

LANDSCAPES OF THE MIND

IT ISN'T JUST IN YOUR HEAD

Ronald A. Reminick *

It is believed by most that time passes. In actual fact it stays where it is

Dogon

The eyes only see what the mind is prepared to comprehend

Henri Bergson

The influence the senses have in men overpowered the thought to the degree that the walls of time and space have come to look solid, real, and insurmountable... yet time and space are but inverse measures of the power of the mind. Man is capable of

abolishing them both
Ralph Waldo Emerson

A Definition of Mind. People's common conceptions of the mind most often locate it in the head, with connections to the heart. They think of it as a consciousness that reasons, thinks, feels, wills, perceives and judges internal and external states of being. It includes intellect or understanding and appreciating; opinion, viewpoints, sentiment, inclination, intention, and desire. It includes attention and intention, and conceptualizations of spirituality would also be a valid inclusion.

Brain and Mind. Some random points about brain and mind:

The brain weighs three pounds and consists of 60% fat.¹

Every heart beat provides 25% of your blood and oxygen to the brain.²

The brain consists of 1.1 trillion cells, including 100 billion neurons.³

A typical neuron fires 5-50 times per second. Within a few seconds quadrillions of signals will travel throughout the brain. Each signal is a bit of information and the totality of that information is what we may call Mind.⁴

The number of combinations of 100 billion neurons firing or not firing is 10 to the millionth power, or 10 followed by a million zeros. This is the number of the possible states of the brain/mind. The number of atoms in the universe is estimated to be 10 to the 80th power.

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¹ Paul Nussbaum, *Your Brain Health Lifestyle*. Word Association Publishers, 2007.

² *Ibid.*, p. 19.

³ Rick Hanson, *Buddha's Brain*. New Harbinger Publications, 2009, p. 6.

⁴ *Ibid.*, p. 7. The next 5 points refer to Hanson, p. 7.

The brain is a stimulus and response system to the organism of the body. The stimulus and response system reaches out into the world of nature and culture and the electromagnetic fields of the universe.

The brain is the primary, but not the only, generator and shaper of the mind.

There are 100 trillion living cells in the human body each of which generates an electric field, all of which create a super-conductive electro-chemical field that transmits and receives energy and communicative intelligence throughout and beyond the body.

The mind/brain has the ability to generate molecules of emotion.

The separate concepts “body” and “mind” is a false dichotomy.

There exists a distribution of cellular intelligence throughout the human body.

An example of cellular memory: In her book, *Change of Heart*, the author, Claire Sylvia, received a heart from a man killed in a motorcycle accident. Shortly after her transplant she took a great liking for motorcycles and beer!⁵

There are four general levels of mind: the unconscious, subconscious, conscious, and super-conscious mind.

We have evolved the ability to download an unimaginable number of behaviors, beliefs, emotional states, and predispositions into our memory at the levels of the unconscious, subconscious, and conscious states.

The conscious mind processes 40 environmental stimuli per second.

The subconscious mind processes 20,000,000 environmental stimuli/second which is 500,000 times greater than the conscious mind.

Certain state of heightened consciousness enable us to experience information from the unconscious, which has a more expansive perspective of reality since it is not filtered by the cortex.

As evidenced by psychic phenomena such as telepathy, precognition, and clairvoyance, as well as accessing information via dreams and out-of-body experiences, provides evidence that mentation and consciousness exists outside of the brain/body.

The super-conscious is the spirit energy, the quantum physics of mentation.

Barriers to Consciousness: The Ego-Mechanisms of Defense. Psychoanalysis has provided us with a dimension of the mind, mechanisms that shield the conscious mind from emotional pain or distress. These are termed the *ego-mechanisms of defense*. There are processes that we can postulate are lawful principles of the mind/body. The process starts with deprivation which causes the experience of frustration which inevitably leads to a level of hostility which results in a disposition to aggression at which point the individual makes a conscious or unconscious decision how to express the experience. These psychological processes limit the level of consciousness an individual may actualize and, although protecting the individual from emotional pain, create disruptions in the harmony and equanimity of the mind. Within the framework of the theory of psychoanalysis the mechanism of *repression* is

⁵ Claire Sylvia, *Change of Heart*. Little Brown, 1997.

the primary process that mobilizes the other ego-defense mechanisms. Repression is the shunting of an experience into the realm of the unconscious. Once the impulse pattern of the experience is rendered unconscious other ego-defense mechanisms can come into play.

Denial is a common ego-defense mechanism that may come into play when one experiences a stressful, objectionable, distasteful, or an anxiety-producing situation. A common example is when a husband hears his wife's complaints or angry expressions of a situation the husband may be involved in and the husband dismisses her discomfort as a "female thing" rather than seriously listening to her complaint and empathically understanding the rift in their relationship.

Displacement is the ego-defense mechanism whereby an act of aggression is directed against a target that was not the source of one's frustration. An example is a man who is publically humiliated by his boss but cannot act on his boss's abuse; he goes home where wife complains he didn't take out the garbage and he inappropriately releases his rage upon her; and she then inappropriately screams at her kid who just came into the house without taking off his shoes. The individuals in this situation may not have been aware of the level of rage that had built up and so acted impulsively, serving their own ego needs without concern for the target of their rage, which, of course, disrupts the harmony and love of the relationship.

Another ego-defense mechanism that is generated by deprivation leading to frustration and hostility is *involution*. Involution is, for our purposes here, anger turned inward. In this state the person may not be aware of the process operating. If there is no feasible way to express the frustration and anger, the angry mind will turn it inward and process it there. In this case turning anger inward may be directed in toward the self or turning the anger against one's own group, as in shame of one's ethnic identity or intra-group violence, especially when the source of the deprivation or frustration lies outside the group. This anger turned inward has two routes of expression: the emotional pathway is recognized as depression while the psychosomatic route manifests in physical ailments commonly connected to stress responses. These physical manifestations normally include symptoms such as headaches or migraines, heart palpitations, stomach or esophageal hyperacidity — leading to ulcers, gastroenteritis, colitis, or outbreaks of anxiety. It can also include periods of sadness, insomnia, feeling "slowed down", decreased sexual vitality, periods of sadness, self-destructive acts, or suicidal ideation. There is a tendency for females to experience depression and males to manifest psychosomatic symptoms, although this difference can change with the change in cultural conditions, as in the masculinization of women. Bottled up anger can fester in the body/mind and virtually "eat one up".

The *reaction-formation* defends against a repressed unacceptable impulse and converts it into its opposite. An example: a young man feels, often unconsciously, he hasn't lived up to the masculine ideals of his culture and feels effeminate. The emotional reaction is fear of this taboo impulse. To react against this impulse he will over-react and play the machismo role expressing hyper-masculinity.

Fixation is a response, often experienced in one's developing years, that prevents the individual further emotional growth. Failure of continued growth and development may occur as a result of a severely traumatic experience or pattern of traumatic experiences, such as harsh punishment, severe injury as in a crippling car accident, early childhood sexual abuse, or extremely painful initiation ceremonies such as unanaesthetized clitoridectomy and infibulation practised in certain indigenous cultures of Africa. Associated with the intrapersonal repression and fixation is the social aspect that we identify as *identity foreclosure* where an individual, still in the stage of development and maturation, has no proper role models to identify with and continue in the maturation process; where an individual is entirely dependent on the peer group for identification and sustenance for role-modeling. Gang membership is one such example, pathological cult groups, another. What is critical to recognize is that it is the emotional level of development of that person's identity that will be foreclosed. It is sometimes heard that men about to marry are dragged out of their adolescence kicking and screaming into the adulthood of responsibility and commitment!

Opening the mind depends on one having awareness of and control over those events that trigger the ego-defense mechanisms and that create distortions of perception, convolutions of cognition, and anger-driven behavior in relationships. Opening the mind creates a broader horizon of consciousness, a deeper awareness, and an empathic sensitivity to others and the environment within which one lives. And, very importantly, an opened mind can channel potentially destructive impulses into creative efforts that benefit the self, the community, and the environment within which one lives. How we do this is discussed in the next chapter.

The Structural Levels of the Mind. I like to think of the mind in terms of several levels of functioning—here we enumerate five: The *conscious*, the *subconscious*, the *unconscious*, and the *deep mind* of cellular intelligence; and beyond this is the *super-mind* or *super-consciousness*.

The conscious mind needs little elaboration. It is our momentary awareness of what we are perceiving, thinking, feeling and doing.

The subconscious mind is that realm that is easily retrievable into the conscious mind with the proper cues, such as “Did you smell something burning?” or “I wonder how your dog is right now” or when asked “What did you eat for breakfast yesterday?”. The unconscious mind stores material, both cognitive and emotional, not easily retrievable. It might be memory traces from birth or infancy, or painful experiences that one wishes not to remember, or the myriad of situations, events, and relationships that are too numerous to easily remember or remember at all.

I consider “deep mind” as the totality of life-energy structures, processes, and functions that we are not aware of but contribute to our life-experience at any moment in time. Structures within a living cell communicate with each other and regulate life-giving functions; configurations of cells are integrated and communicate within organs to maintain organic functioning, and the super-regulatory organ, the brain, communicates with the organismic structures of the body; all inform us that

this communication, this intra-organismic integration and response, this maintenance of intra-organismic balance, is manifest as intelligence, cellular intelligence. When we get a cut in the skin the surrounding cells get the message and know what to do to heal the wound. That is a mode of adaptation resulting from the signals, the messages that are conveyed by the injured cells.

I do not want to stop here in articulating our conception of mind.

Here I introduce the *biophotonic energy of the mind*.⁶ Biophotons are the smallest physical units of light. They are stored in and utilized by all the biological organisms on this planet. The food we eat, especially raw foods, most importantly, vegetables, transport these transporters of the sun's energy, viz., biophotons, into our cells. These biophotons contain important information that controls the vital processes that order and regulate cellular functioning, keep us alive, energized, promoting vitality and well-being.

Every living organism emits biophotons defined as low-level luminescence, normally with wavelengths of 200 and 800 nanometers. It is believed, from the scientists doing the work in Germany, that the higher the luminescence emission the greater its vitality and the greater the potential for the transfer of that energy to the organism consuming it.

The biophotonic emissions of the body come from the vibrations of our DNA. The DNA within each of our cells vibrates at a frequency of several billion hertz. This vibration is created through the coil-like contractions of the DNA, occurring several billion times per second. With each contraction it emits one biophoton. It is believed that all the biophotons emitted from an organism communicate with each other in a highly structured light field surrounding the body. This light field regulates the activity of the metabolic enzymes. This phenomenon borders on the mystical: Each cell's DNA vibrates at several billion hertz, several billion times per second, multiplied by one hundred trillion living cells with the human body. It manifests an intelligence the likes of which we have yet to fully understand and appreciate.

The *super-conscious mind* is a concept not well understood nor accepted by a great proportion of scientists. Astrophysicists speak of the "grid" of the universe; lines of energy that influence astronomical bodies and living creatures. The artist Alex Grey paints these lines of energy in his works of human beings. My animal communicator friends, Agnes Thomas and Barbara Borkowski, speak of "axiotonal lines of the universe" through which "intelligence" is conveyed. Agnes Thomas has correctly read the mind of my Himalayan cat through a telephone conversation with the cat. Agnes spoke of a white animal: the cat didn't know whether it was a cat or a dog. It was a dog; my wife's shitzu. And Agnes knew Buddy was called "Kitty Kat" and she told me the cat did not like to be called that. The cat was healed of a psychological trauma after this communication. There are many now, including members of the Institute for Noetic Sciences, many of whom are noted scientists, who claim our universal connection. It is a notion that, if anything, should provide for us a vehicle for the cognitive and emotional connection of us all.

⁶ DrMercola.com "Why People Really Get Sick".

The instinctual predisposition to alter the mind's consciousness

Ritual, therapeutic methodologies and botanical technologies. I maintain that there is a natural predisposition to alter one's state of consciousness and condition of one's mind. We can conceive changing states of mind on a continuum from very mundane and ordinary to exciting to extremes of ecstasy and orgasmic love to terror, shock, and dissociation. Deep sleep and dreaming are states of mind. Commensality with good friends and a fine meal creates a certain state of mind. Being moved by a powerful drama or meeting someone you missed and hadn't seen for some time are other states of mind. Falling in love or experiencing betrayal are powerful states of mind. An encounter with a threat, physical or psychological, generates a strong endocrine response and the attending emotional state of mind.

Altered states of consciousness can be accidental and involuntary, as with surprise or finding a great *entrée* on a menu you didn't expect. Or, altered states can be voluntary where one prepares one's self for an altered experience. This can be with the aid of psychotropic substances such as cannabis, or the alkaloid, *qat*, strychnine, peyote, lysergic acid, or *ayahuasca*. Or, it can be with a voluntary preparation engendered by directed thought, chanting, song, drumming, dance, postures, controlled breathing, isolation, meditation, or any combination of these. It appears that the practice of a variety of meditation modalities has far-reaching therapeutic effects on a person and the group.

The Yoga Mind. In the *yoga sutras*, Patanjali states that the yoga mind is the cessation of the busy-ness and fluctuations and free-flying imagery of the normal mind. It is, essentially, the cessation of the continuous flow of thought, of the fluctuations of consciousness. The yoga instructor, Karen Allgire, contrasts *citta-vrttis*, the incessant mental activity, with *narodha*, restraint, control, and stilling of the mind's activities, which can then lead us into a deep, inner peace.⁷ With meditative practice, this experienced moment of inner peace will gradually infuse the rest of one's life and allow one to live one's own life in a clearer, more balanced way, not influenced or polluted by toxic thoughts and feelings or prejudicial notions that distort the existential reality. As Karen Allgire points out, Patanjali's sutra, the five states of mind, the *citta-vrttis*, that disturb our perception and inhibit deep inner peace are: *viparyaya* or the illusion of misperception; *vikalpa* or delusion, fantasy, or thoughts based on illusion that do not have their basis in reality; *nidra*, or sleep, dreamless or dreaming, that does not correspond to existential reality; *smrtih*, or memory, which is a source of knowledge and discrimination, but may also keep one in a state of nostalgia or regret, which is not a state of existential reality, or in a state of mistaken or distorted past realities. The state of *pramana* is that of correct perception and accurate understanding of reality. This state of consciousness allows us to encounter a person, place, object, statement, scent, or action without preconception, stereotype, prejudice, association with a past event, or wrongful teaching.

⁷ Karen Allgire, "The Five Vrttis: Fluctuations of Consciousness". *Balanced Living Magazine*, Winter, 2010.

I present an example, a demonstration of the contrast with *pramana*:

Once upon a time I owned an eighteen-foot, 160 pound Burmese python. It was quite docile and my children played with it for years, under the supervision of their father. Mr. Burmese Python made many trips to daycare centers, public schools, and a few college classes. He would be carried in a large red leather trunk, put on the table with a few moments of introduction and commentary. The presenter's children, at one point aged 8 and 10 were attending. When the trunk was opened Mr. Burmese Python would raise his head, extend himself, something like a cobra, and proceed to cascade out of the trunk on to the table and flow onto the floor. It was always a rather spectacular sight. My two boys would then pet it, sit on it, and play. Then the other kids would join in. The teachers, on the other hand, would back off with their backs pressed to the wall (wondering why they invited me in the first place) in shock. Then the point was made: The children had no preconception, no learned fear, no prejudging of the situation. They saw there was no danger and were free to enjoy this creature of nature. The teachers, on the other hand, had learned about snakes and were conditioned by their preconceptions and their prejudgements, their prejudice, and were therefore, fearful. The point was made, how preconceiving something, prejudging something, without the confirmation of existential experience, can produce unnecessary fear and wrongful behavior in people ignorant of the reality they encounter. The state of narodha could have allowed them to enjoy, learn, and appreciate the phenomenon before them.

Yoga *asanas* or postures, yoga breathing, and the yoga state of mind all bring the gift of mindfulness to the practitioner. It brings deep relaxation to the person allowing us to be quiet yet aware, calm yet attentive, slowed down to perceive deeply into one's core; to gain insight into who one really is; it allows us to be fully in the moment and to appreciate the life within our experience.

Meditation Medicine. As Western medical practitioners begin to understand the mind's role in health and disease, there has been more interest in the use of meditation in medicine and psychotherapy. In fact, the field of psychoneuroimmunology has found that the immune system is not static in its performance. Research in this field has shown that it is greatly influenced by our neurology, and that we are now discovering the relationship between thoughts, emotions and health. We are also learning of the positive effects of meditation in healing a variety of afflictions caused by stress.⁸

Meditative practices are increasingly offered in medical clinics and hospitals as a tool for improving health and quality of life, as is the case with Kabat-Zinn's "Stress Reduction and Relaxation Center" in Massachusetts. Meditation has been used as the primary therapy for treating certain diseases; as an additional therapy in a comprehensive treatment plan; and as a means of improving the quality of life of

⁸ Kabat-Zinn, J. (1990). *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. New York, NY: Dell Publishing.

people with debilitating or chronic pain, those with terminal illnesses, such as cancer, or those suffering from AIDS.⁹

In Kabat-Zinn's stress center, patients reported that during meditation, chronic pain was 40-50% less severe. This phenomenon is more fully discussed in Austin's book where he talks of the ways in which the body deals with pain. He reviews a study where a Yogi lay on a bed of nails while meditating. The investigator attempted this and could not tolerate the discomfort. When they both used naloxone to counter any opioid effects (pain relievers such as acetaminophen or morphine), their toleration levels did not decrease, but with meditation it did. This showed that there is some non-opioid effect that occurs during meditation.¹⁰ While it has not been fully explained or explored as to where in the mind this occurs, or how or why, it is sufficient to infer that meditation helps relieve or cancel the pain response.

Another research example is a study by Barnes.¹¹ Forty-five African American adolescents that were having behavior issues in school were divided into 2 groups. In the experimental group they practised 15-minute sessions of Transcendental Meditation at home and at school. The control group had that time filled with the basic "health class" material. The students' number of rule infractions, absentee periods, suspension days due to behavioral issues, all significantly decreased in the experimental group compared to an increase in the control group. Research in schools has also found that meditation may be helpful for teachers.¹² Winzelberg was concerned about the high burnout rates and stress levels found in teachers. Their stress symptoms included emotional and behavioral pathology and gastronomic distress. He constructed an experiment to see if meditation would be an effective way to ease this problem. The researchers instructed teachers in the techniques of relaxation response and guided them through the meditation process involving mantras, slowing down one's actions, and one-pointed attention. It was found that the teachers in the experimental group were able to effectively reduce their stress symptoms,

An illustrative case study is demonstrated by David Shannahoff-Khalsa involving a 20-year-old college woman.¹³ She began working with the David during her university's Spring Break of 2001, in hopes of reducing her social anxiety, academic stress, body dysmorphic disorder, obsessive-compulsive disorder, and depression. The patient said that she really felt she was struggling in life and yet after the first session her BDD& OCD both disappeared for the duration of the day.

⁹ Austin, J. H. (1998) *Zen and the Brain*. Cambridge, MA: The MIT Press.

¹⁰ Barnes, V. (2003). "Impact of stress reduction on negative school behavior in adolescents." *Health and Quality of Life Outcomes, Vol. 1, No. 1*.

¹¹ Barnes, V. (2003). "Impact of stress reduction on negative school behavior in adolescents." *Health and Quality of Life Outcomes, Vol. 1, No. 1*.

¹² Winzelberg, A., Luskin, F. (1999). "The effect of meditation training in stress levels in secondary school teachers." *Stress Medicine 15*, 69-77.

¹³ Shannahoff-Khalsa, D. (2003). "Kundalini Yoga Meditation Techniques for the Treatment of Obsessive-Compulsive & OC Spectrum Disorders". *Brief Treatment and Crisis Intervention Vol. 3*, 369-382 Retrieved December 10, 2006 from: <http://journals.ohiolink.edu:20080/local/cgi/send-pdf/061110135835479516.pdf>

Despite that astounding progress, after spring break, class resumed and she ceased her meditation and, consequently, relapsed into her former symptomatology. As her pathology progressed she would spend 2 hours each day in front of the mirror, convinced the right side of her face was distorted. A psychiatrist prescribed Prozac, but it only deepened the issues she was having by making her anxious and depressed. She developed new symptoms of smoking and self-mutilation. In some cases when she cut her arms, she needed several stitches because of the deep lacerations. Her parents also noticed that she was beginning to show symptoms of anorexia. She would eat only 1 meal per day and was rapidly losing weight. In 2002 she was hospitalized and then taken back to her therapist, David. After meeting with him again, she replaced her medication with yoga. As a result, like the previous meditation therapy, her condition immediately improved. She was able to quit smoking and stop the self-mutilation, and her appetite returned. With continued practice she has been able to maintain a greater state of peace and general strength that has continued up to the day of the article's publication. The above case demonstrates how emotionally-based symptoms can be alleviated.

In this second case, an immune-deficiency disease, dermatomyositis, was treated with meditation.¹⁴ Dermatomyositis is a muscle disease that is characterized by a rash, muscle weakness, with the possibility of dysphagia (problems with swallowing). Eventually, people that suffer from this have a loss of strength, including difficulty getting up from a seated position, lifting objects, climbing stairs. Treatment usually consists of prescribing a steroid drug, often-times accompanied by immunosuppressants and physical therapy to preserve muscle function. However in the case study conducted by Collins and Dunn, the only treatments used were meditation and visual imagery. During the course of observation progress with skin conditions were affected by stress, but strength was not. After meditation, the rash lessened and pain diminished. By the end of the 294-day observation period, she had healed her symptoms on her own. It is important to note that the mortality rate for dermatomyositis is roughly 61% if left untreated, and the odds for "spontaneous recoveries" are rare. This shows that therapies that reinforce the mind-body connection are useful for treating this condition, and may be useful for treating others as well.

Lastly, in Afari's twin study of chronic fatigue syndrome¹⁵ "twins with CFS were more likely to use homeopathy, mega-vitamins, herbal therapies, biofeedback, relaxation/meditation, guided imagery, massage therapy, energy healing, religious healing by others, and self-help groups than their non-CFS counterparts." This study showed that the majority of the control and experimental research groups found these

¹⁴ Collins, Michael P., Dunn, Lucia F. (2005) "The Effects of Meditation and Visual Imagery on an Immune System Disorder: Dermatomyositis." *Journal of Alternative & Complementary Medicine, Vol. 11 Issue 2*, p275 Retrieved on December 10, 2006, from: <http://proxy.ulib.csuohio.edu:2050/login?url=http://search.epnet.com/login.aspx?direct=true>
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¹⁵ Afari, N., Eisenberg, D. (2000). "Use of alternative treatments by chronic fatigue syndrome discordant twins." *Integrative Medicine Vol. 2, No. 2*, 97-103.

techniques to be helpful, with 81% for those suffering from CFS, and 71% for those without.

The Shamanic Mind and State of Consciousness. Shamanic practitioners derive information while in deep trance. This information is generally about diagnosis, treatment of afflictions, divining future events, or finding solutions to the problems people bring to them. Although anthropologists often use the terms trance and ecstasy interchangeably, Tedlock prefers to differentiate between the two.¹⁶ According to Barbara Tedlock trance is a “hyperlucid state of sensory overstimulation triggered by music, noises and odors”. The experiences of trance states are often forgotten after one emerges into normalcy. In contrast, ecstasy is a state of sensory deprivation, withdrawing from the immediately perceivable world via fasting, total silence, meditation in complete darkness. Tedlock asserts that ecstatic experiences are not only remembered, they can be revisited over and over again. Examples of the latter include dreaming, tuning in to the body’s vital energy or chi flows, or altered states produced by psychedelic drugs. Powerful ways of bringing on trance states include drumming —repetitive, long-lasting, constant beats with concerted focus, and chanting repeatedly with constancy brings many practitioners into the trance state. In Tedlock’s experience of shamanic performances, her own and of other shamans, “participants may stamp their feet to one rhythm, clap their hands to a second rhythm, and sing syllables to yet a third”.

Many anthropologists have seen how music that urges dancing profoundly alters the structure of one’s consciousness, changing how one experiences both space and time. “Musically driven movements enable shamans and their clients to enter into spiritual worlds filled with culturally appropriate cosmic imagery”. Participants will often dance to exhaustion, feeling exhilarated, ecstatic, renewed, joyful, and euphoric. Intense dancing leads to hyperventilation, increases the production of adrenaline, causes a sharp decrease in blood glucose stimulating the brain to mobilize the opiate-like endorphins that surge through the body creating wonderful feelings of coursing energy rising up from the belly in waves creating an emotional expansiveness.

The many forms of constant, rhythmic percussion, such as with drums, rattles, or gongs, produce the phenomenon of *entrainment*. Entrainment occurs when the asynchronous patterns of brain waves come in to harmonic resonance. Normally, in the waking state, one hemisphere of the brain dominates the other in an asynchronous pattern. Normally, the right hemisphere generates alpha waves, vibrating at seven to fourteen cycles per second. The left hemisphere generates beta waves vibrating at fourteen to twenty-one cycles per second. As neurophysiological research has shown, rhythmic sounds can alter brain wave patterns, produce entrainment, and induce the state of trance. Researchers of the brain call this process “sonic driving” which can produce visual patterns of color and movement and full-blown hallucination.

A common practice producing an altered state of consciousness is the use of entheogens, meaning “god generated within”,¹⁷ plants or plant products that produce

¹⁶ Barbara Tedlock, *The Woman in the Shaman’s Body*. Bantam Books, 2005, pp. 80-82.

¹⁷ *Ibidem*, p. 145.

an hallucinogenic state of mind. There are over two hundred plants that shamans and healers, as well as others, use to induce an altered state of consciousness, a change in mind. The more commonly known entheogens used for healing, shamanic ritual and other spiritual purposes, include cannabis and peyote. And, a commonly used hallucinogenic is fly agaric, a mushroom used at least since the bronze age by peoples of Siberia, as evidenced in their ancient rock art, North India, among the Greeks, Scandinavians, and Saami nomads of Lapland; commonly found in the birch, fir, and pine forests of North Asia; and the birch, pine, and cedar forests of North America. Lewis Carroll may have had fly agaric in mind when he wrote “Alice in Wonderland” since she shrinks eating one side of the mushroom and stretches eating the other side. We can also include psilocybin mushrooms, San Pedro cactus, and tobacco as commonly used entheogens among healers and shamans to alter one’s state of consciousness. Lastly, we note the use of a plant called *qat* (Arabic) or *ch’at* (Amharic) the leaves of which are chewed by peoples of Islamic East Africa, including Sudan, Ethiopia, and Somalia, and many peoples of the Middle East. It is a mild alkaloid that allows one to remain awake all night, dampen the appetite, and provide boosts in energy reserves often used in ritual contexts. Here, we will not include those hallucinogens that are used for recreational activities.

A more extreme altered state of consciousness requires the careful guidance of an experienced shaman, an *ayahuasquero*, who prepares the client, sometimes for several months before the ritual, for the ayahuasca experience. The chemicals in this Peruvian vine, mixed with other highly potent entheogens, create some of the most powerful and colorful and dramatic experiences known to the human condition. It can transform a person; catapult them into exotic space; often finding freedom from the issues that held them back from insight into one’s self, happiness, and potentiality. It is also a very powerful purgative and the participants become cleansed through violent bouts of diarrhea and vomiting. I quote from an interview with an educated, middle-aged woman, a yoga instructor, who travelled to Peru and engaged in the ritual of *ayahuasca*:

So we walked through the day, terrified; agreeing that this is good; and we’re not being flippant about this; and came to sunset and entered this amazing sacred hut in the valley. And there were no windows, just a round candle-lit hut. And then this wizened old man walks in with his grandchild, about 8; his skin is leather; wrinkles and wrinkles and wrinkles; the beauty of this human being; his eyes! And he went around the room and looked each of us in the eyes; and his grandchild sat waiting for him. She carried the bucket of the brew. Alberto said, last night the brew was from the new part of the bark and not very strong. This is ancient and it will taste different, it will smell different, it will go down different. And you are required to drink a whole glass. I looked at John across the room. Looked here and there; Jim wasn’t doing it... Alberto repeated, “If you consider this a drug experience, you will miss out. Especially you old druggies, you will miss out. So when the experience begins to get really intense, maybe in a half hour, and the ride begins, with the psychedelic experience; you will have to stay focused. Those of you with a yoga background you

will fare well, because of your breathing. Do not let go of your breathing! I said, I'm golden, I got the tools. Let 'er go!

The shaman went first. Then Alberto took the drink. Then next was me. He blessed me, and by the time we got almost around to the person sitting on the other side of the room to me, I started feeling it. Tingling in my fingers and my toes, my eyesight started to be weird, blurry, and I said I guess its time to close my eyes. And I began to trip out. I was so nauseous I knew I was gonna puke on my own body! How disgusting was that! I remembered to b r e a t h e; and the vomit would get up to my throat and I would exhale and made it go down. And each time I breathed I would root myself. I was sitting in lotus; I can't sit comfortably in lotus more than 15 minutes, so I knew I wasn't gonna be in lotus for very long, but I didn't know how I was sitting because the ride, where I was sitting, was so intense that the lights and stream of lights... I couldn't hold on to anything. I was being dragged and nauseous; dragged from one light stream to another and I just kept breathing. I just kept saying to myself, breathe, breathe. Occasionally I heard Alberto's voice. The shaman walked around, rattling leaves, not even dry leaves; and rattled and chanted in front of us. And that kept me focused. It could have been the first hour, I dropped into another place. When the shaman stood in front of me, I heard him say—now he didn't speak any English—I heard him say, "State your intention!" Loud. He was in front of me. "My intention for healing is to heal every misperception in this lifetime and every other lifetime and having gotten that I want to go to the source of my beginning and once I've gotten that I want to be with God. And I said it over and over and over again. [56:25] At that point I was so sick I said "I better open my eyes to see where the door is, because if I have to go out of here to throw up or have diarrhoea I want to know where the door is! I gotta know where I am!". I opened my eyes and what I saw were these huge scorpions walking around the room. And I said: "Not safe out there!". Closed my eyes.

If I threw up it was going on my lap. I don't know what those things are, but I ain't goin'!". I then proceeded to... [we take a break] So I closed my eyes again and the scorpions went away. I started to travel into different realms and different life beings and different forms of life. At one point I was in, what looked like a rocket ship. The beings in the rocket ship, and I was one, big heads, bald heads and they didn't look human. I was—everything was fast! Just fast! Like I was soaring through realms of existence; going through and through and through; streaks and streams of light; there was—the light was me; I was light energy. I went in to the earth, into rock formations; I was experiencing on a tactual, sensation level; other realms of existence; a blade of grass, I could taste it—on a cellular level! And I was—at that point I was going so fast and I remember, shoo! I wish I could control this! Slow down! But I couldn't. And that went on—I don't know how long that went on. It could've been a long time; it could've been minutes. I was in a timeless realm! And then after that bouncing through all of these realms, occasionally I would hear the shaman, the rattle, and I would hear him say, "State your intention!".

Even in this stream I could state my intention; and I could breathe, so I knew I was in control of the situation... I felt safe; I was scared, but I felt safe. And all of a sudden things started to slow down enough for me to say, "Huh, I could ride this wave! Ok! This is ok. I must be in a different phase now. And, in front of me was this enormous man, like from the Arabian Nights; with these flowing skirts wrapped around him and a big turban. He was a beautiful, beautiful black man. And in his hand he was carrying a book. And it was so heavy—and he's a huge being, but it weighs a lot. And the book opens up in front of me. And you know in those old movies the pages flow and they are going that fast; and I know that every page is a lifetime and every single page is a misperception of that lifetime! And I am in ecstasy, because it is I who am about to receive everything I came for! I'm going to heal every misperception from every lifetime as a human personality. And it's awesome, it's awesome. And I don't even have to focus on a single page because it's going so fast! But every once in awhile I see a page and I get hooked into it. One lifetime I was a dancing girl in India. And I'm wearing these amazing colors and I'm twirling like a whirling dervish and I have bangles on my ankles and my wrists and I'm twirling in ecstasy; and at that moment the shaman's in front of me, rattling; "State your intention!". I got off the path. "My intention is to... every lifetime, heal every misperception, and having done that I want to be with God. So now I'm in the misperception phase and I say this 3 times. I focus on... every time he brings me back. That was amazing; I have no idea how long that was.

After that was over I again shoot out of a canon; not a rocket ship; I shoot out of a canon and I am physically experiencing every life form one after another. Starting at that beginning part—and I couldn't control it. But from the moment of my inception as a life form on the planet; I'm experiencing every life form from the tiniest speck of soil, amoebas in water; growing and growing into these various life forms—evolution. And then I'm aware that I can be present in the room at the same time. So I'm plugging into other people's journeys too! I'm like—Alberto is outside. There is a jaguar! And the jaguar is my power animal! And he becomes Jaguar and he is out there in the jungle and he is roaring and roaring. And then at one point I hear him; he's sitting next to me; the shaman he's asking for direction in his brain pathways. In Spanish—and I understand enough Spanish to know what he's doing; and I say to myself : "Oh my he's done this so much he's carving new pathways in his brain! Ginny, be present; be aware! This is your first carving here! So I'm back in my journey and the shaman says, "State your intention... don't get lost". I get back into my journey. I'm at the place where I state my intention: "I want to be with God!" I've gone to the source of my beginning; I want to be with God. [What did you mean by carving new pathways?] To carve new pathways in the brain for new knowledge.

So now I'm going to be with God. All of a sudden I again get shot out of a canon. But I'm not an "I"! I'm not a body! I'm not anything! I do have my breath and now I'm like a giant amoebic –what do call those things—you make a fire—and I can

experience the universe as this---[deeeep inhalation, deeeep exhalation with arms going away from the body and her arms going toward her body]—it is me! it's around me! it's the only thing that exists; and then if I could say that a smile comes over my being; it wasn't a physical smile because I wasn't a physical being; the awareness in that moment [sobbing] I was God! I was--[I say: "Experiencing the breath of the life force of the universe"]--and there was nothing else! And I was there! So there wasn't any thought, there wasn't anything. And the next thing that I remember was coming back into my physical body and I was sitting in lotus for however long that was.

I don't sit in lotus; I don't sit in lotus for long periods. My legs opened up; my eyes were closed; I positioned myself near the wall of the building because I didn't know if I was going to pass out or not. I said to myself, at least you won't pass out on the floor if you're leaning against the wall. I set myself up so I wouldn't fall. So I leaned back and my hands went to my abdomen and my hands were way out! I was 9 months pregnant! And I just—I was sobbing, just sobbing and all of a sudden I was in labor! I said, "Oh my god! I'm having a baby!" and I went through labor completely. I birthed a baby! And at the end of this birth I took this deep, deep sigh and said, "Oh my god! I birthed myself!". And my friend was sitting next to me, staring at me. And she said: "I've been with you for the last 2 hours of your journey! Mine was over 2 hours ago. [1:12:08] "You just birthed yourself!! I witnessed your entire birth!". [We are both crying] And then I looked around the room—the shaman was gone. Alberto was gone! There were only 4 people in the room. Everybody was gone! And we were done.

An intense altered state of consciousness, a powerful state of mind, is quite evident in the sexual act of love; an experience that can transport one into a transformative space. Neurological researchers have demonstrated a strong connection between sexuality and trance. It appears that women have a greater capacity to experience a greater intensity than men.¹⁸ The electrical connections across the hemispheres of a woman's brain contribute to their heightened experience. This is because there is a greater number and higher density of neurons in a woman's brain. The *corpus callosum*, the organ that connects and coordinates the hemispheres of the brain, has a greater equality of connection between the two hemispheres and is larger in women than in men. Furthermore, the *anterior commissure*, a neural pathway connecting the two hemispheres of the brain, is larger and denser in women. And, the band of fibers connecting the thalami of the two hemispheres, the *massa intermedia*, is found more often in women than in men. This provides a woman with a potential for intense orgasms that propel her into an altered state of consciousness culminating in an ecstasy that appears to be similar to indigenous individuals who have been possessed by spirits. This capacity provides women with extraordinary skills in shamanic practice. In fact, Barbara Tedlock points out that the word for orgasm is the same as the word for trance in many languages!

¹⁸ *Ibidem*, p. 89.

It is this great capacity of the human mind, the capacity to access a wide range of experiences from a number of body, and specifically brain sources, that give us our potential for experiencing spirit and achieving spirituality. These higher levels of consciousness do not arise from our normal everyday routine experiences. They come from a special learning and a discipline that trains and entrains the mind to emerge into higher levels of consciousness and knowing. This realm of knowledge and consciousness is necessary for the healthful survival of culture, society, and the individuals who are a part of that society. It is normally the elders of traditional society, men and women who have experienced the joys and excitements, the sadness and tragedy, the challenges and tribulations of life, who are the teachers for the younger members of a community. In modern urban societies, the culture of science and technology, corporate business and media advertising, has taken over the governance of the culture and the programming of uncritical individual minds. The wisdom of our teachers has been eclipsed by the culture of capitalism, materialism, individualism, and narcissism and has led to a whole host of ills —medical, nutritional, psychological, economic, and political— ills that crept into the space left vacant in the absence of the traditional wisdom of the elders who lived connected to Mother Earth, valued the quality of intimacy in relationships, and knew how to experience joy in everyday life.

It is my hope that higher levels of consciousness will be experienced by greater numbers of people around the world; a level of mind that reaches a critical mass of a population that not only enables the individual, but whole populations, to experience a greater peace of mind, lessen the possibility of afflictions, and heighten the possibility of teaching the knowledge to a younger generation.

