

Breathwork: Exploring the Frontier of “Being” and “Doing”

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ABSTRACT: Breathwork is a powerful therapeutic modality. It provides a means to work on several levels: the physical, the emotional/psychological, and the spiritual. It accesses perinatal material (*in utero* and birth experience) and transpersonal material (archetypal, shamanic, and cosmic experience) as well as early childhood and repressed biographical material. Breathwork provides an excellent means of getting past resistance, including *transpersonal defenses*. We explore the connections between breathwork and several other related portals to transpersonal experience, and their relevance to breathwork: the “shamanic state of consciousness” (SSC), hypnosis, out-of-body experiences (OBE), near-death experiences (NDE), lucid dreaming state, the “clairvoyant reality,” hallucinogenic drug states, and hypostimulation or hyperstimulation states. Each generates an increase in primary process thinking, a feeling of acute increased awareness, a lowering of perceptual boundaries, and shares a unique psychobiological signature with the breathwork state, namely high-voltage, slow-wave hippocampal-septal hypersynchrony (HSHH).

We review research on the physiological effects of primal therapy and hyperventilation, and on statebound body memory, as it relates to breathwork. The breath is the frontier meeting ground of opposing, but complementary, internal aspects of an individual: brain laterality, the waking and dream states, the sympathetic/parasympathetic nervous systems (reactive and maintenance), “doing” and just “being.” Breathwork is a powerful means of accessing and healing prenatal and birth trauma, as well as the fear of death and existential “death urge” that may result from that trauma. Breathwork connects people with their spiritual source, promoting “regression in the service of transcendence.”

Introduction

Breathwork is a powerful therapeutic modality. It provides a means to work on several levels: the physical, the emotional/psychological, and the spiritual, straddling the fence between conscious and unconscious activity. We can easily breathe without thinking or being conscious. However, we also can easily consciously control our breath. And the breath is an accurate barometer for the emotional state: by observing our breathing at a given moment in time, we can discover the degree of excitement, fear, anxiety, grief, or calm that we are experiencing.

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On the *physical* level, the breathwork experience actually begins to change the structure and functioning of the body. We bring the breath under conscious control. We begin to understand the subtle energy we are composed of, and learn to manage it for optimal health and growth. We gain conscious influence over many of the processes once believed to be autonomic, such as our sleep cycle, recovery from injury and illness, and the functioning of the immune system. The breathwork process brings us to the cutting edge of decisive moments in our history, often through accessing body memories. Very often those significant moments are intrauterine and birth-related.

On the *emotional/psychological* level we heal the wounds of unresolved trauma, at the deepest of levels, in the developmental state in which they were left unresolved. We are brought to the most intense experience of emotions, from grief and fear to exhilaration and serenity. The emotions may or may not be consciously linked to specific historical events, but they are certainly linked to our deepest core issues.

On the *spiritual* level we often experience a transcendent unity with nature, with life, with God's creatures, and perhaps God's embrace. The process itself requires a surrender of cognitive control, turning the session over to the unconscious body/mind. One of the most common experiences of those who enter into breathwork is a sense of expanding beyond the normal identification with a narrow, too-limited self-concept.

In breathwork we access the unconscious directly, both the higher and lower aspects. The individual's lower unconscious consists of all the psychologically damaging experiences of every developmental age, and includes the collective lower unconscious, what Vaughan (1986) calls the *transpersonal shadow*. This may incorporate past-life and dark entity experiences. The higher unconscious consists of the transpersonal qualities, what Maslow (1968, 1971) calls *peak experiences*. This incorporates spiritual reverie, deep peacefulness and pre-conception experiences.

Serving to repress the lower unconscious are shame, fear, loneliness, unworthiness, pain, abandonment, and spiritual isolation. Because breathwork operates directly through the body on the unconscious, these defenses are rendered less effective than in cognitive, verbal therapy. Serving to repress the higher unconscious are *transpersonal defenses* (Firman & Gila, 1997), mainly the fear of letting go and trusting (surrender). These defenses, incorporated into the body itself as character

armor (Reich, 1942), provide the greatest challenge to the client in breathwork. For the process to be effective, it *requires* one to let go and surrender, physically, emotionally and spiritually. Once the individual begins to breathe, the issue that comes up is letting go of control. And as one continues to breathe, the process begins to take over and the letting go becomes easier.

According to Stanislov Grof (1988, p. 171):

We have been able to confirm repeatedly Wilhelm Reich’s observation that psychological resistances and defenses use the mechanism of restricting the breathing. Respiration has a special position among the physiological functions of the body. . . . Increase of the rate and the depth of breathing typically loosens the psychological defenses and leads to release and emergence of the unconscious (and superconscious) material.

One might view breathwork as “forcing” one to go beyond what Maslow (1971) called *nontranscending self-actualization*, i.e., the level of healing the lower unconscious wounds of shame, fear, unworthiness, and addictions. He described nontranscending self-actualizing people as “more essentially practical, realistic, mundane, capable, and secular people, living more in the here and now world . . . ‘doers’ rather than meditators or contemplators, effective and pragmatic rather than aesthetic, reality-testing and cognitive rather than emotional and experiencing” (p. 281). A further step in that growth process is achieved by overcoming the barriers to the repressed higher unconscious (fear of letting go and surrendering) and embracing it, Maslow’s *transcending self-actualization*. This represents an increasing experience of higher, mystical, and spiritual states of consciousness. Healing the lower but not the higher leads one to become psychologically healthy but not spiritually fulfilled (a nontranscending self-actualizer). Breathwork activates the healing of both the lower and higher unconscious.

There exists also a *middle unconscious*, consisting of contents that are unconscious but not defensively repressed and therefore accessible in our normal functioning. Expanding into this middle unconscious brings to consciousness much more of who we really are.

How Breathwork Works

In breathwork, the person deliberately breathes in a faster-than-normal, deeper-than-normal way, in a cyclical fashion so that there is no pause between breaths, between exhales and inhales. This breathing pattern is

usually referred to as *conscious connected breathing*. The two primary physical effects are to super-oxygenate the body, and to enhance the discharge of toxins from the body. There are three basic types of breathing according to cardiovascular and thoracic surgeon Alan Hymes (1979): diaphragmatic, thoracic, and clavicular. Thoracic, or chest, breathing fills only the middle and upper portion of the lungs. Diaphragmatic breathing is most efficient, because it fills the lower part of the lungs where there is far more blood to receive the oxygen. Clavicular breathing is a way to maximize the intake of air by pulling up the clavicles, or collarbones. Krepack (1980) documented statistically significant differences when he compared thoracic with abdominal breathing patterns on the following factors: self-control, order, endurance, intraception, succorance and personal adjustment. Meister (1988) also found a statistically significant relationship between specific breathing patterns and personality as measured by Eysenck's Extraversion and Neuroticism scales.

The three types of inhalation can be coordinated into one smooth deep breath, with the exhalation accomplished simply through relaxation. This breathing pattern, without pause between exhale and inhale, is therapeutic physically (reducing hypertension) and emotionally (reducing anxiety) (Hymes, 1979, p. 47). Such a breathing pattern balances the sympathetic and parasympathetic systems, whereas chest breathing creates a state of sympathetic nervous system arousal only (Hymes, 1979, p. 50).

There is significant research on the physiological effects of several related experiences. One is primal therapy and another is hyperventilation. Let us first review that data.

Primal therapy

Arthur Janov has researched extensively the process of primal therapy. He defines a primal experience as "a vivid psychophysiological reexperiencing of a painful event from infancy or childhood" (1996, p. 230). It has a biphasic response pattern that starts with an escalating sympathetic nervous system crisis (fight or flight reaction). The vital signs rise to a peak and then fall during a parasympathetic recovery phase, characterized by crying. While Janov draws a clear distinction between a breathwork experience and a primal, we will use some of his research to elucidate parallels between them. Indeed, he recounts a unique "locomotive breathing" (heavy, deep, rapid breathing) which accompanies certain birth or other primal episodes (1996, pp. 225-228). He states that

this breathing pattern, organized deep in the brainstem by the medulla, is triggered by traumatic memory. Our experience is that the process works in reverse as well, i.e., simulating the breathing pattern can trigger the traumatic memories.

The following data about primal patients’ electroencephalogram (EEG) measurements is highly pertinent to understanding the experience in breathwork:

Through our brain maps, we see that the development of and access to the levels of consciousness are represented by variations in specific brainwave patterns and frequencies:

- *Delta waves* are the signature frequency of the brainstem or first-line consciousness. Patients on the verge of first-line pains will suddenly develop long, slow delta brainwave patterns. The patient is wide awake and alert yet is in touch with a level of consciousness ordinarily found only in infancy and deep sleep.
- *Theta waves*, generated by the limbic system or the feeling level, are faster than first-line delta waves. They predominate in children up to the age of six. In our therapy, when patients are near second-line feelings, their EEG shows the appearance of these theta waves, which tells us stored suffering is on the rise.
- *Alpha waves* appear as the third line develops with the maturation of the neocortex or thinking brain, at age twelve or thirteen. At this age, we see the theta waves of second-line consciousness replaced by faster alpha waves. This indicates maturation of the frontal lobes, greater cortical organization, and greater capacity for repression. Alpha is considered the normal frequency range and usually indicates an alert, relaxed state.
- *Beta waves*, faster than alpha, are also emblematic of cortical activity. When the brain is excessively busy, thinking and scheming, obsessing with delusions, then there may be beta-1 and beta-2 activity. Beta-2 betrays a racing mind, the kind that occurs at night when we worry and can’t fall asleep (Janov, 1996, pp. 256-257).

The delta and theta patterns are similar to the shamanic state of consciousness, to be discussed later, and to that exhibited by someone in breathwork. Janov has also demonstrated that along with slowing frequency into the theta or delta range, patients accessing deep levels of unconscious material, “when deep pain bursts through into conscious-awareness” (p. 258), exhibit a sudden increase in EEG amplitude, or voltage. Janov relates the slow frequency, high voltage pattern to uncovering unconscious *pain*, but surely the same pattern would be present for access to any unconscious material, painful or otherwise (for example, collective unconscious, transpersonal, shamanic, spiritual). We shall see that there is evidence for precisely that conclusion. Grof assesses this bias in favor of pain, saying that Janov

lacks any recognition of the transpersonal dimensions of the psyche. Thus, the major dilemma he faces seems to be that the technique he employs is sufficiently powerful not only to take clients into perinatal realms, but also to induce transpersonal phenomena, such as memories of a past incarnation, archetypal sequences, states of possession, and mystical experiences. However, his theoretical system, which is superficial, mechanistic, and antispiritual, does not account for, let alone appreciate, the whole range of experiences that his technique is capable of triggering (Grof, 1985, p. 186).

Hyperventilation

Hyperventilation was used by Wilhelm Reich, with body manipulation, to mobilize the jammed energies and remove blocks to its flow (Grof, 1985, p. 166). Reich termed his therapy *character analysis vegetotherapy*, helping a person to mobilize feeling through deeper, freer breathing (1942). Alexander Lowen developed *Bioenergetics* as a refined implementation of Reich's work, recognizing deep breathing as a crucial ingredient in it. "Only through breathing deeply and fully can one summon the energy for a more spirited and spiritual life" (Lowen, 1975, p. 66). Grof himself began to use it as a means of inducing altered states of consciousness when LSD was no longer legal for clinical research and treatment. He noticed the activating effect on the unconscious of fast breathing, and its promise as a technique for self-exploration and healing. He observed also its power to open very quickly the transcendental experiential domain, considering it primarily a spiritual procedure. Leonard Orr and Sondra Ray (1977) popularized the technique as *rebirthing*.

Grof noted that as clients breathed intensely for up to an hour, tensions in their body tended to collect in a uniquely individual pattern of muscular armoring, and eventually to release as the hyperventilation continued. The bands of constriction that develop tended to occur approximately at the chakra energy centers: in the forehead or the eyes, the throat, chest, navel, and lower abdomen. Frequently, the final outcome is a deep mystical state. These observations led him to reject the medical model of "hyperventilation syndrome" as an alarming physiological trauma, recognizing that the set and setting of the experience largely determines the outcome (Grof, 1985, pp. 387-390).

Hyperventilation syndrome is defined in the medical literature as rapid deep breathing, leading to low CO₂ levels in the patient's blood within 10 minutes of intense hyperventilation. Increased oxygen intake and increased expellation of CO₂ lead to increased blood alkalinity (Lum, 1987). Hyperventilation results in some or all of the following physiological and metabolic changes: slowing of electroencephalogram (EEG) patterns, changes in the balance of electrolytes in the body, numbness (parasthesis)

of the limbs, carpal (hand) spasms, increased pulse rate with unchanged arterial blood pressure, feelings of lightheadedness, and sensations of unreality (Saltzman, et al, 1963). Okel and Hurst (1961) reported all participants in their hyperventilation study experienced some degree of: euphoria, numbness, giddiness, tingling, a sense of unreality, and difficulties in concentrating. Hallucination is another common experience (Allen and Agus, 1968), as is relaxation and drowsiness (Patel & Maulsby, 1987).

The lower CO₂ levels and higher pH levels in the blood create a shift in the electrolytes in the brain, which has a destabilizing effect on the central, peripheral, and autonomic nervous systems. “These biochemical changes may account for the feelings of unreality, giddiness, mood swings of euphoria, apathy and depression, numbness, concentration difficulties, peripheral tetany, twitches and tremors reported by participants in medical studies of hyperventilation and by participants in Holotropic Breathwork” (La Flamme, 1994, p. 22). Another explanation is offered by neurologists Patel and Maulsby (1987) in light of the dramatic slowing of brain waves, namely an increase in theta waves of up to 7 fold and in delta waves of up to 12 fold (Zwiener, et al, 1998). They proposed that this slowing EEG pattern and the attendant behavioral changes activated by hyperventilation are analogous to the brain's transition between wakefulness and sleep. The disturbance of consciousness correlates with the degree of slowing in the EEG.

Breathwork does not lead to “hyperventilation syndrome.” In hyperventilation syndrome, the lowered CO₂ levels of blood circulating in the brain stem cause partial pressure so low that it is below the threshold for stimulation of the inspiration center located in the brain stem. The person waits to breathe in until the partial pressure of CO₂ in the blood accumulates and passes the threshold value, triggering an inhale. In the circular breathing pattern, the person inhales immediately without pause, without waiting for the brain stem to trigger the response, thus avoiding the “hyperventilation syndrome” negative effects (Jones, 1983).

The EEG results of hyperventilation classically show changes to high-voltage, slow-wave frequency in the range of 2 to 4 cycles per second (delta wave frequency) (Gotoh, et al, 1965; Saltzman, et al, 1963). This EEG pattern reflects the dominance of the parasympathetic nervous system, the same as found in certain trance states. Winkelman (1986) postulated that the shamanic journeying state of consciousness (SSC) is “a state of parasympathetic dominance in which the frontal cortex is

dominated by slow wave patterns originating in the limbic system and related projects in the frontal parts of the brain” (p. 49). He suggests that various procedures can induce this neurophysiological change, replacing the normal sympathetic dominance and desynchronized fast-wave activity of the cerebral cortex, with a parasympathetic dominance consisting of cortical synchronization and high-voltage slow-wave EEG activity coming from the hippocampal-septal area (HSHH). Shannahoff-Khalsa (1991) has developed research evidence linking peaks of immune function, regeneration, and healing with the increased parasympathetic state of right brain dominance (p. 242). Conscious connected breathing, similarly to hyperventilation, is one procedure that activates the parasympathetic system.

Curiously, hyperventilation also activates the sympathetic nervous system, as denoted by the increase in pulse. Such an activation has been shown to cause increased emotionality (Schachter and Singer, 1964).

Various styles of breathwork can be compared along a spectrum of breathing to relieve stress and induce calm at one end, and breathing to prompt a therapeutic catharsis and emotional release at the other. Some forms of breathwork provide more stimulation than others, e.g., Holotropic Breathwork introduces music as a catalyst to access deep emotion and unconscious or transpersonal material, while other forms introduce no external stimuli. Research has documented the powerful role of music, both exciting music and calming music, in evoking primary process mentation (Sand & Levin, 1997). A second factor for comparing various breathwork methods is the degree of direction provided by the facilitator. At one end of the spectrum the facilitator provides virtually no direction or input, but focuses on holding the shared space as safe and sacred. At the other end of the spectrum the facilitator offers verbal interpretation and physical resistance or bodywork, suggests ways of accessing and releasing suppressed emotion, and actively coaches the person on what to do.

Breath: The Frontier of “Being” and “Doing”

The breath is the frontier meeting ground of two opposing, but complementary, internal aspects of oneself. The two aspects are rationality and emotionality, activation and rest, “doing” and “being.” The breathwork process serves to balance the extremes of the continuum.

Brain laterality

There are two hemispheres of the brain, the left engaged in linear rational thinking and the right in relational expansive thought. Significant research has documented that the left and right sides of the cerebral cortex of the brain involve analysis versus synthesis, single channel versus holistic, and sequential versus spacial processing (Dimond, 1972; Dimond & Beaumont, 1974; Galin, 1974; Galin & Ornstein, 1972; Goodglass & Calderone, 1977). Many tasks involve collaboration between both hemispheres. For example, in listening to music the left hemisphere processes language used, and the right hemisphere processes the aesthetic qualities and intonations of speech (Bever & Chiarello, 1974; Clynes, 1982). Individuals differ regarding the degree of specialization of brain hemisphere processing. Females and people with dominant left eye and/or handedness are less well-differentiated in left versus right brain functioning than males or the right-handed (LaFlamme, 1994, p. 59). Certain experiential therapy processes tend to increase the communication between hemispheres across the corpus callosum membrane separating them (Feher, 1973), increasing the alpha brain wave pattern, and increasing in turn hypnotic responsiveness. Transition from a normal to an altered state of consciousness, e.g. hypnosis, facilitates right hemisphere functioning while decreasing left hemisphere cognitive processing (Frumkin, et al, 1978).

The right hemisphere has been shown to be dominant in visual-spacial processing (Risberg, et al, 1975; Robbins & McAdam, 1974), and to be dominant in the mediation of emotion (Dimond, et al, 1976; Fenwick, 1984, 1987; Schwartz, et al, 1975). Fenwick proposes the right temporal lobe as being particularly concerned in the mediation of mystical or ecstatic experiences (McCreery & Claridge, 1996).

The sympathetic and parasympathetic nervous systems

Another duality exists within the nervous system, both regulated by the hypothalamus: the sympathetic and parasympathetic systems. The first, incorporating the ergodynamic or argotrophic system, is responsible for sexuality, work, and creativity, and is related to *doing*. It determines vigilance, alarms, alerts, mobilizes, and initiates impulsive behavior. The second, incorporating the endophylactic-tropic or trophotropic system, is responsible for restoration and maintenance of body organs, and is related to creating and maintaining energy, or *being*. It lowers the vital signs, slows movement, initiates feelings, and is dominant in deep sleep or in

recovery from the stress response (Janov, 1983; Mindell, 1998). Some people have habitually suppressed the parasympathetic “antidote” to the stress hormones, and are nearly always in an activated stress state. The type “A” personality pattern has become involuntary for them, and may lead to various stress-related illnesses or anxiety-related symptoms. This is the posttraumatic stress response (PTSD).

Humans have the autonomic response, the nervous system functioning independent of consciousness, and the voluntary nervous system, which is readily controlled by the conscious mind. The autonomic system is important to growth and healing, because some of our psychological problems have become embedded in this involuntary level of body functioning. Prolonged anxieties and fears create chronic cardiopulmonary disease. Insidious or toxic shame depresses the immune system (Janov, 1996). Addictions, which begin as voluntary nervous system “self-mediations,” eventually come to affect the body on the involuntary level. Thus psychological problems become somaticized out of the voluntary control of the conscious mind.

Dr. J. Allan Hobson, a psychiatrist and leading brain researcher from Harvard Medical School, refers to the autonomic processes as “bottom-up” and the voluntary processes as “top-down” (1994). For example, in a car accident, signals from the brain stem (motor patterns) precede those from the frontal cortex (thought); one reacts instantly by braking the car before having time to consciously decide upon a course of action. A startle response or orienting response is an example of bottom-up processing, occurring automatically before we have time to think about and initiate action. Top-down processes are those that begin with a conscious thought that initiates a volitional action.

The waking state and the dream state

Another set of opposing but complementary aspects of the human being is the waking state and the dream state. There is a stark difference in the degree of volitional control available in these two states, and in the rational/relational mix. The dream state is characterized by low-voltage, high-frequency EEG waves which originate in the brain stem and extend through the limbic system to the right hemisphere of the neocortex. Both hemispheres are capable of inhibiting communication from the limbic system, creating dissociation or repression (Henry and Stephens, 1977).

The brain’s chemical system that mediates our waking state is called the aminergic system. The molecules that do the work are amines. The chemical system that mediates dreaming is called the cholinergic system. Its molecule is acetylcholine. The two chemical systems are in dynamic equilibrium. This means - as we already know - that our conscious states fluctuate constantly and gradually between the extremes of waking and dreaming. Even at the extremes, both the aminergic (waking) and the cholinergic (dreaming) systems are active. Their predominance is only relative, not absolute. Thus, the two extreme states have shared as well as differentiated properties, at both the cellular-molecular and the experiential levels. Between the extremes is a rich continuum of aminergic-cholinergic interactions and an equally rich continuum of brain-mind states.

Some of the most interesting points along the continuum, such as fantasy, hypnosis, and meditation, have already begun to be elucidated in terms of the unified brain-mind state theory (Hobson, 1994, pp. 14-15).

Neurological research documents this third state, distinct from sleep or wakefulness. This *hypnoidal* state is characterized by synchronization between hemispheres and persisting alpha waves (Barolin, 1982). The state induced by breathwork falls into the same area along that continuum as fantasy, hypnosis, meditation, and the lucid dream state. Indeed, the neurological research on hyperventilation already discussed (Patel and Maulsby, 1987) locates it in this transitional state between wakefulness and sleep. Research on the lucid dream state, wherein one is conscious of being in the unconscious dream state, provides a model for examining this state. It is “on the knife’s edge between REM sleep and waking. If I push the system too hard, I will wake up. If I let up a bit, I will become reabsorbed in the dream” (Hobson, 1994, p. 173). In breathwork, it is the conscious breath that regulates the balance between normal waking consciousness and unconsciousness.

Hypnosis, breath-induced trance, and meditation resemble the lucid dream state. In the hypnotic or meditative state we are capable of sending a top-down signal from the cortex (for example, dissociate from a physical sensation of pain) to override a bottom-up pain signal from the brain stem. In these states we have an increased capacity for highly selective dissociation, or splitting mental focus into foreground and background. We can experience an age-regression to infancy in our mental foreground, for example, while retaining enough conscious mental background to put the experience into words. In meditation we are capable of “tuning out” the extraneous environment while diligently observing each thought pass through the mind. In breath-induced trance, we can experience a diffuse, timeless, oceanic, expansive state while paying close attention to consciously breathing in a non-automatic pattern.

Weitzenhoffer (1978) reported that subjects identified what was different for them in a hypnotic versus a non-hypnotic state in terms of a state of “effortless concentrated attention” in which their minds were free of extraneous material, allowing a selective experiencing of only what was pertinent to the situation, even “concentrated attention on nothing.” The effortless nature of the experience is associated with alpha brain wave activity (Fehmi, 1978). Highly hypnotically responsive subjects tend to have high resting alpha EEG patterns, in the range of 7 to 13 HZ (Bakan and Svorad, 1969).

Several characteristics accompany the frontier state, that of dream, breath-induced trance, fantasy, hypnosis, and meditation states. The source of information for brain processing shifts from primarily external to internal. Therefore, the experience becomes one of **projection** (Hobson, 1994, p. 70). This phenomenon also accounts for **confused orientation**, that is uncertainty about who we are, where we are, and the relevant time factors (Hobson, 1994, p. 85). Another characteristic is **overinclusiveness**, or **hyperassociation**, that is the brain’s “associative rules are so loosened that almost anything fits into a dream scenario” (Hobson, 1994, p. 91). The brain’s reference files are more wide open than is permitted in the waking state. Note the similarity between this dream state feature and the expansive “wide angle lens” aspect of hypnosis (Zimberoff & Hartman, 1998a, p. 25). **Will** (volition) and **attention** both fade in the dream state as the activation level of the cortex falls.

In breathwork, we encounter these aspects of mind very directly. The left brain, voluntary ergodynamic system manifests as the inner dialogue that distracts one into thoughts of worry, plans, desire, fantasy, boredom, obsession, etc. The right brain, involuntary endophylactic-tropic system brings to awareness whatever blocks exist to the free flow of energy, and the expansive out-of-body experience that follows surmounting these blocks. The highest aspects of us, the shaman, hero, and warrior, are brought face-to-face to battle with the ego-identity, the inertia to normality, and our shadow aspects. A repression barrier operates to keep these identities out of awareness, separated from the whole Self, protecting the self-interests of the ego (the limited identity). Serving to repress the lower unconscious are shame, fear, loneliness, unworthiness, pain, abandonment, and spiritual isolation. Serving to repress the higher unconscious are *transpersonal defenses*, mainly the fear of letting go and trusting (surrender). Both higher unconscious defenses and lower unconscious defenses serve to maintain the split. We experience the age-old struggle of

the seeker to overcome the compulsion to “do” and just “be,” to balance obsession with distraction, focused consciousness with wide angle consciousness.

The bimodal structure of consciousness

Arthur Deikman (1971) has proposed a *bimodal* structure of consciousness to distinguish the psychic duality of engaged activity (active mode) and open receptivity (receptive mode). The distinction between the two is based on functional orientation (acting on the environment versus taking it in). In the former, the ego is centered in itself and asserts itself as autonomous and self-controlled. It is a state organized to manipulate the environment, and physiologically the sympathetic nervous system and the striate muscle system are dominant. The EEG shows beta waves and desynchronization. The principal psychological traits are focal attention, object-based logic, heightened boundary perception (clear self-object differentiation and sharp conceptual boundary distinctions), and orientation toward achieving personal goals. The dominant mode is striving. The time dimension is the *Future*, sacrificing the present in the effortful creation of something better.

The receptive mode is a state organized around intake of the environment rather than manipulation of it. Dominant physiological systems are the sensory-perceptual and the parasympathetic. The EEG tends toward synchronization and alpha frequencies, and psychological attributes are diffuse attending, paralogical thought processes, and decreased boundary perception. The dominant mode is aimed at maximizing the intake of the environment as nutriment. The ego yields to experience, letting go and opening up to influences and experiences that do not conform to its normal ego functions, surrendering to the role of being part of something greater. The time dimension is the *Now*, recognizing that the future contains nothing intrinsically more valuable or satisfying than what is contained in the present. The receptive mode is not necessarily passive; for example, when one cannot recall a name it is common to stop trying and say, “It will come to me in a moment,” and it does. What could not be accomplished by direct effort is accomplished by relinquishing effort and becoming receptive.

Modern cultures tend to regard the action mode as the proper one for adult life, and consider receptive states as pathological and regressive. In contrast, altered states such as sensory deprivation, hypnosis, meditation, lucid dreaming, psychedelic drug experiences, and shamanic states are

more oriented to taking in the environment than to acting on it, and therefore feature the fluid boundaries and physical and psychological relaxation associated with the receptive mode. Other features of these states are heightened sensory vividness, timelessness, exultation, strong affect, animation of the inanimate, decrease in self-object distinction, loss of control over attention, dominance of paralogical thought patterns, increased parasympathetic stimulation, and a sense of expanded awareness. The general effect of undoing the automatic, habituated psychological structures that organize, limit, select, and interpret perceptual stimuli is called “deautomatization” (Gill & Brenman, 1959; Deikman, 1966). These states all incorporate variations on the sensory-perceptive experience of “being.”

An interesting connection exists between the process of “deautomatization” and the high-voltage, slow-wave hippocampal-septal hypersynchrony (HSHH) found in mystical, ecstatic, and spiritual experiences. Neurophysiologically, the hippocampal-septal system evaluates the meaning of incoming stimuli, comparing them with previously stored information, and decides whether to pass the news on to conscious mental processing (active mode). Once the categorization is complete and the decision on importance is made, however, the hippocampal-septal system disengages from any active control of behavior (receptive mode) (Schachter, 1990).

The active and receptive modes of operating are not necessarily mutually exclusive. In the altered states discussed previously, we can experience both integrated to varying degrees. The characteristics of the experience of mixed modes depend on the extent of dominance of one or the other. One might experience gardening actively, “working” in the garden, or receptively, “playing” in the garden. Michael Washburn (1995) suggests that we are, in fact, forming and dissolving a whole sequence of “transition selves” on the way to realizing a pure state of receptivity, selflessness and surrender to ultimate unity (p. 44).

Another formulation, based on orientation rather than function, of the same dual structure is the psychoanalytic concept of *primary* and *secondary process*. Typical primary process mental organization includes condensation, displacement, symbolization and representation in visual or auditory imagery. It is primitive and akin to pre-verbal child mentation. Condensation is the representation of more than one element of unconscious material by a single detail, related to the process of overinclusiveness. Displacement is the substitution of an affective reaction

from the actual cause to something else. Freud saw it as a neurotic mechanism, as in displacing anger at one’s father onto something less threatening, e.g., an animal. It could as easily be recognizing, and reacting to, synchronous causes not correlated in the rational secondary process. Symbolizing in images is fundamental to any communication by and with the unconscious, e.g., in dreams. Secondary process (later termed the reality principle by Freud) is conscious activity, guided by rationality and objective reality.

The Jungian perspective on this duality is the distinction between self and ego: self is the “being” mode, represents the feminine principle, and functions according to primary process; the ego represents “doing,” the masculine principle, and functions under secondary process (Weisstub, 1997). The process of mutual recognition and balanced participation between conscious and unconscious ways of operating leads to what Jung called the “transcendent function” (1958), which in turn leads to the goal of self-actualization, “individuation.”

I. M. Blanco, Chilean psychoanalyst, postulates the existence of two kinds of logic: asymmetry (the logic ruled by the laws of Aristotle and akin to the secondary process) and symmetry (akin to the primary process and ruled by the principles of generalization and symmetry). Both logics exist simultaneously in consciousness and the unconscious, creating the potential of a hybrid bi-logic when both are allowed to operate together (Fink, 1994). Such a confluence of the two produces creativity, insight, and a sense of wonder and awe.

Erika Fromm (French & Fromm, 1964; Fromm, 1977) considered therapeutic change, *creative change* as she termed it, to center on the shift from secondary to primary-process thinking. Rather than denigrating the primary process as Freud did, seeing only the negative aspects of hedonism, displacement, obsession on immediate gratification, and condensation, Fromm viewed the process as highly contributory to aesthetic growth (Eisen, 1990). In other words, “one cannot overlook advances in neuroscience that further the premise that the human brain operates with *parallel* processes of cognition loosely associated with the faculties of each cerebral hemisphere” [emphasis added] as opposed to “a dual (and dueling) cognition” (Fox, 1995, p. 798). Indeed, research (Shevrin, 1973) shows that stimulus content is processed and stored in two memory banks, one organized on the basis of secondary-process thinking and the other organized on the basis of primary-process thinking. Subsequently, the individual draws upon one memory bank or the other

depending on the current state of consciousness. Primary-process thinking is not easily accessible in the usual alert, conscious, waking state; it is more readily accessed in the REM sleep state, or other states on “the knife’s edge between REM sleep and waking,” such as fantasy, breath-induced trance, hypnosis, meditation, and the lucid dream state.

The phenomenon of choosing to enter a state of heightened sensitivity to preconscious and unconscious materials, to the primary process, has been called “regression in the service of the ego” (Kris, 1952), “adaptive regression” (Hartmann, 1958) or “regression in the service of transcendence” (Washburn, 1995). Anthropologist Bourguignon (1965) observed the pattern in Haitian trance rituals, where participants enter a regressive state which gives access and expression to repressed thoughts, feelings and desires. The experience is cathartic and leads to artistic inspiration and creative integration. She calls it “dissociation in the service of the self.” The idea common to each of these formulations is that of taking a step backwards from secondary process to primary process in order to move two steps ahead in transpersonal, spiritual or transcendent experience. An example pointed out by Fromm (1977) is the inspirational phase of creative thinking, characterized by ego receptivity rather than ego activity.

As we move on to discuss healing birth trauma, it is highly relevant to note that if experience is to be translated into long-term memory, i.e. to become incorporated, then the hippocampus must be engaged at the time of learning (Ademec & Stark-Ademec, 1987). Since the hippocampus does not fully mature until the third or fourth year of life, only the *quality* of early experiences, but not their *context*, can be remembered. These memories are organized on a somatosensory level, as somatic sensations (body memories), behavioral re-enactments, nightmares, and flashbacks (O’Keefe & Nadel, 1978). Later in life, severe or prolonged stress can suppress hippocampal functioning and similarly create memory dominated by affective experience with little capacity for categorization (Gray, 1982; Nadel & Zola-Morgan, 1984; Sapolsky, et al, 1984). The experiences of early life or of traumatic moments are not recorded as conscious, explicit memories but rather as visceral and emotional reactions, termed the “taxon” system by Jacobs and Nadel (1985). “The task of therapy with people who have stored terrifying information on a visceral level is to help them remember the fragments stored in the taxon system and recategorize them in the ways that ordinary memories are stored, by attaching context and meaning” (van der Kolk, 1993, p. 232). The first task, of course, is to

access the visceral memories, and breathwork is highly effective in doing so.

Another physiological explanation of the need for non-verbal means to access these early experiences regards the corpus callosum, the membrane which links the two hemispheres of the brain. The hemispheres are not connected at birth, but around the age of eighteen months the callosum membrane begins to form. The connection is complete by age seven, and verbal ability becomes more concentrated on the left side while non-verbal events are separated and integrated on the right. Events before age seven, traumatic or mundane, were not registered verbally for recall. Rather, a complete gestalt of kinesthetic and visceral experience is needed to effectively recall them (Feher, 1980).

Breathwork and Related Altered States of Consciousness

Studying several altered states of consciousness can provide helpful perspectives on the breathwork state. We will look briefly at those of the “shamanic state of consciousness” (SSC), hypnosis, out-of-body experiences (OBE), near-death experiences (NDE), lucid dreaming state, the “clairvoyant reality” described by LeShan (1975), hallucinogenic drug states, and hypostimulation or hyperstimulation states. In each of them, the subject experiences an increase in primary process thinking, a feeling of acute increased awareness, a lowering of perceptual boundaries, and a greater contact with inner states. They are each portals to transpersonal experience (Grof, 1985).

Shamanic Journey

In shamanism, the altered states of consciousness the healer goes through are symbolized as journeys into the lower world or to the upper world. During these journeys, the shaman obtains necessary knowledge or retrieves something valuable and brings it back to this world (the middle world provides access to both the lower and the upper). The shaman travels down into the profound depths of hidden reality, the lower world, or the realm of the lower unconscious. Or he/she may journey up through layers of reality to a perspective of great lucidity, exhilaration, clairvoyant perception, and prophetic visions, the upper world, the realm of the higher unconscious. Importantly, the shaman stays awake and conscious for the journey, adroitly balancing the altered state of consciousness necessary for the journey with a continued conscious awareness (Harner, 1990, pp. 20-

39). One cannot dwell only in the non-ordinary reality without becoming lost, which we call psychosis or autism. “Understood in psychological terms, the shaman must have a firmly developed ego if he or she is to be able to tolerate and survive the numinous and sometimes chaotic power of the collective unconscious, and not get swallowed by it” (Smith, 1997, p. 157).

A breathwork session can be conceptualized as a shamanic journey. Breathwork connects one, as we have already seen, to both the lower unconscious (lower world) and higher unconscious (upper world). Maintaining a dual awareness of the here-and-now reality and the transpersonal experience allows insights into life patterns to be formulated and retained for later use in changing one's behavior.

The shamanic journey or the breathwork session can be characterized as the hero journey discussed by Joseph Campbell (1970). He observed that the hero journey consists of three stages: 1) separation, 2) initiation, and 3) return with the boon. The first stage represents a separation from normal ego-consciousness, entry into the altered state or non-ordinary reality. The second stage is a period of learning and discovery of the mysteries and sacred power, initiation into the insights of transpersonal experience, undergoing a metaphoric death and rebirth. The third stage is the return to ordinary reality, bringing back the boons of insight, increased consciousness, wisdom, and healing power. The third stage offers the opportunity to put to practical use what was obtained on the journey for oneself, and in the case of heroes and shamans, for others in the community.

The shamanic progression takes place similarly in three stages: The stages begin with 1) increasing discomfort and anxiety, which 2) climax in an ecstatic luminescence of insight, and 3) are followed by long periods of saintliness (Mandell, 1980). This pattern is similar to that referenced in accounts of religious ecstasy and conversion (Silverman, 1967) and near-death experiences, which frequently result in increases in spirituality, concern for others, and appreciation for life, and decreases in fear of death, materialism, and competitiveness (see section on near-death experience for reference citations). Experienced breathworkers will observe a close parallel to their experience with this pattern.

UCLA anthropologists Peters and Price-Williams (1980, p. 407) propose that shamanic trance states during ritual performances are similar to certain psychotherapeutic techniques. They refer to “waking dream” therapeutic techniques (Watkins, 1976), such as Jung's (1958) “active

imagination,” Desoille's (1966) “directed daydreams,” and Leuner's (1969) “guided affective imagery.” We will expand on some interesting parallels between the “shamanic state of consciousness” (SSC) and the breathwork state of consciousness; however, we do not mean to equate the two states. One important difference lies in the purpose of each. An essential aspect of the shamanic experience is a state of communication with the spirit world *on behalf of* the community or its members (Eliade, 1958). Part of the definition of shaman proposed by Hultkrantz (1968, p. 33) requires that the shaman “is the intermediary between the human group and the supernaturals.” The individual entering into breathwork, on the other hand, does so for personal reasons alone.

The SSC and breathwork both fit the definition of transpersonal experience, which Grof (1993) separates into four levels. The first level involves an expansion of spacial consciousness in which inanimate objects become interactive. The second involves an expansion of linear time in which the past is experienced with all the sensory clarity of the present. The third level involves a mythological, archetypal reality. And the fourth level of transpersonal experience involves phenomena which merge matter and consciousness.

The shamanic state of consciousness (SSC) represents a discrete altered state of consciousness following Charles Tart's categorizations, and is a “dream-like state, somewhere between sleep and wakefulness” (Achterberg, 1985, p. 23). Risse (1972) describes the state as making the inner experience of sensory memories dominant over rationality. “He reviews his subconscious flow of pictures without the use of the critical powers activated by consciousness as well as the grid of causality, time, and space” (p. 22). This point of view is supported by cross cultural research by Peters and Price-Williams in which they studied shamanic practices in forty-two cultures and concluded that shamanic ecstasy is a specific type of altered state (1980, pp. 398-418). They have suggested that many altered states share underlying physiological and psychological structures, although they may be different on the surface reflecting individual and cultural variation (1983). They linked the SSC with psychological rites of passage, catharsis, meditation, deep hypnosis, “waking dreams” and the experience of Kundalini energy ascending through the chakras. Breathwork belongs in this list, sharing the same physiological and psychological structure.

Mandell (1980) discusses the physiology of transcendence, suggesting that a variety of altered states, including mystical, ecstatic, and spiritual

experiences, may be manifestations of a brain-wave pattern featuring high-voltage, slow-wave hippocampal-septal hypersynchrony (HSHH) that lasts for long periods of afterdischarge. Winkelman (1986) also verifies that the SSC is a state of parasympathetic dominance featuring the HSHH pattern. The increased slow-wave activity consists of alpha, theta and delta waves (Schuman, 1980). The subjective experience of theta-wave production is described as peaceful and pleasant, awake and self-aware (Hebert & Lehmann, 1977), reverie filled with rich imagery, and a period in which unconscious material is brought to consciousness.

Alpha rhythm is the classical EEG correlate for a state of relaxed wakefulness, also described as relaxed vigilance. Indeed, emotional tension attenuates or blocks the alpha rhythm. Theta activity is associated with emotional processes and indicates relative maturity of the mechanisms linking the cortex, the thalamus, and the hypothalamus; theta rhythm also occurs during a state of maximal awareness. Apparently, an alpha wave pattern is most conducive to creativity and to the assimilation of new concepts, while the theta response seems to be a stage at which the mind is capable of deep insights and intuition. (Wallace, et al, 1971, p. 799)

Mandell (1980) notes that this HSHH pattern is associated with optimal cognitive conditions for many thought processes, and is generally associated with the conviction of insight and a deeper perception of reality. It also correlates with reintegration after transpersonal crisis and continuing mental and physical health (Wright, 1995). Additionally, due to the afterdischarge effect noted by Mandell, this pattern progressively increases the body's tolerance for higher levels of energy. Psychologist Gay Hendricks asserts the same effect from breathwork. "Conscious breathing actually retrains your nervous system to tolerate a higher charge of energy" (1995, p. 27).

Drumming or chanting has been shown to increase the right-left synchrony and theta wave production. This explains the enhancing effect of drumming on the shamanic state, and of appropriate music on the breathwork state (incorporated in Holotropic Breathwork).

Helmut Wautischer enumerates five common methodologies for initiating these HSHH physiological changes in one's body: concentration, imagination, breathing, relaxation, and observation. He indicates that "breathing techniques to regulate the oxygen level of the blood system are especially important for increased sensitivity" (1989, p. 40).

Wright (1989, p. 32) attributes a number of positive personality characteristics with these high-voltage, slow-wave hypersynchronous discharges from the hippocampal-septal area, namely, optimal conditions

for energy, learning, memory, and attention, emotional deepening, and feelings of well-being, as well as spiritual involvement. Harvard psychiatry professor John Mack states that breathwork similarly induces profound psychic experiences beyond familiar conscious and unconscious material. “The collective unconscious that is often largely a theoretical construct in Jung’s theories becomes a living reality in breathwork experiences” (Mack, 1993, p. 364).

Nicholson (1988) notes that shamanic healing can be conceptualized as *removing* something inappropriate, an excess, an attached energy, a blockage, and secondly *restoring* something, balance, power, or soul. This reminds us of the importance of releasing negative emotional blocks along with experiencing the positive, of doing the lower chakra work in addition to the higher spiritual work. Breathwork, again, facilitates both.

Hypnosis

Hypnosis is a method of relaxation and concentration that provides access to a unique state of consciousness. This state is characterized by increased primary process thinking, suggestibility (heightened ego receptivity), and dissociation of the observing ego functions from the experiencing ego functions. There is vacillation between ego receptivity and ego activity, with emotional learning taking place during the ego receptivity and insight during the ego activity. The ego activity vacillates between highly focused attention-cathexis and diffuse, free-floating overinclusive attention. The ability to go back and forth on the continua between the unconscious and the conscious is what creates the advantage of altered-state over waking-state therapy. There is greater mobility, a greater ability to dip into the unconscious and to bring the unconscious material back into the waking state of consciousness (Fromm, 1977).

Another phenomenon easily observed in hypnosis that relates to other altered states as well is that of two aspects of the personality. One readily enters a hypnotic state of suggestive, primary process, and the other, the observing ego, remains un hypnotized and functions “normally.” Hilgard (1978) refers to the “hidden observer.” Schilder and Kaunders (1956) define the depth of hypnotic trance according to the extent to which the un hypnotized aspect freely partakes with the hypnotized aspect. In the most profoundly deep trance, the observing ego relinquishes its monitoring function totally, creating what is called a *revivification* experience. However, insight requires some part of the ego to record and observe the imaginal, primary process.

Hypnosis facilitates greater participation of the right cerebral hemisphere in cognition while decreasing the participation of the left (Frumkin, et al, 1978). This type of cognition is independent of normal rules of causality, uses nonverbal image representation (Galín, 1974), and is a means to directly access the unconscious (Shor, 1972).

Out-of-body experiences (OBE)

The incidence of out-of-body experiences is between 8% and 24% of the general population, and is most often described as pleasant, with feelings of calmness, peace, and quiet (Olson, 1987). Those who have had the experience generally feel it has changed their life (Gabbard, 1984). One study by Charles Tart (1968) has shown that during an out-of-body experience, the brain's alpha activity is 1 ½ cycles per second slower than the subject's normal alpha. The absence of REM (rapid eye movements) indicates that it is not a dream state. Tart reported that such a state had never been described in the sleep literature, that it was not any known stage of sleep, not a Stage 1 (drowsy) pattern, and not a waking pattern. Further research documented a preponderance of theta brain waves in the OBE subject preceding the experience (Rogo, 1983). These OBE states resemble mystical or meditative states, with extremes of emotional detachment and elation, where extreme muscular relaxation co-exists with relatively high cortical arousal (McCreery & Claridge, 1996). The breathwork state, too, combines muscular relaxation with high cortical arousal.

Near-death experiences (NDE)

Near-death experiences have been carefully documented and studied for many years. It is reported by at least one-third of people who come close to death, and it is generally estimated that 5% of the American population have had the experience (Ring, 1980; Sabom, 1982; Gallup & Proctor, 1982). According to Greyson (1996), "Typical aftereffects [of the NDE experience], reported by many independent researchers, include increases in spirituality, concern for others, and appreciation for life, and decreases in fear of death, materialism, and competitiveness (Sabom, 1982; Atwater, 1988; Bauer, 1985; Flynn, 1986; Grey, 1985; Greyson, 1983; Noyes, 1980; Ring, 1984)." Interestingly, research documents these same aftereffects to be common following breathwork experiences (Pressman, 1994).

Near-death experiences can be grouped into four component categories: cognitive, affective, paranormal, and transcendental (Greyson,

1993). The cognitive component relates to changes in thought process: distortion of one's sense of time, acceleration of thoughts, panoramic life review, and sense of sudden understanding. The affective component relates to changes in emotional state: feelings of overwhelming peace, painlessness, well-being, joy, and cosmic unity, and an apparent encounter with a loving being of light. The paranormal component relates to psychic phenomena: hyperacute physical senses, apparent extrasensory perception and precognitive visions, and a sense of being out of the body. The transcendental component includes: apparent travel to an unearthly realm and encounters with mystical beings, visible spirits of deceased or religious figures, and a barrier beyond which one cannot return to earthly life.

The affective and transcendental components of near-death experiences are strongly associated with the willingness to surrender to the process of dying and to the possibility of death (Greyson, 1993). The relinquishing of control by the ego, a rehearsal of sorts, may account for the beneficial therapeutic effects of the experience. The same process may well apply to the experience of death in a past-life regression or other transpersonal setting. A clear distinction must be drawn between this “surrender of the ego” experience in the face of death (or simulated death), with the attendant new appreciation for life and decrease in fear of death, and the encounter with death of the fetus in the birth process. That encounter threatens to stop the process that the fetus is totally engrossed in and committed to, namely, emerging triumphantly alive. It becomes an imprint of terrible proportions, and of lasting influence on the individual's life. We investigate the “death urge” in a later section of this article.

Lucid dreaming state

Many people have experienced a lucid dream state at least once. Lucid dreams are dreams in which one exerts conscious control over the dream contents, and the dreamer is aware of existing simultaneously in the dreamworld as well as consensus reality (asleep in bed). The state incorporates vivid imagery in a state of high cortical arousal with a non-rational dissociated sense of out-of-body. Brain function lateralization during lucid dreams is task dependent: the right hemisphere is more activated than the left during a non-rational dreamed activity, such as singing; during a cognitive dreamed activity, such as counting, the reverse is true. These shifts are much more like the effects of real events than like those produced by waking imagery (LaBerge & Dement, 1982). Because dream activities produce real physiological effects, lucid dreaming may be

useful for facilitating healing as an extremely potent form of mental imagery.

Clairvoyant reality

Lawrence LeShan, a well known researcher on shamanism, denotes the state achieved by shamans and others as “clairvoyant reality,” describing it as timeless, with expanded boundaries where information is accessible intuitively free of time and space limitations (1975). Clairvoyant reality is utilized by mystics and psychic healers, and can include clairvoyance, precognition, telepathy, mediumship, and special diagnostic and healing powers. The healer approaches the task passively in the sense of not doing anything *to* the patient, but rather being psychically *with* him/her, focused with deep, intense caring. This is reminiscent of the facilitation approach taken in breathwork.

Transpersonal, shamanic healing occurs outside the time and space limitations of consensus reality. Physician Larry Dossey (1989) has documented the positive effects of prayer and other “non-local” healing methods. The breathwork state provides access to this reality.

Hallucinogenic states

Hallucinogenic substances are widely used in many cultures to achieve shamanic states, including peyote, psilocybe mushrooms, datura (Jimson weed), Banisteriopsis vine (ayahuasca), nightshade (belladonna), mandrake root, or henbane. Therapeutic use of pharmaceutically created LSD has been researched thoroughly (Grinspoon & Bakalar, 1979; Grof, 1980). “The real significance of LSD-like drugs and altered states of consciousness lies in their ability to produce changes in the individual’s awareness of reality, which leads the individual to a perception of a spiritual, mystical, timeless, transcendent reality and of being at one with the universe” (Dobkin & Winkelman, 1989, p.4). The experience of that spiritually transcendent reality is common in breathwork (Pressman, 1994).

Hypostimulation and hyperstimulation

Methods of entering altered states often include hypostimulation or hyperstimulation of the body’s sensory systems. Hypostimulation, sensory deprivation, results in hypometabolic states, similar to hibernation. Hyperstimulation, auditory or visual or kinesthetic driving, results in hypermetabolic states, that is wakefulness characterized by sympathetic nervous system activation. Both states, like OBE states, often incorporate

extremes of emotional detachment and elation, where extreme muscular relaxation co-exists with relatively high cortical arousal.

Sensory deprivation, known as restricted environmental stimulation technique or REST, has been studied extensively and provides some interesting parallels to the SSC. The state is usually achieved by using a darkened and sound-proofed flotation tank filled with saline water to simulate weightlessness. One common experience is a dissolving of boundaries between self and nonself, mentation expanding beyond sensory input and motor activity. Subjects frequently report shifts in consciousness, out-of-body experience, and transcendence. Under these conditions, alpha activity shifts lower and persists for days following exposure to the REST (Suedfeld, 1980; Suedfeld & Borrie, 1978). An increase in theta waves (the very slow brain waves associated with creativity) is often but not reliably present. The shift is from analytic (left brain) to configurational (right brain) processing, with primary process cognitive function dominant over secondary process (Norlander, et al, 1998).

Hyperstimulation, especially the shamanic auditory or visual or kinesthetic driving, has been extensively studied. Drumming at a rate of about 200 to 220 beats per minute frequently induces an altered state (Walsh, 1996). Studies show that such drumming stimulation creates an auditory driving response, provoking a corresponding firing frequency in the brain as measured by EEG, and can drive theta rhythms in the cortex (Jelik, 1982; Neher, 1961, 1962).

What part of the psyche is present and experiencing the altered state? It is the collection of what Jung referred to as complexes. One of the complexes is the ego-complex, the center of the field of consciousness, the adaptive, conscious executive of the personality, the observing aspect. The personal unconscious is related specifically to this ego-complex. Other complexes are collections of ideas and images organized around one or more archetypes at the core of the complex and having a certain feeling tone and energy charge. Examples might include a father complex, mother complex, hero complex, child complex, the anima, the animus, etc. All the complexes together Jung called the collective unconscious, or objective psyche. In the altered state, the normally unconscious complexes come into consciousness.

We should keep in mind that Jung’s conception of the objective psyche is equivalent to Castaneda’s non-ordinary reality, even if Jung endows it with archetypal patterns. It is filled with numinal mystery, it is unfathomable, and it is the locus of near-death experiences, out-

of-body journeys, and shamanic journeying. It is the locus of ancestral memory, of transpersonal guidance, and of numinous healing power (Smith, 1997, p. 136).

In the Jungian perspective, therapeutic healing begins with bringing pathological complexes into experienced (not just intellectual) consciousness. Not all complexes are pathological; only when complexes remain unconscious and operate autonomously do they create difficulties in daily life. Complexes become autonomous when they “dissociate” (split off), accumulating enough psychical energy and content to usurp the executive function of the ego and work against the overall good of the individual. “[Autonomous complexes] are usually the result of traumatic childhood experience” (Smith, 1997, p. 196). Only when dissociation is broken and the complex is brought to consciousness can the emotional charge be assimilated and the autonomous nature of the complex be dissolved. “Everyone knows that people have complexes,” Jung wrote, but “what is not so well known ... is that complexes can have us” (1964, p. 161).

The split-off parts take some of the ego’s energy and become shadow aspects of the ego. “Reintegration is possible, and their retrieval is the goal of both Jungian psychoanalysis and of shamanic healing” (Smith, 1997, p. 196).

The altered state allows access to these dissociated complexes, and the vehicle for reintegration. The breathwork state brings them into consciousness, and provides a natural way to integrate them, emotionally, physically and spiritually.

Healing Prenatal and Perinatal Trauma

Breathwork frequently presents people with their prenatal experience and birth trauma, and is ideally suited for healing these birth issues. In fact, the frequent regression in breathwork to the perinatal experience led Leonard Orr (1977) to call the modality *rebirthing*. The perinatal domain, according to Grof (1985), has as its main constituents the twin phenomena of birth and death. The birth process incorporates an intimate encounter with death, both metaphorically, as being forced from a known existence into an unknown one, and as felt danger, with the onset of upheaval of contractions and the intense physical pressure and oxygen deprivation of descent through the birth canal. Death is but one aspect of birth trauma. First we will review the research on prevalence of birth trauma, and of its

effects on later life. We review the death-related trauma, or death urge, in a later section.

Psychologist John Rowan (1996) writes extensively on the trauma of birth and its treatment. He discusses a traumatic disruption of the undisturbed womb state that occurs at birth, called the *primal split*, when we dissociate into a hidden vulnerable self and a less sensitive self that is pushed forward.

Once this split has occurred, its effects usually continue for a lifetime, as it pushes the individual to re-create repeatedly, in a myriad of ways, the original trauma, in failed attempts to master it. The way that birth or early trauma occurs, persists, and is repeated indefinitely shows the same logic and pattern as that characterizing adult post-traumatic stress disorder (PTSD). The trauma of birth for the baby and of war for the soldier affects them similarly (p. 36).

What constitutes traumatic experience in the womb and the birth process? Research shows that what mothers experience, their fetuses also experience. Therefore if the mother experiences trauma, so does her fetus. Psychiatrist Frank Lake (1980) found that the most influential prenatal events are maternal emotions (and paternal emotions transported through the mother’s emotional response to them) that pass biochemically to the fetus by means of a group of chemicals called catecholamines. The mother’s negative experiences can be either (1) personal, family, and social or (2) medical interventions. Interventions include medical exams and medical tests (amniocentesis and chorionic villae), augmentations (inductions and “breaking waters”), sedation, analgesia, anesthesia, forceps, episiotomy, intensive care placement, respiration, and separating babies from parents after birth. Anesthetization is particularly impactful on bonding because residual amounts of anesthesia are common in babies, even hours and days after birth, and anesthesia makes babies (and mothers) numb and therefore less available to the bonding process. Any traumatic experience causes a defensive dulling of mind and body of mother and fetus, a self-anesthetization effected through hormonal changes that normally occurs in the body during and after trauma and shock (Bloch, 1985). When the body and mind are dulled, the quantity and quality of bonding are lessened. In breathwork, one can work through the physical and emotional effects of anesthetic birth, gradually resolving the lack of bonding.

The physiological correlate of pre- and perinatal trauma is that these infants are in a state of tension resulting from an overactive sympathetic

nervous system and an excess of stress hormones. Noradrenaline sets the system in action for fight or flight. The hypothalamus is activated and kept in an overload condition. Cortisol triggers the inhibition of action and depresses the immune system. The inhibition of action syndrome produces apnea, cardiovascular, gastrointestinal, and upper respiratory damage. It produces emotional damage in suppressed energy, lack of trust, and an inability to form attachments and bonds. The infant becomes tactile defensive, pathologically passive, with rigid musculature or lack of muscle tone. Thought processes become aberrant because of pain and a sense of futility and abandonment (Rice, 1986). This biological “fight or flight” response may have been adaptive in helping the infants survive birth trauma, but may last much longer than needed. This increased sympathetic effect may account for the sleep disorders commonly observed in birth-traumatized infants. The “antidote” is parasympathetic stimulation within the hypothalamus, producing an alpha wave state similar to meditation or deep relaxation. Dr. Walter Hess termed this reaction “the trophotropic response” and described it as a protective mechanism against overstress, which promotes healing processes. Endorphines are produced and a sense of well being occurs (Benson, 1975). If the newborn doesn't relax enough to stimulate the antidotal parasympathetic relief, a deeply ingrained pattern of stress develops that may persist lifelong.

Personal maternal traumas could include loss, abandonment, and aggression, damaging the bonding between mother and child. A lack of bonding creates aggression and violence in the child. Magid and McKelvey (1988) reported that children with severe bonding difficulties do not develop a conscience, and perform asocial or antisocial acts without remorse. Felicity De Zulueta (1993) summarized research in the field of bonding and attachment, and concludes that the more damage that is done to bonding, the greater the likelihood of aggression and violence during childhood and adulthood.

Research by William Emerson (1996) documents that when clients who have problems with aggression and violence are regressed, they frequently encounter the experience of conception, reporting that they are conscious of traumatic issues outside of themselves, in their family or immediate surroundings, such as forced sex, rape, substance abuse, physical abuse, and shame (e.g., conceived out of wedlock). Another common experience for aggressive clients in regressions is discovering that they are unwanted. Depression, self-destructiveness, or aggression is often a direct expression of prenatal rejection. The majority of adults with

problems in aggression learn that they were unwanted at the time of discovery, which has important implications for bonding disorders. Many of them also learn that they were exposed to other forms of aggression during the pre- and perinatal period. Some commonly experienced forms of aggression are war, gang fights, domestic violence, conception through rape, physical or sexual abuse by parents or siblings, intrauterine toxicities (alcohol or drugs), and/or abortion attempts.

Adoption or abortion trauma generally includes discovery trauma (child unwanted at the time the parents discovered the pregnancy), conception trauma (child unwanted at the time of conception), or psychological toxicity (child exposed to mother’s annihilative or ambivalent feelings, or to socio-cultural shame), as well as the abandonment itself.

When prenatates experience severe forms of traumatization, they are likely to perceive in the same context any subsequent stressful life transitions (such as birth, adolescence, first jobs, new relationships, etc.), or subsequent events that are symbolically similar to the original traumatizing events. For example, if prenatates experience prenatal violence, then they are likely to experience life transitions in violent ways, or if the child feels guilty for his mother’s physical birthing pain, he is likely to feel apologetic throughout life. Freud called this process *recapitulation*.

An example of this is a man’s “nice guy” act used to cover up for not being able to tell people how he really feels. This condition is pathological non-assertiveness. He never has an opinion about anything, and he frequently commits to things and then doesn’t keep the commitments. Being phobic about not wanting to hurt or disappoint others, he will not say “no” or tell people what he really wants. This pattern usually leads to loneliness and no intimate relationships, and often traces back to the birth experience. Perhaps it was a long and arduous breech birth, for example, creating a huge conflict: if he moved forward, he caused his mother pain; if he stayed “stuck,” he caused himself to experience suffocation. This prototype dilemma manifests in the inability to move forward in life, to take risks and to “push through conflict.” This pathological non-assertiveness is a recapitulation of the birth experience.

Communication between the fetus and mother is vital to reducing perinatal trauma. One study showed that giving hypnotic suggestions directly to the mother successfully converted breech presentations at 37 to 40 weeks to vertex position (Mehl, 1994). This leads us to the conclusion that baby and mother can be recruited to work together to avoid or lessen

birth trauma. Most important is for the fetus not to feel abandoned in the process by the mother. This happens consistently when anesthetic is delivered and the mother goes unconscious or is unable to push.

It is also important to acknowledge the positive aspects of birthing, giving the baby encouraging messages to keep pushing and that he/she will soon see the light, will soon be out in the light, breathing fully and feeling the love from the family that eagerly awaits the birth. Research does suggest that these positive messages transmitted to the fetus prevent birth trauma, decrease delivery time and increase immediate bonding between mother and baby (Emerson, 1996).

Children who had no prenatal or perinatal trauma, or whose traumas have been resolved, exhibit higher self-esteem and intelligence test scores, and they are more empathetic, emotionally mature, cooperative, creative, affectionate, loving, focused, and self-aware than untreated and traumatized children (Emerson, 1996). Early treatment, during gestation or the first year, frees the child's experiences from negative prenatal influences, and children can live their lives unencumbered by the bonds of trauma. However, treatment is possible and available anytime in life, by uncovering, correcting, releasing, and integrating the traumas into consciousness. Treatment should include opportunities for re-bonding in current relationships, i.e., for bonding in ways that were impossible at the time of traumatization, or bonding in ways that were inhibited by unresolved traumas.

Breathwork and hypnotherapy provide highly effective methods for accomplishing this healing in adults by allowing visceral access to the original experience.

Unfortunately, birth trauma appears to be fairly common. Theodore Slotkin and Frederic Seidler (1988), Duke University Medical Center, have studied the universal stress response in human birth and found that even a normal, otherwise uneventful vaginal delivery is accompanied by a surge of stress hormones, which are responsible for key physiological processes in the adaptation to extrauterine life. Dr. William Emerson found that fifty-five percent of a sample of two hundred children showed signs of moderate to severe birth trauma (Emerson, 1987). In another study, he found that 45% of babies experience high levels of birth trauma, and another 50% of babies experience some degree of birth trauma, ranging from mild to moderate (Emerson, 1998). Barnett (1987) surveyed previous research into the negative birth experience (NBE) and notes that the incidence of NBE is constant at about 30%. The research indicates that almost 20% of all

patients in psychotherapy suffer from symptoms due in part to prenatal trauma. He concludes that prenatal influences markedly shape one’s destiny, but that these influences can be modified through therapeutic intervention.

One schema for organizing the perinatal and birth experiences, including any trauma involved, is proposed by Stan Grof (Grof & Zina-Bennett, 1993) as four *basic perinatal matrices*, or *BPMs*. The first of these, *BPM I*, is related to the prenatal state and is often experienced as undisturbed, “oceanic,” or blissful, but can be experienced as bad when traumas occur such as accident, illness, drugs, violence, fears, etc. The *BPM II* begins when the uterus starts contracting and the cervix has not yet opened. For the baby about to be born, this is an experience of great pressure and no way out. This can be traumatic if it is prolonged or if the baby is already anxious. *BPM III* comes when the cervix dilates enough to allow the fetus to begin its journey down and through the birth canal. The fetus here encounters determination and hope, and also struggle, suffocation, fear of death, anxiety and exhaustion. The final stage of birth, *BPM IV*, begins when the fetus finally emerges from the birth canal, the umbilical cord is cut, and the baby breathes air for the first time. The birth struggle is over. Other struggles may be experienced, however, such as guilt, anxiety, abandonment, or pain, depending on the reception afforded to him/her.

There is significant research recently to support the contention that birth trauma, in fact, contributes to various physical and psychological problems later in life. For example, birth trauma is positively correlated with anxiety (Banner, 1969; Gemmette, 1982; Ritzman, 1988); behavior problems in children (De Sousa, 1974); bipolar disorder (Kinney, et al, 1998); childhood neurosis (Van Zyl, 1977); conduct and antisocial personality disorder (Modlin, 1991); criminality (Arseneault, et al, 1997); drug and alcohol abuse (Hull, 1984, 1986); dysfunctional relationships (Givens, 1987); infantile autism (Verny, 1977); insidious trauma (Zimberoff & Hartman, 1998b); learning disabilities (Grofberg, 1970); mental illness (Randolph, 1977); psychosis (Janov, 1974a; Taylor, 1969; Wilcox & Nasrallah, 1987); psychosomatic illness in children and adolescents (Koelling, 1984); schizophrenia (Cannon, 1998; Gray and Dean, 1991; Hultman & Oehman, 1998; Kinney, et al, 1998; Lenzenweger & Dworkin, 1998; McCurry, et al, 1991; Rosenthal, 1966; Torrey, 1977; Zomberg, 1998); schizotypy (Bakan & Peterson, 1994); stress (Ritzman, 1984; Slotkin & Seidler, 1988); suicide (Jacobson, et al, 1987; Janov,

1974b; Roedding, 1991); violence (Chamberlain, 1995); and youth suicide (Allen, 1987).

Not only is birth trauma a causative factor in adult self-destructive behavior, the form of trauma is related to the form of self-destructive behavior (Feher, 1980). Bertil Jacobson and associates at the Karolinska Institute in Stockholm, Sweden, gathered birth record data for 412 forensic victims comprising suicides, alcoholics, and drug addicts born in Stockholm after 1940 and who died there during 1978-1984. They compared the subjects with 2,901 controls, and

mutual comparison of categories showed that (1) suicides involving asphyxiation were closely associated with asphyxia at birth, (2) suicides by violent mechanical means were associated with mechanical birth trauma, and (3) drug addiction was associated with opiate and/or barbiturate administration to mothers during labor. Results suggest that irrespective of what mechanism may transfer the trauma from birth to adulthood, obstetric procedures should be carefully evaluated and possibly modified to prevent eventual self-destructive behavior (Jacobson, et al, 1987, p. 364).

Psychologist Winifred B. Lucas has researched regression therapy for many years, and states her conclusions: "Scripts of anxiety and violence may be stamped into the personality of the fetus at any point during the nine months of gestation or while the child is being born. They may have many sources and leave deep gouges in the psyche" (1993, p. 4).

Alice Givens, a psychologist who specializes in working with deep fear and trauma, writes, "Releasing the trauma, or giving it up, occurs as a result of re-living the incident. Trauma that is stored in the unconscious mind contains energy, and as it is re-lived and expressed in regression therapy, the energy is released, whether it relates to childhood, infancy, or to prenatal and birth memories" (1993, p. 24).

In fact, prenatal memories may be the most influential on development in life. R. D. Laing (1976) and Frank Lake (1980) contend that prenatal memories are the most influential in life because they are the first. Lake contended that the most formative experiences were ones that occurred prenatally, especially during the first trimester.

For example, a woman named Sasha, an intelligent professional woman, spent years attracting and accepting abusive relationships in her life. In a breathwork session, Sasha returned to her conception, in which scenes of her mother being raped as a young girl came to her. She could feel her mother's pain, rage and fear, realizing that she had been conceived in a violent rape. During the nine months in the womb she experienced terror caused by her mother's strong desire to abort

her. Her birth was extremely traumatic, followed by her mother’s rejection due to the manner in which she had been conceived. Now everything made sense to her. She could see the repetition compulsion in continuing to attract abusive men who often forced sex on her, beat her and reinforced the deep underlying experience of not being worthy to be alive. She made significant changes over time, possible only with corrective birthing experiences where she was wanted, adored and welcomed into the world, free of violence or abandonment.

Another example is John and Marie, who came in for marital counseling. John was pressuring Marie to get pregnant, but he was physically and emotionally abusive to his wife, and she was hesitant to raise a child in an abusive situation. John was seething with rage toward authority figures or people whom he perceived as having power over him. John discovered in breathwork prenatal experiences that he was an unwanted child, conceived in shame and secrecy by his teenage mother. He spent his nine months in the womb steeped in fear that his mother would somehow “get rid of him.” His conception experience of shame and being unwanted resulted in a birth experience that felt like death to him. His birth was difficult due to his mother’s youth and small size. The doctors used forceps to pull him out, and his experience was of someone trying to “smash” his brains. His defiance of authority figures was displaced rage toward his mother for not wanting him. Through many breathwork sessions, John was able to release his rage toward those whom he perceived as having power over him, especially his wife. He is no longer abusive, and has welcomed a daughter into his life.

Emerson (1996) has found that these *prenatal* traumas affect the fetus’ experience of *birth* itself, that birth is often perceived and experienced in terms of prenatal traumatization. For example, fetuses who experience abortion attempts are likely to experience birth as annihilative. Fetuses who experience near-death during implantation in the womb are likely to experience birth as a near-death experience. Fetuses who experience aggression or violence while in the womb are likely to experience medical interventions at birth as aggressive and violent. Sheila Kitzinger (1989) has documented that whenever there is significant prenatal trauma, there is an increasing statistical likelihood that birth complications will occur. The greater the degree of stress or trauma during the prenatal period, the greater the likelihood of birth complications and obstetrical interventions.

The Fear of Death and the “Death Urge”

Death is a common theme in many transpersonal altered state experiences, and this is the case with breathwork. The context of death may express the fear of annihilation, taking one of several forms: (1) It may be that of “ego death,” the surrender of the limited self-concept in the service of transformation and integration. This is the context that accompanies a near-death experience, and carries the transformational acceptance of death. (2) It may be that of the necessary death that must precede rebirth, the initiation required for successful return of the hero discussed by Joseph Campbell. (3) It may be that of the profound impact on one’s life of the inevitability of death, the ever-presence of death. The threat of death is seen as “a dark, unsettling presence at the rim of consciousness” (Yalom, 1980, p. 27). (4) The context of death may be that of the depressed lack of psychical energy we call malaise, symptomatic of “soul loss” in shamanic traditions and Jungian psychology.

Alternately, the context of death may reflect a “death urge,” taking one of several forms: (1) It may be that of an existential resistance to being incarnate on earth, the deep sense of “I don’t want to be here.” This is not a suicidal condition, not even an unconscious one, but rather a lack of commitment to life. (2) The form of death urge may be that of someone who gets to a particular stage of development and has a “mortal fear” of moving on to the next stage, preferring instead to end it prematurely. (3) It may be that of fulfilling an early imprint on one’s perinatal encounter with death, e.g. re-enacting the traumatic suffocation created in a prolapsed umbilical cord birth or an overterm birth. In one study (Salk, et al, 1985), respiratory distress lasting one hour or more in infancy was correlated with a high risk of teenage suicide. The study showed that 60% of 52 adolescents with suicide attempts had 3 or more of the following risk factors at birth: respiratory distress, chronic disease in the pregnant mother, lack of prenatal care, tobacco or drug use by the pregnant mother, alcohol use by the pregnant mother. (4) The “death urge” may be fulfilling one’s perception of the parent’s desire for the child’s death, e.g. parental rejection in the form of contemplated or actual adoption or abortion. This unborn child is aware of being an “unwelcome child,” and reacts with shame and overpowering anxiety over its right to exist. The existential angst and death urge become deep, unconscious forces at work throughout the individual’s life. Research by Southgate and others suggests that many child accidents are in fact unconscious attempts at suicide (Southgate & Whiting, 1987).

Death anxiety is a core anxiety, and a widespread, mostly unconscious fixation on the unsettling presence in our peripheral consciousness. Freud (1917/1966) posited the death instinct (*Thanatos*) as a counterbalance to the self-preservation instinct (*Eros*). The threat of death is experienced as overwhelming, against which we erect psychological defenses, such as denial, neurotic obsessions, escape through addictions, or total absorption in the mundane details of day to day existence. Facing death without defense invites a deep existential crisis, and ultimately resolution of death anxiety through transpersonal experience.

Fear of death begins at birth, and the imprint of it is stronger when the trauma of birth is greater. Death anxiety is birth anxiety. We anticipate the end of world life based on the suffocation that we all experienced to some degree, and any other traumas, at the end of womb life and the beginning of world life. It may have been, “There's no way out.” Or perhaps “This is unbearable.” Or “I'd rather die than cause so much pain to others.” Or “It is all just too much. I'm overwhelmed.” Death and birth are interchangeable symbols in the unconscious (Feher, 1980). Exploring one's birth prepares one to explore death.

The Jungian context for this death urge relates to a general malaise, the lack of conscious relation to the “central integrative force of the psyche, the ‘doctor within,’ which Jung calls the archetypal Self” (Smith, 1997, p. 133). “Failure to face death, to accept life, and to live in accord with one's deeper self results, Jung believed, in a pathological condition. This pathological condition could be considered a form of soul loss” (Smith, 1997, p. 118). Jung described the condition “loss of soul” as “a slackening of the tensivity of consciousness, which might be compared to a low barometric reading, presaging bad weather. The tonus has given way, and this is felt subjectively as listlessness, moroseness, and depression. One no longer has any wish or courage to face the tasks of the day. One feels like lead, because no part of one's body seems willing to move, and this is due to the fact that one no longer has any disposable energy” (Jung, 1958, p. 119). The condition can go so far that the individual parts of the personality become independent and thus escape from the control of the conscious mind, a phenomenon known as hysterical loss of function. The condition results from physical and mental fatigue, bodily illness, violent emotions, traumatic shock (p. 120), and dissociation and suppression of consciousness (p. 281). The source of these underlying causes is usually prenatal and perinatal, and they result in profound existential conflict. Experiential transpersonal therapy, especially breathwork, is a powerfully

effective way to retrieve and integrate the “lost soul” and affirm life over death. For the individual to face death and accept life is for *the ego* to face its own death to promote the life of the greater Self, the individuated life.

There are certain people who are labeled by the psychiatric community as having “suicidal tendencies.” What makes these people prone to suicide? These are often people who have a history of suicide attempts that may date back to their early childhood. Some of these attempts may have been very serious where they nearly died or they may have been superficial “cries for help.” There are some people who seem to be preoccupied with suicide, while others talk about it only from time to time. Certainly depression underlies most suicidal ideation. But where does that depression come from and where do those thoughts of killing oneself come from?

Research and years of experience indicate that suicidal thoughts often come from pre- and perinatal experiences. When a baby is conceived and that conception is unwanted, the mother herself may begin thinking about having an abortion. Even though the mother has never told the child about these thoughts or feelings, conscious connected breathing can bring this knowledge to the conscious awareness of the breather. Thought is stored in the cells of each individual and is transmitted by the breath. In this way thoughts of abortion, transmitted by the mother to the child, become a death urge which may plague this person his/her whole life. This can be quite baffling to a psychotherapist, especially if there is no other obvious trauma in the person’s history to explain suicidal ideation.

This death urge can be brought to consciousness through conscious connected breathing and can also be released in the same way. The breath is the healing mechanism which allows these negative thoughts to flow out of the consciousness in the same way that they flowed in. The breath carries the negative energies out and brings in balance. The breath is the vehicle for transformation, the vehicle that removes this unconscious death urge and transforms it into the drive for life.

If the mother has thoughts of not wanting the baby, of wanting a boy instead of a girl, or fears about giving birth, these are all transmitted to the baby through the breath. When the baby is inside the womb, it is connected to the mother through three main sources: the nourishment of the umbilical cord, the constant beat of the heart and the rhythmic ebb and flow of the breath. The heartbeat and the breath are the main sounds and vibrations which the baby is aware of for nine months. It is what keeps the baby totally connected to its mother in a very visceral way. When we begin conscious connected breathing, all of those experiences during the nine

months of breath-connection to the mother are almost instantly brought back to consciousness. It is a “body memory.” The sound and vibration of the individual’s own breath triggers the memory of the mother’s breath in the womb. The cells, nerves and muscles all remember the experience of breathing. Graham Farrant (1986), an Australian medical doctor, referred to recollections of prenatal events as *cellular memory*. Lake (1980) found that prenatal memories stemmed from viral cells, that viruses were primitive prenatal cells that formed during trauma and carried traumatic memories. He, too, referred to prenatal memories in terms of cellular memory.

The experience of re-living the trauma is central to releasing it. Conscious connected breathing and hypnosis are direct methods for bringing the trauma to consciousness so that it can be healed. By breathing and being in our bodies we locate ourselves and transcend old, restricting forms of consciousness, many of which are imprinted prenatally and perinatally (Caldwell, 1997). Research has documented the myriad of ways in which fetuses imprint experience derived from their mother, be it healthy or unhealthy, mundane or traumatic (Salk, 1966; VERNY, 1982).

In their classic book *Mind-Body Therapy: Methods of Ideodynamic Healing in Hypnosis* (1988), psychologist Ernest Rossi, Ph.D., and gynecologist/obstetrician David Cheek, M.D., explain in great detail the way in which state-dependent memory is activated through clinical hypnosis and other trance states to access and heal early trauma, ranging from car accidents to hurricanes, from birth trauma to child abuse, from ‘shell shock’ in war to riots in the streets. Following traumatic events, details of the incident that were vivid when it took place become vague and more or less forgotten. This is because the special stress-released information substances that encoded their traumatic memories have changed as their mind-body returned to normal. The memories are thus not available to normal consciousness, and the phenomenon is called traumatic amnesia. The traumatic memories are still present and active, and they may influence the trauma victim’s dreams and/or be expressed as psychosomatic symptoms. The memories are *dissociated* from normal consciousness and encoded on deeply imprinted physiological levels where they form the nuclei of psychosomatic and psychological problems. The severity of these problems depends on the age of the person, the degree to which the traumatic situation is acknowledged and reviewed within oneself or with others, and the type of emotional support received.

Statebound learning occurs in the fetus not just in traumas but in every experience. For example, fetuses of women with chronic stress have fast heart rates and are very active (Klaus & Klaus, 1998). The fetus may experience that its mother's constant stress level is lowered, bringing calming relief, *only* when it also experiences nicotine or sugar or alcohol in the blood supply. This lesson is learned at the deepest layer of the developing fetus' nervous system functioning, and re-enacted unconsciously later in life in the compulsive self-medicating use of nicotine, sugar or alcohol. The memory is not verbal or conceptual, it is viscerally imprinted. The only means of accessing it for possible change is to return to the state in which it was learned: re-living the original experience *as it was first experienced*.

The repeated 'mini stress' involved in the therapeutic sensory and emotional reviewing of the traumatic event in hypnosis can partially reactivate the stress-released hormonal information substances that originally encoded that event in a statebound condition. The body actually remembers physical sensations and recreates these *body memories* during hypnosis age-regressions or other deep experiential transpersonal experiences. The statebound information is brought into consciousness, where the client's ordinary cognitive and verbal ego can process it. This allows the statebound or dissociated memories of the traumatic event to be accessed, processed, and therapeutically released.

The Four Levels of Pain

Lake (1980) argued that there are four levels of stress or pain and resulting trauma, and that what happens inside the individual depends very much on exactly what degree of pain is involved. He made no distinction between different causes of trauma. It is important to understand that trauma can exist from the moment of conception, where the child may be unwanted, to times in the womb where the mother may be punched in the stomach by an angry husband, to a long birth where the baby may be stuck in the birth canal. Most people are aware of trauma which happens during childhood, but tend to overlook or be unaware of the trauma that exists in the pre- and perinatal stages of life.

The first level according to Lake is pain-free and involves no trauma whatsoever. It is the ideal state especially when referring to birth issues. A baby born according to the methods of the French Dr. Leboyer will have

little or no trauma. The studies done on babies born in this way indicate physically and emotionally healthier babies.

The second level of stress can be coped with. This is where the stimulation is bearable and even perhaps strengthening, because it evokes effective and mostly non-neurotic defenses. A child who is told not to touch the stove, touches the stove, gets burned and learns from the experience. It is a mild level of stress as long as there is learning rather than shaming involved.

The third level involves opposition to the pain. Because the pain is so strong it cannot be coped with, repression takes place. If this trauma happens in infancy or earlier, the defense will be splitting rather than repression, consequently some degree of dissociation will occur. We have discovered that not only does the personality split off, but the soul also becomes diffuse and may separate. This level of pain may involve birth issues such as breech where the process is long, involved and painful. Later on it may be a child who is often shamed and is physically or sexually abused.

In healing the third level of pain where repression takes place, the breath is extremely helpful. It acts as a detection device as it moves into every corner and crevice of the unconscious where repressed memories are stored, and gently loosens them so they can be released. The breath acts like an emotional vacuum cleaner seeking out what needs to be brought to consciousness and releasing it. If these memories continue to be stored in the body, they become like the toxic material which causes decay in a tooth. They eat away at the body until they hit the nerve cells and turn into physical pain. The repressed trauma, if left long enough in the body, can become cancer, ulcers or other stress-related illnesses.

The fourth level Lake calls *transmarginal* stress. It is so powerful, originating so early, that the person cuts off completely from the real self and may even turn against the self, wanting to die. For example, when a parent actually attempts an abortion that didn't work, or a father repeatedly beats up the mother while she is pregnant with the baby, the child absorbs and carries the trauma of that experience. This type of early trauma usually sets the pattern for continued abuse once the baby is born and grows up, and certainly can be internalized as a death urge.

The Benefits of Breathwork

Experimental research is documenting the therapeutic effectiveness of breathwork. Most of the research conducted to date has studied Holotropic Breathwork, the form of breathwork developed by Stan and Christina Grof. Holotropic Breathwork, in combination with experientially oriented verbal psychotherapy, facilitates a reduction in death anxiety and an increase in self-esteem (Holmes, 1994; Holmes, et al, 1996). Holotropic breathwork has been shown to be effective and useful in the treatment of chronic alcoholism in a narcological setting (Zaritskii, 1996). Holotropic Breathwork creates positive psychological and spiritual effects for practitioners (Pressman, 1994).

Jim Leonard (1983), one of the original “rebirthing”-style breathworkers, discusses the breathwork experience as a single process that incorporates five basic elements: circular breathing, total relaxation, awareness, integration into ecstasy, and acceptance that “you create your own reality.” The circular breathing pattern allows circuits of energy in the body to complete, which activates access to deeply unconscious and transpersonal material. This happens because it reverses the shallow breath pattern that accompanied the original suppression. The relaxation is also important as a reversal of the original suppressing pattern. The person in breathwork maintains awareness on the here-and-now bodily, imaginal and emotional experiences. This keeps the mental processing from being worried thought, cognitive planning, or reviewing memories. Integration into ecstasy means allowing whatever experience that comes to be a vehicle for growth, i.e. not judging it as appropriate or not, fun or boring, useful or a waste of time. The final element is an empowering way to stay tuned into one’s experience of the present moment. This is an excellent summary of the process of breathwork.

Benefits of breathwork include: managing pain and physical healing; balancing the left and right hemispheres of the brain; retraining your nervous system to tolerate higher charges of energy; balancing the sympathetic and parasympathetic nervous systems of the body; getting past resistance; accessing deeply unconscious psychical material, including prenatal, birth, and death ; resolving early trauma; and enhancing the experience of deep spiritual connection.

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