not only needs to remember what she or he has learned but the individual also needs to learn how to use those learned skills in the contexts where she or he wants to use them. In other words, the individual needs to be able to generalize (or transfer) that knowledge or skill to contexts that may differ from the context in which the

knowledge or skill were originally learned. Some loss of transfer will inevitably occur, but can be minimized in a number of ways, including the following:

- Obtaining less frequent feedback that requires the learner to engage in more complex, elaborate and distinctive encoding processes (Schmidt & Bjork, 1992);
- Varying the to-be-performed task, the practice conditions, and type of mental processes used during initial training (called "contextual interference") and the environmental contexts in which the behavior is practiced (called "contextual variety") in order to induce the use of more diverse, elaborate and distinctive learning strategies (Bransford, Franks, Morris, & Stein, 1979; Magill & Hall, 1990);
- Varying the number, examples, and order of the behaviors to be learned each time they are practiced (Fried & Holyoak, 1984);

While learning may be slower under such conditions, "deeper" learning occurs which more likely will generalize to related contexts where the individual wants to perform the behavior (Schmidt & Bjork, 1992).

What's good for short-term learning may not be good for long-term performance. While an individual may be able to demonstrate learning, comprehension, and memory for how to practice meditation at a high level of achievement during the initial training sessions themselves, for example, this is no guarantee that what is learned then will carry over to other times, other places, or other situations when the physical, emotional, or mental set of the learner and the setting are not exactly the same as those of the original training set and setting, especially over periods of disuse after initial training is over. Paradoxically, research suggests that the methods that enhance long-term retention and transfer to different contexts, create "difficulties" for the learner and may impair performance during initial training; that is, procedures which may enhance learning and produce better performance in the short-term may be insufficient to promote long-term recall and generalization to different settings at a later time (Druckman & Bjork, 1991; Farr, 1987).

Retention and Transfer of Learning and Memory Below the Threshold of Consciousness

Subliminal perception: Subjective and objective thresholds. Subliminal perception as a scientific concept has a long and distinguished history (e.g., see Adams, 1957; Cheesman & Merikle, 1984, 1986; Dixon, 1971, 1981; Kihlstrom, 1987; Marcel, 1983). Laboratory research suggests that physical stimuli that are presented too rapid or too faintly to be consciously detected or recognized by subjects may have short-term effects on performance of simple tasks (e.g., sentence verification tasks or color naming). This has led to a two-threshold theory in the experimental psychology of perception that distinguishes a "subjective threshold" and an "objective threshold" of perception (Cheeseman & Merikle, 1984, 1986). Above the subjective threshold lies the field of normal waking consciousness in which people verbally report conscious awareness of a stimulus and their behavior indicates awareness of its meaning. Below the subjective threshold (but above the objective threshold) at the level of subconscious awareness, people verbally report that they can neither detect nor recognize the perceptual stimulus, although their behavior (e.g., measured by reaction time, forced-choice, confidence ratings procedures) indicate that the meaning of the perceptual information is being detected above chance levels. Below the objective threshold at the non-conscious or unconscious level, people claim they are unaware of the stimulus and their behavioral response to the stimulus is random or functioning at the chance level of pure guessing.

Subliminal audio/video tapes: What you expect is not necessarily what you get. Laboratory psychophysical experiments conducted by Merikle (1988) examining subliminal self-help tapes widely advertised and marketed to the public found that some of the tapes did not contain any embedded

subliminal stimuli at all that could be identified through objective means (i.e., sound spectrograph) that could conceivably influence behavior. These tapes contained stimuli below the objective threshold, in other words, that were consciously imperceptible and behaviorally undetectable. Other self-help tapes did contain perceptual information above the objective threshold (i.e., consciously imperceptible but behaviorally detectable). What this finding means is that individuals need to beware of commercially-produced cassettes that claim to include, but do not contain, subliminal stimuli that are *above* the objective threshold of awareness that satisfy the minimal condition for demonstrating subliminal perception. For those tapes that do contain subliminal stimuli above the objective threshold of awareness, the jury is still out. "Such effects, if any, remain to be conclusively established and rigorously explored...[and] would need to address a very long list of questions...raised by prior research" (Druckman & Bjork, 1991, p. 116). The following three questions, for example, would make excellent research topics for the interested undergraduate or graduate student:

- We know that perceptual thresholds vary from person to person, that what is subliminal for one person may be clear as day for another, that some people are more sensitive to the presence of certain images, sounds, tastes, or odors than others, and that thresholds vary over the course of the day depending on fatigue, interest, expectations. What other individual differences might be important determinants of susceptibility to subliminal perception? Obviously, the "same" subliminal stimuli does not have the same effect on everyone, or does it (Sackeim, Packer, & Gur, 1977)?
- Is there a significant difference in the role that different kinds of stimuli play in what is extracted from subliminal presentations? That is, does subliminal perception work more at a mental or emotional level? Even if there is a change in behavior, how does one trace it to the subliminal stimuli (Mandler, Nakamura, & Van Zandt, 1987)?
- What effect would alternate states of consciousness have on perception of subliminal stimuli below the subjective threshold? How might one's sensitivity or susceptibility be affected by hypnosis or meditation? Would a relaxed passive mode of consciousness (e.g., daydreaming) enhance susceptibility more than an active mode of consciousness (e.g., need to plan, make decisions, act upon these decision) (Hilgard, 1986)?

Subliminal perception is not subliminal persuasion. While the phenomenon of subliminal perception may arguably be demonstrated in the laboratory (e.g., Cheesman & Merikle, 1986), the effectiveness of subliminal self-help tapes in learning and behavior change remains inconclusive at the present time. Subliminal perception is different from subliminal persuasion. Anecdotal reports of the effectiveness of subliminal self-help tapes for influencing more complex cognitions (e.g., self-confidence), emotions (e.g., depression), or behaviors (e.g., smoking) are not supported by laboratory research at this time (Druckman & Bjork, 1991; Russell, Rowe, & Smouse, 1991). Absence of proof, however, does not mean proof of absence. Expectancy, self-justification, and placebo effects are the usual suspects identified by mainstream psychology as being responsible for verbal reports of self-improvement in these situations. This does not deny the occurrence of improvements, but changes cannot be directly attributed to the tapes themselves. Like any other technique that works at thresholds below normal waking consciousness, the effectiveness of suggestions will depend on many variables (e.g., how suggestions are worded, the flexibility of the ego and permeability of ego boundaries, the presence of conflicting beliefs, the state of dissociation attained, how frequently the suggestions are presented, how deep-seated the problems may be, and so forth). People may be motivated to see some improvement in how they think about themselves, how they feel about their life, or how they behave toward others simply in order to justify to themselves the time, effort and money they have spent on working with the subliminal self-help tapes (Conway & Ross, 1984). Or people may improve because they expect to improve as a result of tape use (called "expectancy effect" or "placebo response") (Greenwald, Spangenber, Pratkanis, & Eskenazi, 1991).

The power of suggestion and the dynamic nature of the subconscious mind. The act of belief, when harnessed by the power of the subconscious mind, becomes a plausible working hypothesis for understanding claims of self-improvement resulting from subliminal self-help tapes that contain no detectable embedded messages (Maltz, 1960; Murphy, 2000). What passes through the mind affects the body. The main ingredient is the human belief system and not the method, technique, equipment or cassette tape. Self-help subliminal tapes may serve as a way of focusing conscious energy in constructive directions. It is not the thing believed that heals or harms, but the belief, faith, and confident expectancy in the mind that acts as a powerful suggestion to the subconscious, releasing its healing potency. This "conscious belief \rightarrow subconscious mind" principle, especially when supported by the imagination and creative visualization, points the way to a practical approach for building an understanding of how to enhance, augment, and further develop human learning, memory, and performance (Epstein, 1989; Fanning, 1988; Gawain, 1982; Greenspan & Feltz, 1989; Whelan, Meyers, & Berman, 1989; Suinn, 1983). The example of those 52 other runners who broke the four-minute mile barrier the same year that Olympic runner Roger Bannister did -- in the face of absolute 'irrefutable' scientific evidence that the human being could not run faster than four minutes in the mile -- is an example of the operation of the power of belief in action and the overcoming of what proved to have been a *psychological*, not a physiological, block (McNeill, 1985).

The subconscious mind has the conscious mind to contend with. Why would messages presented below the subjective threshold of perception be any more persuasive than suggestions that could be consciously perceived and understood? A more practical approach would seem to be to use the conscious mind to insert suggestions rather than have a supposedly "subliminal" tape that allegedly bypasses the conscious mind. The subconscious, subliminal stream of consciousness is complicated, richly creative, infinitely varied, purposeful, and highly discriminating (Taylor, 1996b). The subconscious mind also exists with the conscious mind to contend with. The subconscious mind does not try to make sense of the philosophical and religious beliefs that pervade the social, cultural, political world. It relies upon the interpretation of the conscious mind that produces an inner environment of thoughts and concepts to which our subconscious mind and body then respond. Although suggestions may bypass the ego-self entirely, it is always better that the cooperation of the conscious self be sought whenever possible at any time suggestions are given on any conscious basis by the individual. Our conscious mind directs our attention toward sensations that occur in three-dimensional time and space, interprets those sensations into perceptions, organizing those perceptions into concepts, categories, and schemas. The quality of our mental and physical health is formed through the subjective realities and energies of our feelings and cognitive constructs. The subconscious mind and body depends upon those interpretations.

The goal is open channels of communication between the conscious and subconscious. The subconscious is not simply a cardboard figure or an ignorant machine that can be pushed around, badgered and bullied to carry out the orders of the outer ego, or "tricked" through so-called subliminal programming. Excellent communication with one's own personal subconscious can be achieved, only if the individual speaks to his or her subconscious as a partner and an equal, which it is. Once such a relationship is set up between the conscious personality and its subconscious portions, then communication would then operate without it. Communication is always a two-way street and operates both ways. Suggestions not only come from the physical environment to act upon the inner physical environment. The conscious personality needs to recognize that "subliminal" suggestion operates both ways in order to be open to this possibility and train oneself to react to suggestions that are constructive rather than impeding, that bypass the ego completely and come into awareness whatever their source.

V. Transpersonal Learning and Education

Ideal Performance States

Peak experience as an "ideal performance" state. Transpersonal psychology has long been interested in cognitive, affective, and motivational states associated with individuals' "peak performance" (Murphy, 1992). One set of attitudes or mental states that enhance human performance are those that Abraham Maslow (1971) described as being characteristic of *peak experiences* -- "a generalization for the best moments of the human being, for the happiest moments of life, for experiences of ecstasy, rapture, bliss, of the greatest joy" (p. 105). Common cognitive, affective, motivational, and attentional features of peak experiences include (Maslow, 1964, pp. 59-68):

- The whole universe is perceived as an integrated and unified whole, and that one has his or her place in it.
- A kind of total, non-comparing acceptance of everything, as if everything were equally important; one unique person in principle is worth as much as any other person.
- We are able to perceive the world as detached from human concerns, as if it were there in itself and for itself, rather than as something to be used or to be afraid of or wished for or reacted to in some personal, self-centered way.
- We become relatively ego-transcending, self-forgetful, egoless, unselfish.
- Life is seen as meaningful, worthwhile, self-validating, self-justifying.
- We realize that Being is its own justification.
- There is an experience of timelessness and spacelessness and that one is living "under the aspect of eternity."
- The world is seen as beautiful, good, desirable, and worthwhile, and so-called evil is understood as being a necessary part of the whole as the person reconciles opposites and conflicts into an integrated unity-identity-whole grasped in Being.
- Fear disappears.
- There is a change in the person.
- Heaven exists all around us right now.
- Tendency to move away from the inauthentic, false self to one's real and authentic self.
- We feel more responsible, active, and creative and more a free agent with free-will.
- We become more loving, accepting, spontaneous, honest.
- We become less a thing and more a person, less an object and more a subject.
- We feel in a "state of grace," lucky, fortunate.

Flow as an "ideal performance" state. Some, but not all, of the qualities of consciousness that characterize peak experiences also characterize what Mihaly Csikszentmihalyi (1990) refers to as the *flow* experience – "the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (p. 4). Common cognitive, affective, motivational, and attentional features of flow experiences include (Csikszentmihalyi (1996, pp. 11-123):

- Clarity of goals -- There are clear goals every step of the way.
- Knowing how well one is doing -- There is immediate feedback to one's actions.
- Balancing challenges and skills -- We feel that our abilities are well matched to the opportunities for action.
- The merging of action and awareness -- Our concentration is focused on what we are do.

- Avoiding distractions -- We are aware only of what is relevant here and now.
- Forgetting self, time, and surroundings -- There is no worry of failure, self-consciousness disappears, and we forget time.
- Intrinsically reinforcing for its own sake -- We begin to enjoy whatever it is that produces such an experience.

Obviously, no individual can be in a peak state of bliss or experience flow constantly. An unchanging and steady state of exuberant happiness is not practical, for we would learn nothing otherwise, or at least very little. Physical existence means translating inner moods and psychological climates into physical, bodily terms. The fact of the matter is that there is always *effort* involved, for this is the meaning of being and of creative effort. This means that the mental states or qualities of experience that characterize peak experiences and flow experiences while emerging spontaneously are also *learnable*.

Transpersonal Learning

Learning to unlearn, learning to learn. Can a person learn to have transformative transpersonal experiences? Can a person learn to effectively integrate body, breath, heart, mind, and psyche or soul into a fully embodied spiritual consciousness? Fields, Taylor, Weyler, & Ingrasci (1984, chap. 2) remind us that a necessary prerequisite to learning for persons on a spiritual path is an *open mind*. The first step to true learning on the spiritual path involves "learning how to unlearn" which means we must learn to forget the habits of mind that we have learned as an adult that anchor us to our usual ego-centered ways of seeing the world and ourselves. This does not mean that there is anything wrong with the ego, but only that its ideas and beliefs can get in the way of learning how to learn while on a spiritual path. The spiritual, mental, emotional, and biological ideas and beliefs that we want to re-arouse during the process of transpersonal learning are those attitudes that are frequently predominant in childhood.

Learning to rearouse the basic virtues and strengths of psychosocial development. The reader is invited to reflect upon the basic strengths, positive attitudes, and virtues that Erik Erikson (1982) identified as potential outcomes that unfold during the process of psychosocial development -- hope, will, purpose, competence, fidelity, love, care, wisdom. Playfully imagine for a moment each of those basic virtues as being innately present in the birth of each child, and try to re-arouse within yourself those earlier, more innocent feelings, expectations, and beliefs here and now. Remember when you felt yourself couched in an overall sense of safety and security, drawn to other people, and born with a joyful expectation and faith that there would be many rewarding tomorrows filled with new adventures and discoveries. Remember when you felt that inbred sense that it was good and natural for you to trust yourself, other people, and other creatures; that it was fine for you to act and trust your impulses and explore your world; that it was okay to enjoy communication and the pursuit of knowledge with a sense of initiative and purpose. Remember when you felt that it was perfectly natural for you to express yourself and to live every day with a playful attitude and a rambunctious zest for life; that it was all right for you to love and form intimate relationships with other people and other creatures; that it was acceptable to creatively contribute to the world and develop one's capabilities borne out of an innate sense of self-satisfaction and selfappreciation. Remember when you were filled with curiosity, expected the best possible results of every event, and that relationships would be rewarding, stressful situations would get better, and communications with others enjoyable.

Learning to unlearn the beliefs that impede the free flow of energy and action and threaten the integrity of the personality itself. However simple and Pollyannaish such feelings may sound, they are quite practical and beneficial beliefs and expectations and carry within them the vitality, energy, and power needed to successfully meet the psychosocial demands of everyday life and to grow up physically and mentally healthy. Unfortunately, through the learning processes of classical and operant conditioning,

observational learning and imitation utilized by well-intentioned parents, family members, teachers, peers, friends, partners and work colleagues, another different set of ideas and beliefs developed that smothered the earlier feelings of meaning and purpose, zest and purpose, needed by body and mind to enjoy life's daily pursuits and activities, and propel future growth and development. "Learned" beliefs acquired through socialization and acculturation presented an opposite, often contradictory, set of hypotheses that took it for granted that we live in an unsafe world and that stressful situations will only worse, that impulses cannot be trusted and left alone the body will catch any disease, that communication is dangerous and self-expression gets you into trouble, that the natural world is savage and cruel and all human endeavors are futile. Transpersonal psychologist Charles Tart (1975/1992) referred to such unfortunate beliefs and ideas as a part of the "Western Creed." In order to achieve the "open mind, empty mind" necessary for transpersonal learning, such beliefs should be recognized and then discarded. Feelings associated with these beliefs should be aired and then not concentrated upon. Concentrate instead upon re-arousing those natural, health-promoting beliefs predominant in childhood with a playful "as if" attitude of joyful expectation (rather than as a deadly serious adult pursuit) that encourages the use of the imagination and the creative abilities.

Having a teacher. G. I. Gurdjieff, the Russian mystic whose teachings were popularized by P. D. Ouspensky (1931/1971, 1957/1971) once said somewhere: "A man cannot awaken himself." Gurdjieff was referring to the need to have someone awaken us from our habitual normal waking sleeping state or what psychiatrist Arthur Deikman called "the trance of everyday life" (Deikman, 1982). From this perspective, a teacher, master, or guru is necessary to help us break the conditioning of habits of mind and heart that stand in the way of transpersonal development. A teacher is necessary to guide us on the spiritual journey once we break through into spiritual realities. On the other hand, having a teacher may prevent the student from facing life directly, put the power for transformation into the hands of another, and create unhealthy dependencies. Some problematic teacher-student relationships are due to students' misunderstanding of cultural factors that surround meditation practices (Berzin, 2000). Other difficulties may arise when separating from a spiritual teacher (Bogart, 1992). The most important point regarding "having a teacher" in transpersonal learning is to realize that the real teacher is within and the lesson is everything that happens to you.

What *is* important is not to follow anybody but to understand oneself. If you go into yourself without effort, fear, without any sense of restraint, and really delve deeply, you will find extraordinary things; and you don't have to read a single book. ... In oneself lies the whole world, and if you know how to look and learn, then the door is there and the key is in your hand. Nobody on earth can give you either that key or the door to open, except yourself. (Krishnamurti, 1972, p. 158)

Integral Transformative Education

Transformative education. The topic of learning and memory naturally leads transpersonal psychologists to a discussion of transformative education, and finding and working with one's "inner teacher" that Krishnamurti (1972) talks about. From a transpersonal perspective, learning is more than a function of brain activity, cognitive functioning, behavior, and social interaction – it is an integral (or integrated) process of learning and inquiry that involves all dimensions of the human being – body, heart, mind, and spirit - and that connects both learner and teacher to transformative and spiritual dimensions of one's being in the world (Clark, 1974). Our current educational processes tend to divorce knowledge from emotion, understanding from identification, and stress the mind over the body. Our traditional educational processes have forced upon us great divisions in which operationally the intellect seems separate from the intuitions, reason seems separate from the emotions, and end up creating a learning processes in which opposites seem to apply where none actually exist. To be intellectual, smart, reasonable, and objective, we take great pains to teach our students to be critical thinkers, which means

not to be emotional or creative, not to identify with the subject being examined or studied for fear of being biased or too attached, and to be ashamed of using one's intuitions. To be "subjective" is a crime and unscientific. Yet to educate the whole person means educating one's own body, emotions, intuitions, creativity, and will as well as one's conscious mind and intellect and integrating spirituality -- however one conceives it to be -- into the educational process (Hart, 2001). A balance between spontaneity and discipline is required (Hart, 2000). Survival in the physical environment is determined by the *full* development of potential -- physical, emotional, intuitional, social -- and not just intellectual or spiritual. When the possibilities of the inner self are not ignored, when survival is not considered in a limited light, when a sense of inner accomplishment is permitted to arise, then the personality simply works better and more efficiently and more *joyfully* and abilities of which the egoic self is not aware emerge and flourish. Education for transcendence is a transformative learning experience indeed.

Education for transcendence. Education for transcendence means education "to go beyond" those possibilities of the human condition that are usually recognized by mainstream psychology and world culture. Transpersonal psychology studies those experiences and behaviors that indicate that the peak of human development is not "normality" or "average" performance. There is more to human beings and to being human than has been recognized (Walsh & Shapiro, 1983). Transpersonal psychiatrist Roger Walsh (1993) states:

There exists developmental possibilities far beyond those we have taken to be the ceiling of human potential, and these possibilities include enlightenment. . . . 'How can we realize these potentials for ourselves?' The answer is that one takes up a practice, a transpersonal discipline, a yoga capable of catalyzing transpersonal development. (p. 131)

Walsh and Vaughan (1993b) identify six common elements within the world's spiritual traditions that specify the key practices or processes capable of producing transpersonal development:

- Ethical training
- Attentional stabilization
- Emotional transformation
- Redirecting motivation
- Perceptual refinement
- Cultivation of wisdom

Walsh (1999) has collected practical exercises from the world's religions designed to cultivate each of these elements, with goal of "recognizing the sacred and divine that exist both within and around us" (frontpiece). Interestingly, the six elements that educate for transcendence are similar to the six shared components of psychotherapeutic procedures or "rituals" that psychiatrists Frank & Frank (1991) identified as effective in combating "demoralization" -- feelings of helplessness, hopelessness, confusion, and subjective incompetence) (pp. 44-51). Features shared by all forms of psychotherapy (or rituals for healing) that combat demoralization are those that:

- Combat the individual's sense of alienation
- Inspire and maintain the individual's expectation of help.
- Provide new learning experiences
- Arouse the emotions
- Enhance the individual's sense of mastery or self-efficacy
- Provide opportunities for practice.

All education for transcendence aims at a change in the being of the individual, for "knowledge is a function of being. When there is a change in the being of the knower, there is a corresponding change in the nature and amount of knowing" (Huxley, 1944/1970, p. vii).

Problems along the path. Many proposals for an "integral transformative education" attempt to address the lopsided development that can occur during transpersonal development (Vaughan, 1995). Problems that may be encountered along the path of personal transformation include:

- o Fatiguing of the body and inhibition of sexual energies (Romero & Albareda, 2001).
- o Failure to integrate spiritual experiences into daily life (Bragdon, 1990; Grof & Grof, 1989).
- Ethical problems and sexual issues arising in guru-disciple relationships (Butler, 1990; Kripal, 1999).
- Self-deceptive assertion of a false spiritual self to avoid contact with other disavowed portions of the personality ("offensive spirituality") and beliefs about the nature of spirituality that prevents expression of physical and emotional dimensions of selfhood ("spiritual defense") (Battista, 1996).
- Ego-inflation ("spiritual narcissism") and strengthening egocentricity through spiritual techniques ("spiritual materialism") (Caplan, 1999; Trungpa, 1973).
- Reinforcement of traits, perpetuation of limiting beliefs, subversion of balanced growth, partial focus on specific experiences (Murphy, 1992).
- Bypassing conflictual areas to privilege spiritual experience alone ("spiritual bypassing") (Welwood, 2000).

Integral education: Hierarchical integration in an integral transformative education. A number of proposals have been formulated regarding how to actively encourage the occurrence of transformative experiences that add to the psychological strength, personal flexibility, and physical health of the personality. Ferrer, Romero, & Albareda (2005) argue for "a participatory approach to integral transformative education in which all human dimensions - body, vital, heart, mind, and consciousness are invited to cocreatively participate in the unfolding of learning and inquiry.... [in order to reconnect] education with its transformative and spiritual dimensions" (p. 1). When most educators talk about an integrated (or integral) educational experience, they are often talking about a "horizontal" integration of three basic elements of learning -- general content knowledge, procedural skill training, and methods of inquiry -- either within or across various academic disciplines. *Disciplinary* integral education refers to the integration of content, skills, and inquiry within the same academic discipline (e.g., integrating behavioral and social perspectives to study personality development). Multidisciplinary integral education refers to integration of the three elements of learning across different academic disciplines (e.g., integrating nursing and social work perspectives in a course on public health issues). Interdisciplinary integral education refers to the incorporation or assimilation of content, skills, or inquiry from one academic discipline into another (e.g., integrating nuclear magnetic resonance imaging from the field of chemistry into the field of medicine and then into the field of psychology). Transdisciplinary integral education refers to the eclectic use of content knowledge, skill training, and methods of inquiry from any source that will help increasing learning and inquiry (e.g., the use by the investigator of concurrent, intermittent, and retrospective modes of self-report creatively synthesized with skills training of research participants in the use of self-hypnosis in a study of the effects of different verbal report procedures on the experience of imagining in different states of consciousness).

Integral education: Vertical integration in an integral transformative education. A "vertical" integration of the three basic elements of learning (content, skills, inquiry), on the other hand, refers to "the way we integrate multiple ways of knowing" (Ferrer, Romero, & Albareda, 2005, p. 4; Braud & Anderson, 1998; Hart, Nelson, Puhakka, 2000; Palmer, 1998). The heart has its reasons and the body possesses its own natural wisdom that the intellect ignores at its own peril. The spirit is the mind's source

and well-spring of insights and inspiration. When the conscious personality with its reasoning mind cuts itself off from these other aspects of its own being (heart, body, spirit), it can feel isolated and alone and become fearful, paranoid, and less than it can be in terms of its own potential and capacity. When the reasoning mind acknowledges its own limitations and opens itself to these other aspects of its own being, it can realize "that it does not need to know everything because there are greater sources of knowledge to which it can be connected" (Ferrer, Romero, & Albareda, 2005, p. 18). When the conscious mind works in collaboration with other ignored, overlooked, and denied ways of knowing (e.g., intuition) and genuinely and authentically welcomes their creative participation as equal partners in the learning process, then the "whole person" becomes truly engaged in an educational process which is re-connected with its transformative and spiritual dimension. Only then can integral education "help learners to achieve adulthood at all levels, not only mentally" (Ferrer, Romero, & Albareda, 2005, p. 17).

Examples of Integral Transformative Education

Integral Transformative Practice (ITP) Programs. Ferrer (2003), spells out the details of what "Integrative Transformative Practice" (ITP) would look like in terms of specific activities, exercises, and practices. Ferrer (2003) provides a review of programs (e.g., Leonard & Murphy, 1995; Murphy, 1992; Wilber, 2000), including the Holistic Integration program of Ramon V. Albarea and Marina T. Romero -- collectively known as "Integral Transformative Practices" (ITPs) -- that contain a range of exercises, training techniques, and practices from which individuals may select to personalize training for the development of particular spiritual attributes (e.g., honesty, creativity, love, courage, balance, resilience) that address the major existential categories of existence (body, self, others, world). Examples of exercises, practices, techniques included in ITP programs include:

Body

- o Feldenkrais-type methods for bodily awareness and self-regulation
- Athletic training
- Aerobic exercise
- Weight lifting
- Low-animal-fat diet
- o Martial arts (judo, karate)
- Yoga (Karma, Hatha)
- o Qi gong
- o Tai chi chuan

Self

- Depth psychotherapy
- Philosophical reflection and the study of philosophy, myth, artistic works, or religious symbols
- o Bibliotherapy
- Cultivation of mystical states
- o Positive affirmations and intentional creative visualizations
- o Meditation (zazen), self-observation (vipassana), contemplative prayer
- o Self-hypnosis
- o Multidimensional (body, breath, emotion, mind, spirit) contemplative practices
- o Individualized integral practices

Others

- Empathetic visualizations
- o Mentoring and community support
- o Mutual disclosure

- Self-examination for the growth of love
- o Community service learning
- Compassionate care
- Engagement with others
- o Interactive embodied meditations practiced "in contact" with other individuals

World

- o Recycling
- o Hikes
- o Nature celebration
- o Integrative work in everyday life

Noting the problems of "lopsided development" that follow from an over-emphasis upon head-heart practices and under-emphasis of body-breath practices in educational training programs for psychospiritual development, Ferrer (2003) asks: "What does it really mean to live a *fully* embodied spiritual life? Is it actually possible to integrate the many needs, desires, dynamics, and understandings of the various dimensions of our being harmoniously?" (p. 22).

Lozanov Suggestology. Bulgarian psychiatrist George Lozanov (1978) developed a learning system called "Suggestology" based on the sciences of Raja Yoga, physiology and psychology designed to integrate left-brain/right-brain, breath, thought, and emotions into a single "whole person" approach to transformative learning. Employing a combination of rhythmic breathing and music, self-image therapy and affirmations, autogenic relaxation and meditative states, Lozanov's Suggestology system attempts to create an alert and aware alternate state of consciousness that accelerates the learning process and facilitate the encoding, storage, and retrieval of learned material. How does it accomplish this? The first step is to have the learner relax his or her body and mind through the use of a combination of deeprelaxation autogenic suggestions, specific forms of slow rhythmic music (e.g., classical Baroque music such as Bach, Handel, Pachelbel, Vivaldi), and Raja Yoga breathing exercises. After body rhythms are calmed, while leaving the mind alert and able to concentrate, a series of positive affirmations (or "desuggestions") are given to de-condition or rid the learner of any preconceived ideas and beliefs about the limitations of one's ability to learn and remember (e.g., "This isn't going to work," "I can't do this," "No pain, no gain"). Then, the to-be-learned material is presented to the learner in a slow-paced, strict rhythm over the music, in such a way that breath, heartbeat, brainwayes, and verbal input are synchronized to the beat of the music (Bancroft, 1975). One key component of this system is the rhythmic timing of breathing, music, and to-be-learned material. Another key component is the use of specific types of music to simultaneously relax and calm the body and mind that alters the learner's state of consciousness without bringing him or her to the edge of sleep or in trance. The healing energies and power of sound and music is well-documented (Gaynor, 2002; Lingerman, 1983) and are employed in Lozanov's Suggestology system to enhance memory and learning.

Assessments of learning are conducted at varying intervals after training. Results reported by Ostrander, Schroeder, & Ostrander (1979) indicate that learning is rapid and memory is expanded, and subsequent performance on training tasks and post-training transfer tasks is very high. Learners learned material faster, did not forget what they had learned, and reported improved emotional well-being from the meditative training sessions. Having initially been developed as a program for adults for the learning language (e.g., vocabulary words of foreign languages, academic terms in chemistry, history, and biology, manuals and technical terms used at work and in hobbies, long speeches and poems), Lozanov's Suggestology system has been extended to teaching children in elementary school spelling, math, reading, and in homework coaching (Dohority, 1991; Jensen, 1988; Schuster, Benitez, & Gritton, 1976). In a program called *SuperCamp*, suggestology has been integrated with aspects of neurolinguistic programming to help high school student build self-confidence, learn how to learn, and develop

communication skills (DePorter & Hernacki, 1992). Principles and components of Lozanov's Suggestology system (e.g., yoga, autogenics, visualizations, affirmations) have also been extended to enhance performance in sports, pain control, psi functioning, intuitive decision making and problem solving, and dream recall (Dickinson, 1991; Rose, 1985). Ostrander, Schroeder, & Ostrander (1979) provide useful details about "How to Do Superlearning" (chapter 7) and ""Preparing Your Own Program" (chapter 8) in addition to yoga, concentration, visualization, and autogenic relaxation exercises (chapters 17-20) that are helpful for individuals interested in applying the Lozanov learning system to their own daily life. Details of teacher-training programs, research reports, and resources can be obtained from (a) the Society for Accelerated Learning and Teaching (S.A.L.T.), 3028 Emerson Avenue South, Minneapolis, MN 55408, (b) *The Global Alliance for Transforming Education* (G.A.T.E.), 4202 Ashwoody Trail, Atlanta, GA 30319, and (c) *New Horizons for Learning*, 4649 Sunnyside North, Seattle, WA 98103.

Transpersonal higher education. Transpersonal psychologist, William Braud (2006) describes a transpersonal approach to master and doctoral education that is employed at the Institute of Transpersonal Psychology (ITP), the only regionally-accredited institution of higher education in the United States to offer a Ph.D. degree in transpersonal psychology. In addition to its *transpersonal* emphasis – a concern with the study of consciousness; recognition of the spiritual quest as an essential aspect of life; interest in questions of value, meaning and purpose; importance of nonauthoritarian and nondogmatic attitude in search for the truth; use of many different ways of knowing or epistemologies in discovery of knowledge -- ITP educational programs emphasize *whole person* learning through its programs of study that focus on training in and balanced development of "physical, emotional, intellectual, spiritual, communityrelational, and creative expression" in its curriculum (Braud, 2006, p. 136). Experiential learning is emphasized -- learning that is "fully and deeply lived, immediate, and embodied. . . [and] involves appreciations and apprehensions that occur through the direct, personal experience in our lives" beyond the narrow, abstract, cognitively-mediated forms of learning typical of higher education (Braud, 2006, pp. 137-139). A multi-trait, multi-state approach is taken to the assessment of students' personal transformation, including qualities and characteristics related to "self-actualization, self-transcendence, transpersonal self-concept or identity, openness and interconnectedness, surrender and acceptance, body awareness and somatic knowing, environmental awareness, spirituality, values, and mindfulness" (Braud, 2006, p. 144). Interviews, standardized testing, peer review, self-assessments, observational measures, journal writing, reflective papers, indirect (projective) methods, in addition to traditional measures used for the direct assessment of intended educational (student) learning outcomes are all used to evaluate the nature of transformative change of students undergoing the program. As one model of transformative, integrative, experiential learning in higher education, the program at ITP "suggest ways in which others might introduce holistic and transpersonal approaches into other graduate programs and other institutions of higher learning" (Braud, 2006, p. 154).

Other Transformative Practice

Working with the past as a way of creating a more constructive present. Past memories (what one remembers about the past) often reflect present emotions (how one feels in the present) which, in turn, are reflections of current ideas and beliefs in the present, a phenomenon called "mood congruence" (Ellis & Moore, 1999). If the person feels like the world is against him or her in the present, then when the person looks into the past he or she will subconsciously select only those memories that are congruent or compatible (and match) his or her present mood and ignore all other memories -- recalling other past times when the individual felt the same way -- thus reinforcing the feelings in the present and the beliefs that justify them. The memories we remember are clues to our present ideas and beliefs, in other words. When individual feels happy, he or she will tend to select pleasant memories; when he or she feels depressed the person will tend to select memories that evoke similar feelings. The individual can thus fall into a vicious cycle in which past memories support and reinforce present beliefs and emotions until that

is all he or she can feel. Furthermore, we not only selectively recall memories that reinforce present beliefs and their corresponding emotions, but memories also serve to organize our present experience. When we think about a past event, such as an event that made us angry, we tend to take on those emotions again in the present, feeling angry all over again. By thinking about a past memory we can actually change our emotions in the present, taking on to some extent those emotions we felt in the past (Parrot & Spackman, 2000). What this means is that individuals can change his or her present experience by how he or she relates to the memories that he or she chooses to remember from the past., whether it is by the intentional recall of pleasant memories, re-contextualizing existing memories, or exploring probable versions of a remembered event.

Memory refresher. Once the individual becomes aware that his or her present ideas and beliefs generate their own emotions that in turn act as magnets for memories that are congruent or consistent or compatible with those ideas and emotions, then he or she is in a position to break the vicious cycle. This is done by intentionally recalling memories of events whose emotions one wishes to bring into the present (i.e., deliberately evoking positive memories when one feels depressed). "If you want to create a more pleasant present and future for yourself, don't dwell on unpleasant thoughts of the past. Focus instead on positive, pleasant times, and use them to reinforce the present" (Ashley, 1984, p. 64). Ashley (1984) offers the following "Memory Refresher" exercise to help the individual bring into the present pleasant feelings from the past. Remember a time when....

- You were a praised for a job well done
- You laughed and laughed and laughed
- You enjoyed a beautiful sun set
- You won
- You indulged yourself
- You felt loved
- You savored a warm bed and clean sheets
- You played hookey
- You were first choice
- You enjoyed doing absolutely nothing
- You were happy

Those memories will generate positive emotions in the present, changing one's present experience in an more constructive, positive, and therapeutic fashion. One's memories will reflect and reinforce this new viewpoint, building a more positive present for oneself in the future.

"Every access is a reframe." Memories change over time. One's memory of the "same" event experienced at the same time in the same place by another person are not the "same" memories. The creativity of the mind spontaneously changes, adds on to, alters, deletes, or views from a different perspective every memory every time it is recalled or accessed. This inconstant, changing, subjective nature of memory is not something to bemoan (although courts of law may take a different view), but points to how individuals can generate within themselves, first on a subconscious level, and then at a conscious level, new patterns of awareness that emerge with the spontaneous reorganizing and reframing of problems that follow upon the creative, changeful nature of all memory processes (Bandler, 1985; Bandler & Grinder, 1979).

The meaning that any event has depends upon the 'frame' in which we perceive it. When we change the frame, we change the meaning. . . . This is called reframing: changing the frame in which a perceive perceives events in order to change the meaning. When the meaning changes,

the person's responses and behaviors also change. . . . When a therapist tries to get a client to 'think about things differently' or 'see a new point of view' or to 'take other factors into consideration,' these are attempts to reframe events in order to get the client to respond differently to them. (Bandler & Grinder, 1982, p. 2)

"Each time we access the state-dependent memory, learning, and behavior processes that encode a problem, we have an opportunity to 'reassociate and reorganize; or *reframe* that problem in a manner that resolves it" (Rossi, 1986, p. 68-69). One way to do this is through the use of a light self-hypnotic trance. One begins by sitting or lying quietly, breathing deeply, and systematically relaxing each portion of the body, until a state of complete bodily relaxation is achieved. The individual would then perform in the ways suggested below (the instructions may be read into a tape recorder and played at the appropriate moment):

As soon as your inner mind [creative unconscious, spiritual guide, etc.] knows [pause] that you can review some important memories related to the source of that problem [pause], you will feel yourself getting more comfortable as your eyes close to review them [pause]....When a deep part of your inner mind knows it can resolve that problem [pause], you will feel yourself getting more and more comfortable, and you eyes will close [pause]....Now your inner mind can continue working all by itself to solve that problem in a manner that fully meets all your needs. [Pause]... There are memories, life experiences, and abilities that your inner mind can use in many ways you may not have realized before ... When your inner mind knows that it can continue to deal effectively with that problem, you will find yourself wanting to move a bit [pause], and you will open your eyes and come fully alert. (Rossi, 1986, pp. 72, 74)

"Problems' are paths to the person's 'growing edge.' Symptoms are often signals of the need for personal development" (Rossi, 1986, p. 68). When we look at our problems as opportunities and challenges, and view our symptoms as having informational value that is to be investigated and explored instead of being resisted and avoided, we will get better results and a more harmonious outcome. To paraphrase the poet Robert Frost, "Sometimes the best way out is through."

Probable past, probable selves, probable realities. Another approach to working with the past as a way of creating a more constructive present is to use one's imagination to get in touch with "the road not taken" and other probable events that are always implied within any decision made in the present. **Figure 5.1** outlines a series of practical exercises presented by transpersonal writer and channel Seth/Jane Roberts (1977, 1979b) designed to accomplish this.

Insert Figure 5.1 here

The performance of these exercises will likely disclose aspects of the events in one's life and the decisions that one has made that were not previously apparent. According to Seth/Jane Roberts, the practice of these exercise will actually begin a process of neurological and psychological re-orientation that automatically brings about conscious experience with probable events and probable realities that are usually outside or beyond the confines of present-focused sensory-oriented perception. During the day, after the individual has made an personally significant and important decision, he or she may begin to sense the actuality of the "opposite" decision and its ramifications. The exercises are doorways that have the potential of expanding one's concepts of oneself (probable selves) and of reality (probable realities). The individual who actually performs the exercises in the way suggested may also find that he or she is connecting with and consciously remembering dreams dealing directly with future probabilities in which he or she tries out various solutions to a given problem. In this particular theory, these probabilities are

actual realities within and beneath the sensory physical reality that we ordinarily accept as the one that is "real." The practice of these exercises is designed to expand normal waking consciousness in order to bring into awareness these other quite legitimate and valid probable realities that are a part of the present neurologically-accepted sense reality in which we live.

Response to critics of integral transformative practice programs. The "pick and choose" quality of these programs of selecting and practicing the set of techniques best suited to the individual has been criticized because of their seemingly haphazard and nonsystematic approach to transpersonal development and possibility of providing not an integrated spiritual transformation but "one big accident-prone soul" (Wilber, 2000, p. 39; Ferrer, 2003). An argument can be made, however, that individuals' metacognitive knowledge about their bodily, emotional, cognitive, social, and spiritual process *can* appropriately guide them in arranging circumstances and selecting practices that facilitate their own spiritual development. Some of the above mentioned practices and techniques will not be attempted, despite the fine advice and suggestions given by others more knowledgeable. Enough of them will be followed, however, to provide some kind of inner program that would at least head the individual in the proper direction.

Transformative practice programs -- however arbitrary, careless, hit-or-miss they may appear to outside observers who are more knowledgeable about the value and virtues of an integrated spiritual development -- do recognize the value-ladened character of existence and the significant importance of individual differences, free will, choice, and responsibility for one's choices in this matter of the personal pursuit of transpersonal development and spiritual transformation. One of the assumptions underlying transpersonal psychology is that "every individual has the right to choose his[or her] own path" and this includes selecting integral transformative practice programs (Sutich, 1972, p. 95). Techniques, program, and practices that are worthwhile and desirable for one person may be meaningless to another because of individual differences in temperament, inclination, curiosity, training, education, past experience, and motivation. Individuals can choose among techniques, programs, and paths to spiritual transformation precisely because they are uniquely suited to sense what course of action will lead to their own probable development and fulfillment as individuals. There is always more than one way to become acquainted with those deeply creative aspects of one's own being. Transformative practice programs acknowledge this vital reality.

The conscious mind *does* evolve through life. The individual is usually aware of only those abilities that the mind can understand, however, and most people do not contend with larger portions of their own reality even on a partial basis except through nightly dreaming. An individual sets for himself or herself those challenges in life that lie within his field of consciousness at any given time. He or she does not tackle challenges that in his or her time are too great to be solved. Certainly fears and angers consciously available but not faced will inhibit transpersonal development and spiritual transformation (Vaughan, 1995), the mind does not operate in practice separate from the body, however, and inner controls will be applied as a way of maintaining balance. In order for development and transformation to proceed, fears and desires, conflicts and confusions of which the individual may be ashamed need to be allowed to reach conscious awareness so they can be vented and addressed, acknowledged consciously without intellectualizing them away so they can be met. This project needs to occur at the individual's own pace. No one can do this journey for another.

As a person becomes acquainted with a different kind of transpersonal reality encountered (or participated in) during the performance of any particular ITP, he or she has to learn how to assimilate it with the "normal" one or accommodate the existing framework to the new knowledge. Often a situation of unbalance is set up that would not exist had the personality not accepted the challenges and implied potential for greater development. The more ordinary elements of the personality take whatever measures seem necessary at the time, while new orientations are tried out. These measures may seem unconnected

to the new knowledge or unrelated to the emerging skills and capabilities, but they still provide a framework in which the personality feels itself free to pursue its goals. The built-in momentums provide sign points or benchmarks when the newly sensed spiritual reality is strong enough to provide greater comprehensions and a new framework for living. When that occurs, then the old framework is seen as limiting, and discarded.

VI. Conclusion

Learning to investigate the "unknown" reality of oneself. The "unknown" portions of the self are as much a part of each individual now as any cell within the physical body. The psychological subconscious simply contains great portions of the individual's own experience that are consciously unknown and with which the person is not at familiar in a conscious way. The subconscious portions of the self deal with a different kind of (psychic) reality than the comprehending ego is used to dealing with, but with which the conscious personality *is* natively equipped to deal, if it is flexible enough. To explore the "unknown" reality of oneself, the individual must venture inward within his or her own psyche. To know the nature of consciousness, each individual must become familiar with the nature of his or her own consciousness. No one can do this for another. It requires a *self*-investigation. In order to be able to do this, however, the person must first give up any ideas he or she may have about the unsavory nature of the unconscious and those spontaneous inner processes that make physical life possible. "Value fulfillment of each and every element in life relies upon those spontaneous processes, and at their source is the basic affirmative love and acceptance of the self, the universe, and life's conditions" (Roberts, 1997a, p. 253).

Learning to give up ideas about the unsavory nature of the subconscious. C. G. Jung, one of the godfathers of transpersonal psychology, came to believe that the subconscious portions of our personality contain more than chaotic, infantile impulses that are not to be trusted, as Freud had claimed (Scotton, 1996). For Jung, the order of nature, the creative drama of our dreams, the precision with which we unconsciously grow from a fetus to an adult without a whit of conscious thought, the existence of mythic themes and heroic quests and ideals that pervade the history of our species, all give evidence of a greater psychic reality within which we have our being. The unconscious is not to be feared but is to be sought as an aid and helper and supporter in solving waking life's problems. Transpersonal writer and channel Seth/Jane Roberts (1976) elaborates on this point:

Our particular kind of individual consciousness is natural and rises from the psyche as easily as leaves grow from trees. The unconscious forms conscious focus; needs it, seeks it out, and operates in the objective world under its auspices. The unconscious is the constant creator of our individuality and not its great usurper; not the dark king ever ready to do us in and set up its own kingdom instead. Without the unconscious, there would be no conscious kingdom to begin with. Such beliefs in the threatening elements of the unconscious make us fear the source of our being and hamper the fuller facets of individuality possible. (pp. 321-322)

It is the unconscious portion of our being that assures the smooth functioning of all of the spontaneous, automatic processes of one's body. The central nervous system, circulatory system, digestive system respiratory system, endocrine system, immune system, and so forth, all operate without the aid of conscious thought, repairing themselves constantly with a precision and purpose and intelligence that surpass our most sophisticated medical technologies. Those spontaneous processes that knew how to grow us from a fetus to an adult provide for our physical and psychological life on a daily basis. They can and must be trusted. It is those inner spontaneous processes that propel our thoughts and that heal our bodies. These very same spontaneous processes "represent the life of the spirit itself" and are responsible for the health of both the physical body and the nonphysical mind (Roberts, 1997a, p. 251).

Learning not to be frightened of ourselves. When people cut themselves off from their inner, transpersonal Self, because of negative beliefs about the nature of the unconscious, then distrust, uncertainty, self-doubt, and fear is generated of one's own inner dynamics. When people view their own thoughts, feelings, and impulses as extravagant, excessive, dangerous, untrustworthy, unreliable, or filled with negative energy, then those individuals can become frightened of themselves and of those impulses that stimulate good health, effective action, bodily movement, expression of emotions, and the discovery of unconscious knowledge. They feel alienated and separated from the source of their being, or else, compensating for these felt lacks, they may see themselves instead as all-powerful to hide inner feelings of powerlessness, fear, and aloneness. Why should the ego be afraid of its own source? Jung understood that we can indeed depend upon seemingly unconscious portions of ourselves. When we do so, we can become more and more consciously aware, bringing into our conscious awareness larger and larger portions of our identity. When the center of the total personality no longer identifies solely with the ego portion of its self- identity, and the conscious mind becomes aware of the existence of the inner transpersonal Self, then the personality can consciously draw upon the Self's greater strength, vitality, and knowledge. Jung once remarked, "One does not become enlightened by imagining figures of light, but by making the darkness conscious" (quoted in Zweig & Abrams, 1991). The personality is not powerless to understand itself nor must the individual compulsively react because of inner conflicts over which he or she has little control. Transpersonal writer and channel Seth/Jane Roberts (1972) reminds us: "The fact is that while you hold limited concepts of your own reality, then you cannot practically take advantage of many abilities that are your own; and while you have a limited concept of the soul, then to some extent you cut yourself off from the source of your own being and creativity (p. 92).

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Figure 5.1

Probable Pasts, Probable Selves, and Probable Realities (Roberts, 1977, pp. 109-110, 179-180; 1979b, p. 324)

- "Take any remembered scene from your own past. Experience it as clearly as possible imaginatively, but with the idea of its probable *extensions*" (Roberts, 1977, p. 109).
- "Choose from your own past a scene in which a choice was involved that was important to you. In such a case, begin imaginatively, following through with the other decision, or decisions that you might have made" (Roberts, 1977, p. 110).
- "Take any incident that happens to you the day you read this page. See the particular chosen even as one that came into your experience from the vast bank of other probable events that could have occurred. Examine the event as you know it. Then try to trace its emergence from the thread of your own past life as you understand it, and project outward in your mind what other events might emerge from that one to become action in your probable future. This exercise has another part: When you have finished the procedure just given, then change your viewpoint; see the event from the standpoint of someone else who is also involved. No matter how private the experience seems, someone else will have a connection with it. See the episode through his or her eyes, then continue with the procedure just given, only using this altered viewpoint" (Roberts, 1977, p. 179)
- "Keep notes for a day or so of all the times you find yourself thinking of probable actions, large or small. In your mind, try to follow 'what might have happened' had you taken the course you did not take. Then imagine what might happen as a result of your chosen decisions" (Roberts, 1979b, p. 324).
- "Take a photograph of yourself and place it before you. The picture can be from the past or the present, but try to see it as a snapshot of a self *poised* in perfect focus, emerging from an underneath dimension in which *other probable pictures could have been taken*. That self, you see, emerges triumphantly, unique and unassailable in its own experience; yet in the features you see before you -- in this stance, posture, expression -- there are also glimmerings, *tintings or shadings*, that are echoes belonging to other probabilities. Try to sense those (Roberts, 1977, pp. 179-180).
- "Now: Take another photograph of yourself at a different age than the first one you chose. Ask yourself simply: 'Am I looking at the same person?' How familiar or how strange is this second photograph? How does it differ from the first one you picked. . . ? What similarities are there that unite both photographs in your mind? What experiences did you *think of following* in one picture that were not followed in the other one? In your mind follow what directions that self would have taken, as you think of such events. If you find a line of development that you now wish you had pursued, but had not, then think deeply about the ways in which those activities could now fit into the framework of your officially accepted life" (Roberts, 1977, p. 180).