Theory

PART THREE: A MULTIDIMENSIONAL MODEL OF THE DECEASED STATE OF CONSCIOUSNESS

Christian J Hallman, Ph.D.

ABSTRACT

Cardiac arrest and the near-death experience are two closely related phenomena. Some people who survived cardiac arrest reported experiencing an extraordinary realm that includes a dark tunnel and a brilliant light. To map out this unique realm, a multidimensional model is presented to help explain how people can experience a variety of physical phenomena during the dying process. Beyond this bio-physical model, there is a psycho-spiritual realm that will also be discussed in this paper. To learn more about the connection between the bio-physical and psycho-spiritual, and why they are ultimately unified, a couple of methods are presented for studying any state of consciousness or stream of awareness. This is followed by a model summarizing the primary functions and essential abilities of consciousness

KEYWORDS: deceased state of consciousness, NDE, perception, motivation, reason, interpretation, force, energy, synergy, theurgy, intuition, recognition, precognition, retrocognition, illumination, attention, potention, intention, retention

INTRODUCTION

Perhaps nothing sparks the curiosity more I than what happens to our mind after bodily death. Most Americans, regardless of their age or level of education, say they believe in life after death.1 However, death is still a fearful, frightening happening, and the fear of death is a universal fear even if we think we have mastered it on many levels.² Throughout the ages many cultures from around the world have both documented and even attempted to explain the so-called afterlife.³ For the ancient Egyptians, those who were dying could look forward to eternal existence in the world they had known during life and their survivors could feel that their deceased relatives and friends were still in their midst.⁴ Different terms like heaven, purgatory, limbo and hell have been used to describe such a realm.⁵ Books like the Tibetan Book of Living and Dying and Swedenborg's Heaven and Hell provide some very detailed descriptions of the afterlife. 6,7 According to the Buddhist teachings, there are six possibilities that one may transition to after bodily death including four different realms of heaven, hell, titans and hungry ghosts; the other two possibilities are reincarnating as either a human or animal in the next life.8

So what happens to consciousness after bodily death? Some researchers have turned their attention to studying mediums – people who can channel information from the dead;^{9,10} some have investigated cases of haunted houses, ghosts, apparitions, poltergeists and death bed visions;¹¹⁻¹³ while

others have documented cases of reincarnation. These studies have provided some compelling evidence, which supports the survival of consciousness from bodily death hypothesis, but they don't tell us what happens to conscious experience while transitioning during the dying process.

One of the more well-known phenomena that can provide us with a glimpse of the afterlife is the near-death experience (NDE). Quite simply, NDEs seem to give those who experience them a picture or sample of an afterlife, or more appropriately, the survival of some form of consciousness after the death of the living material body. 19 The NDE has become a household term thanks to a number of popular books that have been written about it. 20-24 There has even been much interest in studying the NDEs of children.^{25,26} Some commonly reported principles of the NDE include peace, joy and love.²⁷⁻³² Approximately eight million people from the United States admit to having had some kind of NDE.³³ People who recovered from cardiac arrest have also reported many of the well documented phenomena of the NDE. In this paper, the term deceased state of consciousness (SoC) will sometimes be used synonymously with the NDE. The number one qualifier of a deceased state or clinical death is cardiac arrest.34 Without the heart pumping the blood throughout the body, there can be no respiration, and without the vital molecules from the air flowing into the body, the brain cannot survive long. If the brain does not receive these important molecules within two to four minutes, the injury becomes irreversible.³⁵ As blood flow to the brain

ceases, our abilities for sight and comprehension fail; tunnel vision ensues, and everything becomes dark.³⁶ Clinical death then is the result of no heartbeat, respiration and brain activity. Despite all of this, Sabom found that 43% of cardiac arrest patients reported having an NDE.³⁷

Many NDE theories have been presented ranging from a biological explanation to a more theological interpretation.^{38,39} Some theories propose that NDEs are simply false memories, which can stem from hallucinations generated within the brain. 40,41 These can occur when the brain is deprived of oxygen.⁴² Some researchers even suggest that NDEs can be triggered by taking certain chemical agents like ketamine, lysergic acid diethylamide (LSD), and dimethyltryptamine (DMT).43,44 Of these three, DMT is actually part of our own physiology. Strassman suggests that DMT is naturally produced in a part of the brain called the *pineal body*. This tiny organ is about the size of a grain of rice, and is shaped like a pine cone, hence how it got its name. Interestingly, no other part of the brain contains so much serotonin, a neurotransmitter, 5-hydroxytryptamine (5HT), that works at the synapses, or is capable of making melatonin which is a neurohormone. 11 Descartes not only believed that the eyes were the windows into the soul, but that the pineal body was the seat of the soul. To Yoga practitioners, the pineal body strongly correlates with the "Third Eye" chakra. In the New Testament Jesus made statements like, "The eye is the lamp of the body, if it is good, then the whole body will be full of light (Matthew

6:22)," and "the kingdom of God is within you (Luke 17:21)." These two Biblical verses acknowledge the importance of an inner third eye, light, and a realm of God that can be accessed from within. If we take all of these notions of the pineal body into consideration, it may actually serve as a functioning organ directly involved in the visual perceptions of NDEs. Let's now examine some important abilities of perception.

ABILITIES OF PERCEPTION

In my previous papers (Part One and Part Two) I covered three distinct abilities of perception: sensation, imagination and emotion.^{47,48} Another crucial ability that also helps shape our perceptions of the world is reason. This ability mainly functions through a conductive process. Two types of reason include: *inductive* and deductive. Inductive reasoning is based more on initial or personal experience. If I push an egg over the edge of my balcony and it splats all over the ground, and then repeat this procedure several more times and get the same result, I presume the next egg I push over the side of my balcony will experience a similar fate. This conclusion is based on inductive reasoning (or a posteriori). For inductive reasoning, it is improbable that the conclusion is false if the premises are true.⁴⁹ Scientists employ inductive reasoning when they frame hypotheses based on a limited number of observations or experiments.⁵⁰ However, if I say that every egg will fall to the ground according to the laws of gravity, this conclusion is based more on deductive reasoning (or a priori). For deductive reasoning, the

conclusion cannot be false if the premises are true.⁴⁹ Deduction is based on the strict rules of logic.⁵⁰ Reason is a perceptual ability that helps us describe the nature of cause and effect. Furthermore, "reasoning conductors" are hypothesized in this model to be profoundly involved in the perceptual processes of NDEs.

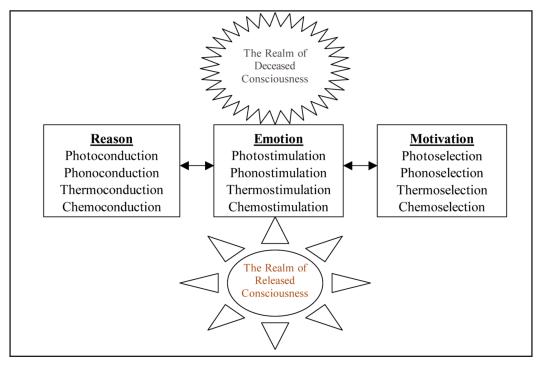
Another important perceptual ability that must be addressed is motivation. ability functions mainly through a selective process. Motivation refers to the initiation, direction, intensity and persistence of behavior.⁵¹ Like reason, motivation also has two types: extrinsic and intrinsic. Extrinsic motivation is based more on external factors. If I want to work for an organization because they pay well, this is known as extrinsic motivation since money is an external factor. Intrinsic motivation is based more on internal factors. If I want to work for an organization because I feel in my heart that it's the right career path for me to take in my life, this is intrinsic motivation. When an NDEr returns to waking consciousness, motivation seems to play a vital function in this perceptual process. "Motivational selectors" are also hypothesized to be profoundly involved in the perception of NDEs.

In a survey done by Long, NDErs reported a variety of emotions both during and after the experience.⁵² This is because reason and motivation are very much related to emotion. The model below (see RF 1) shows how reason, emotion and motivation work together for two different states of consciousness (released and deceased). In

this model I would like to introduce several new words that parallel some of the terms I shared in part two: photoconduction and photoselection, phonoconduction and phonoselection, thermoconduction and thermoselection, chemoconduction and chemoselection. The first two abilities help shape or form visual perceptions during a deceased SoC. Some of the common visual perceptions that NDErs report are: deceased relatives, compassionate "beings of light," and beautiful cities of light.⁵³ When people experience cardiac arrest, obviously the photoreceptors in their eyes are no longer capable of providing this kind of organized perceptual information. Yet this does not prevent NDErs from experiencing visual perception. In some extraordinary cases, people blind since birth have miraculously reported some form of visual perception during their NDEs.54,55 Phonoconduction and phonoselection help shape or form one's audio perceptions during a deceased SoC. Some of the commonly reported audio perceptions of NDErs are heavenly or majestic music, a voice, tingling bells, loud ringing, buzzing noise, whirling noise, clicking, roaring, banging, etc. 20,56,57

In Buddhism, the "Heavenly Eye" and the "Heavenly Ear" are two of the six superpowers that were realized during the Buddha's enlightenment.⁸ In her book *Practical Mysticism*, Evelyn Underhill writes:

The "Simple Eye" of contemplation, about which the mystic writers say so much is then a synthetic sense; which sees that white light in which all colour is, without descrete analysis of its



RF 1.

properties. The "Simple Ear" which discerns the celestial melody, hears that Tone in which all music is resumed.⁵⁸

The out-of-body experience (OBE) is a commonly reported phenomenon of people who had NDEs.⁵⁹ As people transition to a deceased SoC from a released state, reason, emotion and motivation are still deeply involved in shaping their perceptual experiences. Sometimes emotion and reason are considered two totally opposite abilities. Wang noted differences in the decision making process between the two; emotional choice preferences were often the opposite of rational choice preferences with more risk-seeking qualities.⁶⁰ The overuse of one can even hinder the function of the other. Emotional reasoning is an example of how

overwhelming emotions can distort one's ability to reason. However, emotion and reason are also linked. Damasio studied patients with brain injuries and discovered that damaged regions to certain parts of the brain impaired both emotion and reason simultaneously. Moreover, emotion and motivation are also linked. Both *move* us in some way and load high on *intensity* or *energy*. Emotion and motivation seem characterized by heat and pressure.

Figure 1 outlines five abilities of perception: imagination, motivation, emotion, reason and sensation. Each of these abilities helps us perceive a wide range of information in the physical world. With these five perceptual abilities we can have a variety of experiences.

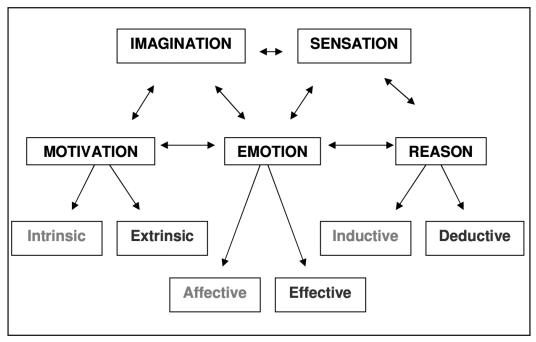


Figure 1. Five Abilities of Perception: Reason, Motivation, Emotion, Imagination and Sensation. With these five perceptual abilities we can have a variety of experiences.

outlined by Moody and Atwater, it appears that NDEs tend to overlap with other well-documented experiences, including out-of-body experiences (OBEs) and mystical-religious experiences (MREs). 20,66 As we have covered earlier, it is quite common for NDErs to report an OBE, which is a characteristic of a released SoC. In a survey done by Fenwick and Fenwick, of the 500 people who had a NDE, 66% also had an OBE. To Some NDErs have been known to experience a climax which can include a

religious enlightenment or even a mystical

union. An MRE is a characteristic of what Krippner calls an *expanded* SoC.⁶⁸ People

who have MREs tend to go through a

NDES AND OTHER RELATED EXPERIENCES

After examining the NDE characteristics

profound transformation in their lives. Similarly, people who had NDEs report significant life style changes afterwards.⁶⁹ The notion of one's individuality or ego dies during this mystical transformation.70 Cultures who acknowledge this expanded or awakened SoC also understand the importance of the dying process. In Islam, experiencing this kind of transformation is known as fana, and in Buddhism it is called nirvana. Fana is the disintegration of one's narrow self-concept, social self and limited intellect; nirvana is a state of consciousness in which all cravings and desires have become extinguished.⁷¹ Although such words as annihilation and extinction are used to describe such a powerfully rare experience, other terms like liberation and freedom are also used. Fana and nirvana both attempt to describe a state of purification or a total cleansing of the mind. A common metaphor for these descriptions is "wiping the slate clean." These mental cleansings may help us understand why the majority of people who regain waking consciousness after cardiac arrest cannot remember anything. Still there is yet another type of experience documented in Buddhism called nirodh, which could very well be classified as a deceased SoC. Nirodh is a state that can last up to seven days long; the experiencer's heartbeat and normal metabolism cease. At the residual level, metabolic processes continue just enough to prevent the body from decaying like a corpse.⁷²

NDES AND THE DECEASED SOC

It seems quite clear that an OBE can be equated as a released SoC, but does the NDE equate as a deceased SoC? Based on how the NDE has already been defined, it's much more difficult to do so. Besides the released SoC, there are other overlapping states. For example, many NDErs report a panoramic life review.⁷³ People can actually experience a panoramic life review during what Krippner calls a *stored memory* SoC. This discrete SoC involves past experiences or events that are usually not immediately available to an individual's reflective awareness.⁶⁸ An estimated twelve to twenty percent of NDEs include a life review.^{67,74}

Perhaps the most challenging phenomenon of an NDE that makes it difficult to equate with a discrete state is the perception of light at the end of a dark tunnel. Hunt explains the tunnel and the "light of the void" experience as a complex synesthesia.⁷⁵ What is synethesia? According to Cytowic, synesthesia is the involuntary joining in which the real information of one sense is accompanied by the perception of another sense.⁷⁶ Synesthesia is also one of the main characteristics of a psychedelic SoC. While experiencing this discrete state, one may perceive a variety of synesthesiac phenomena such as: hearing colored music; visual pain; tasting geometric shapes; geometric hearing; seeing colored auras, geometric shapes, numbers and words. Masters and Houston have identified three distinct levels of the psychedelic SoC.⁷⁷ Based on these examples, an NDE can encompass at least four specific states: released, stored memory, psychedelic and deceased. Many of these states tend to overlap with one another. We can construct a multidimensional map to help us measure some of the phenomena that are commonly experienced from these other discrete states of consciousness.

DIMENSIONAL USAGE

In parts one and two I outlined multiple dimensions of motion, space and time. 47,48 We can use these different types of dimensions to measure the movement, size, and age of any existing physical object. It is also possible to use mathematical dimensions to measure an objects *power*, i.e. capacity to perform work, and *strength*, i.e. capacity to influence or cause physical change. In physics, the concepts used for these phenomena are known as *energy* and *force*, which are almost synonymous terms. If energy equates with power, force can represent its strength. Energy behaves

through different types of forces, and a force can manifest through different types of energy.

QUANTUM STATES

What is the relationship between energy and force? If we treat one of these as the subject and the other as the object (or vice versa), we still need a term that connects both by including a link between the two. We can designate the word "state" as that holistic term. All states, whether they be physical (e.g. solid, liquid, gas, etc.) or psychological (e.g. sleeping, waking, dreaming, etc.) in nature are really quantum states. Within the physical world, a quantum state can be defined as an entire networking system that consists of subject(s), object(s) and link(s). "quantum link" between all things could provide a better understanding of how humans come to understand anything at all.⁷⁸ Since the 20th century quantum physicists have experimentally demonstrated that an observer can affect the observed through the very act of observation. How is this even possible? According to Goswani, quantum measurements interject our consciousness into the arena of the socalled objective world, whereas a quantum collapse is a process of choosing and recognizing by a conscious observer.⁷⁹ When psychologists conduct field research in a work setting, they notice how employees tend to make changes in their behaviors as a result of knowing they are being observed. The main reason psychology experiments need to be blinded or even double blinded is because experimenters tend to get results that confirm

their expectations.⁸⁰ However, even with the observer hidden, like those studies conducted in parapsychology experiments, an experimenter effect is still noticeable between believers (e.g. sheep) and nonbelievers (e.g. goats).81 These observer effects inform us that experimenters display the features of an actual participant in these experiments, regardless of what kind of control is being used. The key ability for making this happen is intuition, which I define as the ability for obtaining immediate or direct knowledge through a To know immediately, then, connection. or intuitively, is for mental content and object to be identical.82 The connectivity between mind and object is what makes this possible. Intuitive knowledge usually comes to fruition from three important cognitive abilities: recognition (e.g. insight), precognition (e.g. foresight) and retrocognition (e.g. hindsight). Not only does intuition have a cognitive function, but a volitional component (e.g. psychokinesis) as well. While studying gifted subjects, Schmidt measured the action of psychokinetic effects on pre-recorded random processes.⁸³ We can also interpret this finding as evidence for obtaining retrocognitive information. Regardless of which interpretation provides a more favorable explanation, intuition is still the key ability for establishing the connection between the subject and object. Without utilizing intuition in the physical world, we would struggle immensely trying to link any material object with its subject matter.

Although researchers can identify a subject and an object, they can never totally isolate

the two as completely separate from one another as long as there is a connective state that links the two together. A feature of quantum systems is quantum inseparability, which implies that all quantum objects that have once interacted are still connected.⁸⁴ Particles of light called photons seem to display this interconnectedness. The mathematics predicts that when two photons begin together and then simultaneously travel even to opposite ends of the universe, what happens to one photon can be precisely and instantly observed in the other.⁸⁵

One distinction between a physical state and a psychological state is that the former is a finitely divisible, close-ended energetic system; and the latter is an open-ended synergetic continuum of infinite possibilities. An NDE involves both physical and psychological states. For now, let's focus on

the physical. To measure quantum states of a more physical nature, we can use multiple dimensions of energy, force, motion, space and time (see Figure 2).

ENERGY AND FORCE OF NDES

Two phenomena that NDErs often report are: 1) the "dark" and 2) the "light." NDErs often describe an acceleration or movement through a dark but not frightening space, sometimes described as a black hole or a tunnel; this is followed by ascending toward a brilliant white light at the end of the darkness, which is sometimes perceived as golden in color. 66,73 These two commonly reported phenomena are really different manifestations of energy and force. We can further explain the dark and light phenomena with different types of energetic substances.

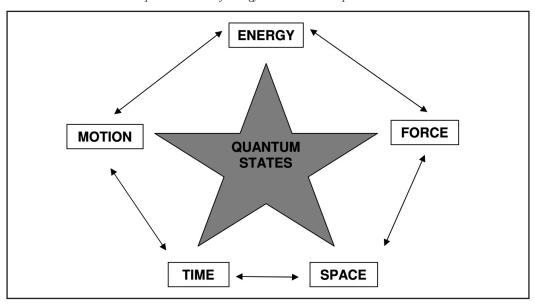


Figure 2. Quantum States of a more physical nature are measurable using multiple dimensions of Energy, Force, Motion, Space and Time.

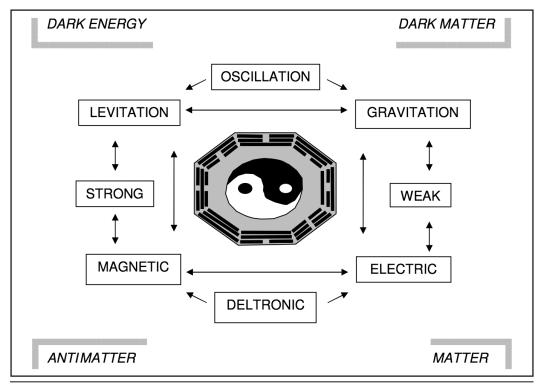
ENERGETIC SUBSTANCES

In my previous paper (part two), I discussed the topics of dark energy and dark matter in addition to the more well known energetic substances of matter and antimatter. ⁴⁸ Dark matter and dark energy are two energetic substances which can be used to explain some of the phenomena that NDErs typically report, including the rapid pulling or levitating through a dark tunnel. Matter and antimatter are two energetic substances that can be used to explain the phenomenology of light. These four

substances are all included in Figure 3. Each of these substances has the potential to exist in multiple quantum states. Plasma, colloid, and Bose–Einstein condensation are just a few examples.

One type of substance that is hypothesized to emerge from the lowest possible quantum state is called zero-point energy. It's a type of subtle energy that fills the vacuum of empty space where there is no matter or other outside source of energy.⁸⁶ This vacuum energy is so large that, for a "flat"

Figure 3. According to Taoist Cosmology, Dark Energy, Dark Matter, Antimatter and Matter are four energetic substances that emerged from the creation of Primordial Energy (first substance). Oscillation, Gravitation, Levitation, Strong, Weak, Deltronic, Magnetic and Electric are force fields that emerged from the creation of Yin (dark force) and Yang (light force), which are depicted as the black and white circles in the center. Each field can combine with another to form a secondary force field. The Electro-Magnetic field and the Electro-Weak field are two well known examples.



universe, the intrinsic total energy contained within the volume of a single hydrogen atom is about one trillion times larger than that contained in all the physical mass of all the planets plus all the stars in the entire known cosmos out to a radius of 20 billion light-years.⁸⁷ The total amount of zero point energy is calculated to exceed all other energy in matter by a factor of 10⁴⁰, or 1 followed by 40 zeros.⁸⁸ This zero point energy comes from all types of force fields.⁸⁹

FORCE FIELDS

Gravitation and levitation represent two dark force fields because they are more directly related to dark matter and dark energy. Gravity works by pulling or attracting an object and levity works by pushing or repelling an object. Whinnery's study of fighter pilots subjected to extreme gravitational forces, NDEs were triggered after they became unconscious.⁹⁰ The electric and magnetic fields represent two light force fields because they are more directly related to (light) matter and antimatter. Persinger has been able to induce the NDE in some people by stimulating the temporal lobe using magnetic fields.⁹¹ Unlike the dark force fields, which can either pull or push a physical object, each light force field can do both. In part two, I covered the deltronic and oscillational force fields. 48 Both of these fields serve as mediators between the light and dark forces respectively. Strong and weak are known as the nuclear force fields. Traditionally, we were taught in chemistry that all atomic elements have a nucleus located in their center. composition of an atomic nucleus consists of two different types of subatomic particles called protons and neutrons. The strong force is responsible for keeping these two types of particles tightly crammed together inside of atomic nuclei. 22 Additionally, these particles can experience a phenomenon called radioactivity. The weak force plays an important role in whether and how readily a proton or a neutron decays in a nucleus. 33 When these particles break down, smaller components can be identified. Physicists call these *quarks*. The strong force is also responsible for keeping quarks "glued" together inside of protons and neutrons. 22

I would like to propose an eight force field model (see Figure 3). Each of these force fields (e.g. electric) is fully capable of combining with another (e.g. weak) to form a secondary force field (e.g. an electro-weak field). Of these, physicists are most familiar with the electro-magnetic (EM) field, which is the combination of an electric and a magnetic field. In her laboratory at the University of Alabama, Ning Li has been able to levitate objects using powerful magnets.⁹⁴ Catherall et al. has also demonstrated the levitation of small objects by using magnetic fields.⁹⁵ These two examples could possibly represent an interaction between the levitation and magnetic fields. Having sixty-four potential combinations makes it possible for us to observe a variety of effects like: scalar fields, torsion fields, the electrostatic force, the Casimir force, the Van der Waals force, etc. We may question if these eight distinct fields truly represent the primary forces of nature. If so, then how did these fields

emerge? Perhaps we can find some of these answers by examining an ancient Chinese philosophy known as Taoism.

TAOIST COSMOLOGY

The eight force field diagram in Figure 3 is very compatible with Taoist Cosmology. According to Taoist teachings, there are two primary forces of nature, which are shown in Figure 3 as a black and white dot in the center. These are known in Chinese philosophy as Yin and Yang. Yin is characterized as the dark, passive, enduring and more receptive force of nature, while Yang is characterized as the light, active, changing and more generative force of nature. In Chinese culture, there is a term for life force called qi, which is a combination of Yin and Yang. These binary forces naturally join together forming a unified field or unitary bond through the creation of primordial energy. So what is this primal energy? In Taoist Cosmology, Yin and Yang resulted from a primordial chaos.⁹⁶ This primal spark was initially created by Tao - the "Ultimate Source" of all that is. We can begin to understand this creative process by interpreting the first two steps outlined in verse 42 of the Tao Te Ching:⁹⁷

Tao gave birth to One One gave birth to Two

If Tao is the unknowable Creator or source of all creation, and One represents primordial energy, Two must then symbolize the binary forces of Yin and Yang. The next two steps from verse 42 of the Tao Te Ching reads:

Two gave birth to Three
And Three gave birth to all the
myriad things

Again, if Two symbolizes the binary forces, and Three equates with the tertiary complements of motion, space and time, all the myriad things must then include a plethora of elementary particles (e.g. fermions), subatomic nuclei (e.g. hadrons), atomic elements (e.g. helium), etc. Primordial energy represents the subtlest and purest form of energy ever created. Based on this interpretation we can conclude how the four energetic substances and eight force fields (shown in Figure 3) emerged from the Tao's creation of primordial energy and binary forces. With the creation of energy, force, motion, space and time, simple equations like $E = mc^2$ and F = ma can be formulated. The four steps outlined in this Taoist text provide a logically concise summary of the formation of the physical universe.

AN EXPANDED MULTIDIMENSIONAL MODEL

In part two, I proposed a 26D model that consists of fourteen dimensions of motion, six spatial dimensions, and six temporal dimensions.⁴⁸ I now propose a more expanded model (see Figure 4) that includes an additional 480 dimensions! Why 506 dimensions? According to superstring theory, 10 or 26 or 506 dimensions must be postulated if these theories are to be mathematically consis-

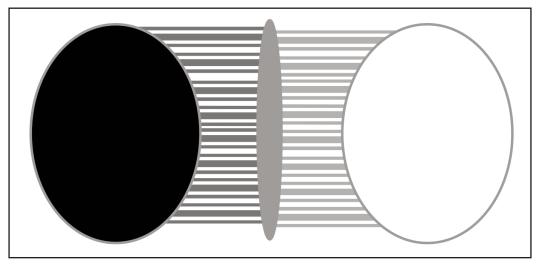


Figure 4. The relationship between energy and force can ultimately be explained as a unified field of Primordial Energy and the Binary Forces of Yin and Yang. As these light and dark forces unite with each other through numerous dimensions emanating from Primordial Energy, many phenomena like Phonons (sound quanta), Photons (light quanta) and the Higgs (mass quanta) can emerge through motion, space and time. We can trace the origins of every energetic substance and force field to this unified bond.

tent. 98 By utilizing another 480 dimensions it gives us plenty of freedom for measuring any type of energetic substance or force field – including the very origins of both energy and force.

In the very middle of the diagram in Figure 4 we can view the primordial energy (shown in gray). Yin is the black circle and Yang is the white. Each string or line shown in this illustration represents a cluster of 10 dimensions, making it possible to experience numerous quantum states. Notice there are 24 strings on each side, or 240 for a total of 480 dimensions. Ultimately, I think the fundamental relationship between these two forces is what Albert Einstein was attempting to explain as the unified field.

With a 506D model, it may be possible to measure every energetic substance, force field, motion sector, spatial domain and temporal zone of the entire multidimensional universe or multiverse. We can summarize these dimensions as:

$$U = E^{60} \times F^8 + M^{14} + S^6 + T^6$$

U is the multidimensional universe or multiverse. E and F both represent energy and force, while M, T and S represent motion, time and space. If each energetic substance is capable of existing in fifteen different physical states, by multiplying these four substances by fifteen we come up with a total of sixty quantum states. Then if we multiply these different states by the

number of force fields (eight) we come up with 480. By including the dimensions of motion, time and space outlined previously in parts one and two, our model now has a total of 506 dimensions.

From Dreaming to Deceased

Now let's turn our attention to the diagram in Figure 5. This multidimensional model of the physical universe can be used to explain how bio-physical life forms naturally process through numerous cycles of change throughout their lives. Change is first initiated by the formation of primordial energy (gray) and the binary forces (black and white dots), which are illustrated within the center of the diagram. Since every object within the physical universe is subject to motion, this model can help us interpret the constant movement of all biological organisms by outlining three motion sectors: containment (red), material (yellow) and cosmic (blue). As I covered in part two, psychologically we tend to access the material sector during waking consciousness, the cosmic sector during dreaming consciousness, and the containment sector during a released SoC.⁴⁸ From any of these sectors, we are capable of transitioning to a deceased SoC. For instance, when people have an NDE, it may begin as an OBE at a location in close proximity to their physiological body (PB). These examples are evident in the detailed reports of the hospital setting such as the operation room, which have been given by people after recovering from clinical death.34,37 People are also at a high risk of cardiac arrest while sleeping due to certain medical conditions like sleep apnea.⁹⁹ Perhaps these survivors are more likely to have an NDE while transitioning from a dreaming SoC. With their physiological eyelids closed at the moment of cardiac arrest, NDErs have a higher probability of transitioning to the deceased SoC from a dreaming state. As I mentioned in parts one and two, REM is a characteristic of the dreaming SoC. ^{47,48} A recent theory proposed by Nelson et al. attempts to explain NDEs as a result of a phenomenon known as REM intrusion. ¹⁰⁰ One common form of REM intrusion that researchers are familiar with is sleep paralysis. ¹⁰¹

One type of dreams that researchers have focused their attention on is called the lucid-dream experience (LDE). An LDE is characterized as being consciously aware of the dream state by realizing that one is actually dreaming. Since we have established that OBEs are often a precursor to NDEs, it would be interesting to find out if there is any relation with LDEs. Levitan and LaBerge found that of the 572 people who filled out a questionnaire, 452 of them claimed to have an LDE. 102 And of these 452, 39% have also had an OBE, as compared to 15% who did not claim having an LDE, but reported having an OBE. LDErs can be differentiated from non-LDErs by their heightened awareness and an ability to remember the contents of their dreams. Since LDErs are more likely to recall memories from OBEs than non-LDErs, we can hypothesize that LDErs are more likely to report having an NDE after surviving cardiac arrest than non-LDErs.

On the left hand side of the diagram in Figure 5 we can observe the cosmic sector

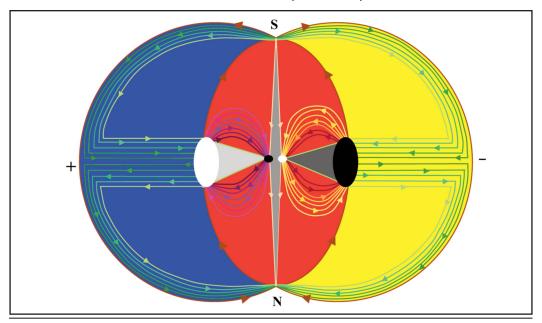
of dreaming consciousness, which is the realm of the imaginal body (IB). Notice the white hole bordering the cosmic and containment sectors. Some NDErs have reported experiencing this brilliant light immediately upon death.⁵³ Van de Castle explains that light is sometimes experienced by lucid dreamers:

When light appears in a lucid dream the dreamer typically reports some form of transcendent experience, and the feelings associated with its presence are usually labeled as extremely joyful, exhilarating, and sometimes transforming. The

appearance of light in a lucid dream seems to be associated with an evolution of consciousness or awareness to a very high level. ¹⁰³

Van de Castle's explanation of what lucid dreamers experience as light is very similar to what happens to NDErs. As NDErs pass through a white hole from the cosmic sector into the containment sector, they may begin to perceive a force at the end of the tunnel. The black dot shown at the end of the light gray tunnel in Figure 5 represents this powerful dark force of nature.

Figure 5. All energetic substances, force fields, motion sectors, spatial domains and temporal zones of the Universe can be used for mapping out the multiple dimensions of the Causal, Emotional, Imaginal and Physiological Body. In the very center we can observe the Binary Forces (Yin and Yang) and Primordial Energy, which makes up the composition of the Causal Body. On the right side flowing clockwise is the sector of the Physiological Body, while the Imaginal Body is found in the sector flowing counterclockwise on the left side. The reciprocal flowing sector of the Emotional Body completely surrounds and penetrates through these two sectors, and contains all of the Dark Energy, Dark Matter, Antimatter and Matter of the entire Physical Universe.



Subtle Energies & Energy Medicine • Volume 19 • Number 2 • Page 71

From Waking to Deceased

With their physiological eye-lids still open at the moment of cardiac arrest, NDErs are more likely to transition from a waking SoC to a deceased state. Some NDErs who have experienced clinical death simply remain earthbound, while others end up passing through a dark tunnel or black hole. 104 Let's now turn our attention to the right hand side of the diagram in Figure 5. Notice a black hole bordering the material and containment sectors. According to Samantha-Laughton's Black Hole Principle, black holes exist at every level of the universe. 105 Some of the phenomena of black holes may also help explain why so many cardiac arrest survivors cannot recall what happened. If memory requires energy, and if black holes have gravitational fields so powerful that not even light can escape, this may give us a clue why many people can't recall a single memory from their deceased SoC. In a prospective study involving patients from 10 different Dutch hospitals, van Lommel et al. found that only 62 of the 344 survivors of cardiac arrest could remember being consciously aware during their clinical death.34 In another study, Parnia et al. calculated only about 11% of 63 cardiac arrest survivors could remember their NDE. 106

Another valid explanation of why most survivors of clinical death have difficulties remembering has a physiological basis. To begin with, very few people are resuscitated from cardiac arrest. Nichol et al. noticed that out of 1,748 cardiac arrest patients, only 126 survived. Of these 126 survivors – eighty-six of them were

interviewed afterwards – it was evident that the majority of them suffered from brain damage. Having good memory recall depends on a healthy functioning brain, without it, reporting what may have happened is less likely.

As NDErs travel through a dark tunnel – shown in Figure 5 as dark gray in color – they enter the realm of the containment sector (shown in red). The containment sector is equivalent to what others may identify as the astral world. This is the world in which we find ourselves immediately after death. Atwater has documented three levels of the astral world:

The lowest level is the equivalent of emotional excesses, demonic possession, and the various realms of hell. The intermediate level is similar to the earth except lovelier, with many opportunities to rest, rehabilitate, and learn. The highest level is the "summerland" of heaven, with angelic assistance and unconditional love; wider perspectives about life are gained, and greater vistas to creation are revealed.¹⁰⁹

The lower levels are dark ones, but as one advances to each higher level, there is a greater abundance of light. This containment sector can be viewed as a multidimensional realm consisting of both a heaven and a hell. Heaven may include experiences of pastoral landscapes, cities of light, spiritual beings and angels. 67,111-119 Hell may include experiences of bewildered spirits, darkness and demons. 111,120-123 We

can view this contrast between the dark and the light in Figure 5. This diagram illustrates the lowest level of the astral world near the black hole bordering the material and containment sector. The white dot at the end of this dark gray tunnel in Figure 5 represents the powerful light force of nature. While journeying toward the light, an NDEr is able to ascend each of these heavenly levels and perceive a number of phenomena commonly associated with the afterlife. NDErs often report moving through a tunnel via accelerated motion.¹²⁴ The highest level of heaven or "the seventh heaven" in Atwater's model is called the celestial.¹⁰⁹ This level I presume is the final realm in which NDErs can still perceive themselves as individual entities (e.g. "I" or "me") from everything else (e.g. spiritual entities and angelic beings) around them.

As NDErs journey into the light and become completely engulfed by it, they experience an "at-one-ment." For the NDEr, this can seem like eternity. As this occurs – time and space lose meaning – the perception of multiplicity is replaced with the illumination of unity. In Figure 5 we can view the light force, primordial energy, and the dark force all joined together in the very center. We can interpret this joining as a unified field.

CAUSAL BODY

People have reported experiencing some bodily form during their NDEs. 126,127 This body has been described by NDErs with words or phrases like: a mist, a cloud, smoke-like, a vapor, transparent, a cloud of colors, wispy, etc. 20 I will borrow a term

from previous authors called the causal body. 128,129 Unlike the emotional body (EB) that was described in part two, and the IB and PB, which were described in part one, the causal body (CB) is hypothesized to be composed mainly of primordial energy. In theory, the smallest unit of primordial energy is a photon, which is a *light* particle or quanta. Photons have no mass and are neutral - having neither a positive or negative charge - yet they interact with electrically charged objects. 130 Physicists tend to view light as the composition of particles (e.g. photons) or waves (e.g. vibrating electro-magnetic fields). 131 In a survey of NDErs done by Long, a variety of "beings of light" were encountered during NDEs (e.g. relatives, friends, strangers, and religious figures such as angels).¹³² While embodied in the CB, the NDEr may feel as if they have melted into the universe and can be everywhere at once.¹³³ If the CB was composed entirely of photons it would not have any mass whatsoever and therefore be weightless. MacDougall successfully measured patients by weighing them before and after the moment of death and found an average weight loss of a little over one once. 134 How is this possible? If weight is the result of a gravitational pull on an object, then part of the compositional structure of the CB must consist of an energetic substance with detectable mass. In part two, I mentioned the hypothetical Higgs boson, which is a *mass* quanta. Besides photons, the composition of the CB may also consist of these Higgs quanta. Unlike photons, which can emerge from the zero-point fieldthe lowest possible energy state in a

vacuum, the nonzero Higgs field is hypothesized to give all other particles mass and charge, hence why it is nicknamed the "God particle."93,130,135 The CB may also consist of phonons, which are sound quanta. What is the significance of phonons? interpreting the opening verses of the Old Testament (Genesis 1:3), theologians have wondered how our Creator first produced a sound in order to create light. 46 Some cosmologists believe that in the early beginnings of when the cosmos underwent an extraordinary expansion, which was before light could travel unhindered through space, sound waves reverberated freely throughout the universe and may have originated in the first instant of the Universe's life. 136 So phonons explain the sound NDErs perceive.

The anatomy of the CB may consist of very subtle energetic structures called sefirot, which I presume are composed of a combination of phonons, photons and Higgs quanta. Sefirot originally meant "numbers" or numerical potencies. 137 These structures are usually depicted as spherical in shape, and acknowledged by ancient Kabbalist practitioners as emanations of the Divine Creator. 138 Traditionally there are ten sefirot that are connected via twenty-two different paths. 137-139 Together these energetic structures are depicted as a tree representing our archetypal reality. 139,140 If we multiply 32 (the number of sefirot + paths) by 15 (the hypothetical number of possible states of each energetic substance), we come up with 480. This calculated figure is the hypothetical number of dimensions of the CB. Within the Kabbalist teachings, there are four distinct realms or worlds that have been identified: Aziluth, Briah, Yetzirah and Assirah. 137 Each of these identified realms may directly correlate with the CB, EB, IB and PB. Figure 5 can map out the energetic flow of each of these bodies. The PB exists in the clockwise flowing sector; the IB is found in the counterclockwise flowing sector; and the reciprocal flowing sector contains the EB. All three bodies emerged from the CB, which is within the very center.

TRANSCENDING FINITE BOUNDARIES

Some NDErs have reported experiencing a border or a limit of some kind. 20 However, there are additional levels documented in Atwater's model that NDErs are capable of experiencing. These include: 1) the end of manifest, vibratory creation; 2) the void, non-vibratory or pure consciousness; 3) full "at-one-ment" and entry into states of consciousness beyond human comprehension. 109 To avoid any possible confusion, let me clarify the "void" which Atwater describes in her model is not to be confused with what many NDErs call a void when they attempt to explain an entry into a black hole. The "void" in Atwater's model completely transcends any such black and white dichotomy. It has been described by NDErs as pre-creation, or before the "Big Bang."109,141 Bruce Lee's description of the void helps clarify this meaning:

The void is all-inclusive, having no opposites – there is nothing which it excludes or opposes. It is living void, because all forms come out of it and

whoever realizes the void is filled with life and power and the love of all beings. 142

Meister Eckhart – a Christian mystic of the 14th century – referred to God as three persons (a trinity), but called the void "Godhead," which he characterized as the pure, undifferentiated, inert and motionless unity. 143 In the Gospel of Thomas (30:1-2), it seems apparent that Jesus himself realized the difference between the trinity and unity when he stated "Where there are three deities they are divine. Where there are two or one, I am with that one." 144

There is a useful technique taught in Buddhist practice which may help explain how NDErs can transition from a finite, physical system to an infinite, psychological continuum. In his book The Meditative *Mind*, Daniel Goleman attempts to provide some of these details by outlining a map used by Buddhists that consists of eight levels or jhanas.⁷² The concentrative technique highlighted in it involves the practice of contemplating a single object, which can result in unity consciousness or "one-pointedness." The first four jhanas are labeled as material states, and the latter four are called formless states. A crossover between material states into states of formlessness commences at the fourth level. At this level there is no single sensation or thought; the practitioner's breath becomes so still that it is perceived to cease altogether. Even though the practitioner experiences joy or bliss, it is without bodily pleasure or rapture. At the fifth and sixth levels, all perceptions of form cease altogether as the practitioner is more

attentive of the infinite. The mind is now completely free from the close-ended confines of the body. With an infinite number of dimensions available, the practitioner realizes the total freedom of unlimited choices.

This Buddhist map outlined by Goleman can also help us recognize the true source of all that is. At the seventh level the practitioner experiences absorption with nothing-ness, or the void. This dimensionless level is pure choiceless awareness. The practitioner can even access an eighth level by contemplating the peacefulness of the void, which is neither perception nor nonperception. Practitioners can experience this level through a contentless SoC known as nirvana, a state in which awareness of all physical and mental phenomena ceases entirely.⁷² A contentless SoC is purely motionless or completely still, and absolutely unchanging. All ego desires cease to exist as well as all emotional phenomena such as greed, hatred, and sorrow. Experiencing this state of nirvana is a true realization of the Tao. From this "Ultimate Source" we are able to realize how finite universes (close-ended systems) can emerge, and why the infinite (an open-ended continuum) exists in conjunction. All physical objects within our own finite universe are subject to the restricted closeended limitations of space, time and motion. The infinite continuum, which is without end or any boundary whatsoever, is not subject to any such parameters or limitations. As people experience the infinite for themselves, concepts like nonlocality (or spacelessness), and eternity

(or timelessness) are expressed in an attempt to describe the boundless and endless nature of the continuum. By experiencing the Tao through a contentless SoC, we realize the true nature of all creation both finite and infinite. The prerequisite for knowing anything at all is our very own consciousness. We can study consciousness with the scientific method.

METHODS

hat makes any branch of study a credible science is the application of the scientific method. Scientists tend to use two main approaches: quantitative and qualitative. These methods are typically used for measuring both objective and subjective experiences. The quantitative method may start with a question like "What is the object?" Furthermore, researchers can ask other questions: How many are there? Where are they located? What will happen if...? How often...? What is the size of...? Is object A greater than or less than object B...? Does object A work better than object B? This scientific method consists of four steps:

- 1) Observation (Description)
- 2) Formulation (Hypothesis)
- 3) Control (Prediction)
- 4) Replication

General science texts are in agreement on this method as a reliable means for gaining knowledge.¹⁴⁵ The qualitative method may begin with asking "Who (or what) is the subject?" Then researchers can ask further questions like: What is she thinking? How

is he feeling? How did she do that? What kinds of patterns in his behavior can be identified? How does he work with others? What variations in her behavior have occurred? Qualitative research is a source of rich descriptions and explanations of mental processes.¹³ This scientific method also consists of four basic steps:

- 1) Observation (Subject)
- 2) Interview (Focus Groups)
- 3) Case Studies
- 4) Content Analysis

Both of these methods rely heavily on two mental strengths: perception and interpretation. Perception can be defined as the ability for reporting information with a description. This mental strength is required for making any kind of observation. As we have covered earlier, there are five important perceptual abilities. Interpretation can be defined as the ability for providing information with an explanation. To formulate any kind of hypothesis or theory requires this mental strength. How we interpret information depends heavily on several important thinking skills, which are shown in Table 1. The first six cognitive skills outlined in this table are based on Bloom's Taxonomy, and the seventh was added by Passig. 146,147

Both perception and interpretation have helped humanity establish the very foundation of empiricism – a philosophy of science which emphasizes that all knowledge must be experiential. Based on this philosophy, scientific experiments are carefully designed to provide researchers a more controlled

- 1) Memorization ability to classify, identify, title, etc.
- 2) Comprehension ability to include, translate, change, etc.
- 3) Application ability to calculate, demonstrate, improve, etc.
- 4) Analysis ability to divide, categorize, reduce, etc.
- 5) Synthesis ability to combine, organize, restructure, etc.
- 6) Evaluation ability to compare, judge, summarize, etc.
- 7) Melioration ability to adapt, suggest, forget, etc.

approach for experiencing knowledge either directly or indirectly through use of perception. Although quantitative and qualitative methods are useful for studying objective and subjective experiences, neither method was really designed to handle measuring the connective experience.

THE QUANTUMTATIVE METHOD

Gough and Shacklett have proposed a scientific model of connectiveness. 148-150 To support their efforts, I would like to introduce the quantum tative method for measuring connective experiences. Instead of focusing on the differentiated parts (e.g. individual objects), this new method is intended to measure a complete whole, such as an entire state of consciousness. The quantitative method may serve us well for measuring the objective bio-physical realm. Now we can utilize this quantum tative method for measuring the connective psycho-spiritual realm. This new method may start by asking questions like "What is the link between subject and object? Why can they all relate?" The quantumtative method consists of four steps that I've adopted from Petitmengin-Peugot's study of intuitive experiences: 151

- 1) Preparation
- 2) Connection
- 3) Acceptance
- 4) Confirmation

The preparatory step involves the practice of relaxation, which includes calming, quieting and clearing the mind. Relaxation can be defined as the ability to calm and soothe. One way to accomplish relaxation is by simply letting go so the mind can be free. This step prepares us for connecting directly or immediately to anyone or anything. Connection is an important step for establishing a mental link between the subject and the object. This relation makes it possible for the knower to experience the By opening the mind to the infinite possibilities, this step can provide us with access to any conducive SoC. Acceptance is a profound receptivity (e.g. listening). Because this step allows information to be integrated deeply into the psyche without interruption, it also prevents our personal biases from potentially distorting the availability of information being shared. When intuition doesn't operate it is because something is preventing it from operating, namely, the previous conceptions. 152 One caution that needs to be addressed during this step is attempting to identify the information prematurely before letting it integrate properly. Anderson believes that rest and relaxation are essential for the intuitive process to unfold naturally and spontaneously and suggests that incubating the data is an essential feature of intuitive inquiry.¹⁵³ Confirmation then is simply verifying the hunch as either truth or a faulty impression. Researchers must be cautious of possibly mistaking a hunch for true intuitive knowledge. According to this new method, a hunch is analogous to a hypothesis, i.e. nothing more than a tentative explanation. To quantumfy the information as intuitive knowledge, the hunch must first be confirmed as real or true. By definition, an intuition can only pertain to information that is correct. If a seemingly intuitive insight turns out wrong, it did not spring from intuition, but from self-deception or wishful thinking. 154

This new method will help us bridge the gap between the known, unknown and even the unknowable. The unknowable represents any category of information that cannot be logically proven with reason. For example, it is unknowable to predict the outcome of a random event generator (REG) or random number generator (RNG) with a high degree of certainty by using logical deduction. Even in mathematics there are equations which are truly unknowable. 155 Kurt Godel's Imcomplete Theorem demonstrates that it is possible to construct an arithmetical statement that is true but not provable in theory, which basically means that any theory expressing elementary arithmetic cannot be both consistent and complete. 156 In 1936, Alonzo Church and Alan Turing both demonstrated the existence of unsolvable problems by mechanical means. 157,158 Although Godel was able to show that we cannot always prove a statement to be either true or false through use of reason, he never ruled out the possibility of understanding certain truths by intuition. The Buddha taught that intuition, not reason, is the source of truth and wisdom. 159 This is why koans (paradoxical statements) are used by Zen Buddhist practitioners to help them mentally transcend cause and effect thinking. When logic and reason fail, intuition often takes over. 160 This seems to be the case when certain people participate in REG or RNG experiments. Studies have shown that people's scores can significantly deviate either positively (above chance) or negatively (below chance) when they attempt to either make a prediction or even try to willfully influence the outcome. 161 If reason can only help us obtain chance results at best while operating a REG or RNG, then intuition is the key ability for helping us understand why scores can either positively (e.g. precognition) or negatively (e.g. psychokinesis) deviate from chance expectation. As scientific researchers we need to fully acknowledge this important ability, and why it can help us bridge the gap between the known, unknown and unknowable. Implementing this new scientific method will definitely help us measure these intuitive connections.

The quantumtative method is grounded in a philosophy proposed by William James called radical empiricism: To be radical, an empiricism must neither admit into its constructions any elements that is not directly experienced, nor exclude from them any element that is directly experienced. For such a philosophy, the relations that connect experiences must themselves be experienced relations, and any kind of relation experienced must be accounted as 'real' as anything else in the system.¹⁶²

James' philosophy acknowledges the importance of directly experiencing the connection of subject and object. The quantumtative method can help us study an entire SoC by fundamentally measuring the subject/object relation. Every SoC should be accessible and even measurable with these four quantum tative steps. If we wanted to investigate the current trend of "Top 40" songs, we must first learn how to tune the radio dial to the correct station(s) before we can measure (record) the actual songs broadcasted. Based on this analogy, our best option to measure any discrete SoC must start by learning what it takes to access the state directly for ourselves.

In parts one and two I discussed the importance of scientists being able to directly experience any SoC by using the state specific guidelines outlined by Charles Tart. 47,48 A deceased SoC may be one of the more difficult states for researchers to access because of the possible risk of not returning to waking consciousness. Without a guaranteed safe return, the very idea of potentially experiencing death may discourage a lot of researchers from even considering this kind of exploratory study.

Experiencing the insight of a deceased SoC requires the mastery of shifting conscious states. Practitioners of Yoga have been known to make their hearts stop, which is one of the major signs of a deceased SoC. 163 Like many other extraordinary feats, demonstrating this kind of mastery of one's body may realistically take many years of training.

THE QUALUMTATIVE METHOD

There is yet another type of experience that some NDErs report having. It is called the unitive experience, and it differs from the connective experience in certain ways. For a connective experience, the subject and object do share a link, but they can still be identified as different from one another. For a unitive experience, subject and object are completely unified and no longer distinguishable from each another. A good example is when two drops of water combine, they become one, and can no longer be viewed as two individual drops. What makes this type of experience possible is a bond. A bond creates an inseparable unity of subject, object and link. Like the connective experience, neither quantitative nor qualitative methods are capable of measuring the unitive experience, which is why I would like to propose the *qualumtative* method. Like the quantumtative method, this new method is intended to measure a complete whole, such as an entire stream of awareness, which will be discussed a bit later. "Quantum" and "qualum" are two terms that can represent entire wholes, whereas "quanta" and "qualia" are commonly used for differentiating certain parts, such as a distinct quantity or unique quality of a whole.

Quantum consciousness is essentially unity consciousness. 164 The term qualum represents unity consciousness as well. Since intuition is an important ability for having a connective experience, illumination is essential for having a unitive experience. I define illumination as the ability for realizing ultimate or absolute knowledge through a union. This ability represents the highest function of knowing in which the subject/object duality is dissolved by establishing a genuine union; there is no object of experience - not a sensation or a perception or even a thought meaning there is no distinction between knower and known. 165

People can experience illumination via energy (physical power) or luminosity, synergy (mental power), and even theurgy (spiritual power) or *numinosity*. Theurgy is also known as divine power. To harness it would seem God-like. If energy is defined as the physical capacity to perform work, theurgy can be defined as the spiritual capacity to create. What I mean by creation, is the power to create something totally new from absolutely nothing at all. If energy is classified as a substance, theurgy is an essence. Synergy is a powerful blend of energy and theurgy, and can be defined as the mental capacity to transform, which is really a combination of creativity and work. Sometimes our mind cultivates synergy for transforming something that already exists into something else (e.g. an invention). When an artist paints a picture, he or she can only do so because of having pre-existing materials such as paint, brushes, and a canvas to manipulate. An innovation would

be an example of creating something totally fresh and new.

The qualumtative method may start by asking questions about the nature of unity like "What is the bond of subject, object and link? Why are they all unified?" There are four steps of this method that I've adopted from Collins' study of mystical experience: 166

- 1) Awakening
- 2) Purification
- 3) Union
- 4) Transformation

An awakening is often realized as a powerful flash of true brilliance (e.g. the light) by simply absorbing the present moment. Absorption can be defined as the ability to observe, or apply attention. An example of an awakening was written in the New Testament (First letter John 1:5) as "God is light..."46 Purification is a profound spiritual cleansing. For some Christian mystics like St. John of the Cross, it may be interpreted as the dark night of the soul.¹⁴¹ Union is the realization of wholeness. Some may also refer to union as "Oneness" or a unity with all that is (e.g. "All-ness"). In the New Testament (Gospel of John 10:30), one example documenting unity is written as "The Father and I are One."46 Similarly in the Gospel of Thomas (77:2) Jesus said, "I am all: from me all came forth, and to me all attained."142 And transformation is an important step for making change possible. For instance, as two people experience sexual union, a powerful creative transformation occurs at the moment of conception. The

result can be a physical as well as a psychological change. 109 Historically, mystics have been known to transform humanity both physically and psychologically by sharing their teachings with the world, but this tends to occur after they have experienced steps one, two and three. To qualumfy information as unitive knowledge, transforming it into a language that can be understood by others is essential. This may require inventing new definitions for words that already exist or even innovating new terms if no current words are available to convey the information. We can apply this qualumtative method for helping us measure why people can experience divine revelations or a powerful spiritual enlightenment.

QUALUM STREAMS

Earlier I designated the term state for identifying the link between the subject and the object. All states of consciousness include a mental link, which makes it possible for us to have connective experiences in multiple ways. People tend to mentally connect with one another by accessing the same quantum SoC. For unitive experiences, I would like to use the word "stream." This term has been used in more recent theoretical models of consciousness proposed by Dainton and Ingebo-Barth. 167,168 A stream of awareness (SoA) is a qualumtative term that creates a unification of all parts of a whole. There are many possible streams of awareness, which makes it possible for us to have multiple types of unitive experiences. A stream provides a spiritual bond which joins subject, object and link together as a unified whole in much of the same way that water provides

a unifying substance for an entire lake or ocean. To experience a bond of any SoA requires absorption. We can exercise this ability through both contemplative and meditative practices. If relaxation is a precursor for intuition, then absorption can be a precursor for illumination. All people can spiritually unite or unify by realizing the same qualum SoA.

PRACTICAL APPLICATIONS

These newly proposed scientific methods and expanded multidimensional model can be used by scientists, particularly thanatologists to help them learn more about what happens to our consciousness during the dying process. For medical practitioners who provide palliative care, helping people heal who have recovered from a deceased SoC begins with compassion and empathy in assuring them more support of their NDEs. Sometimes NDErs are in need of good answers after returning from death. And if they can't get them from the socalled experts, they may become more reluctant of sharing their experiences with By interpreting this model, thanatologists can provide a thorough explanation if needed, even for those who have never had an NDE. They can also use these new scientific methods for validating the NDE. Figure 6 provides a compilation of the four scientific methods covered in this paper.

For thousands of years, mystics from all over the world have explored the nature of reality by utilizing concentrative and meditative techniques to help them access various quantum states and qualum streams.

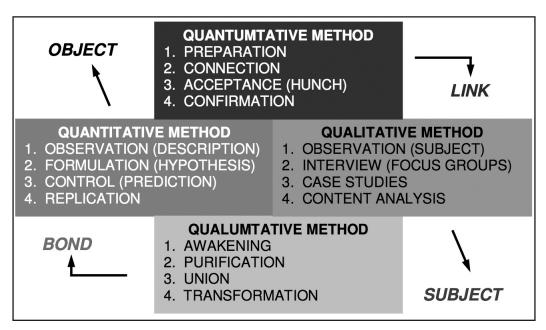


Figure 6. Four Scientific Methods: Quantitative, Qualitative, Quantumtative and Qualumtative. Qualitative and Quantitative Methods are typically used for measuring parts of a whole (e.g. a subject and the object). Qualumtative and Quantumtative Methods can be used for measuring an entire whole (e.g. a bond/link).

With proper training in learning how to access the deceased SoC, modern day cosmologists who question how the physical universe came into existence may find the answers by passing through the various heavens and into the void beyond all motion, space and time. During this journey they will be capable of directly experiencing primordial energy and the binary forces as a unified field. Psychologists could investigate the phenomena of a deceased SoC by observing the behaviors of various beings or entities encountered within these more subtle multidimensional realms. Some researchers might be interested in studying the anatomy of the CB, which may be more directly observable through a deceased SoC.

SUMMARY OF CONSCIOUSNESS

Throughout these papers I've mainly presented how consciousness functions through our very complex multidimensional world. These dimensions include different physical realms (close-ended systems) ranging from the gross manifestation of the physiological body, which can be experienced through a waking SoC, to the subtlest creation of the causal body, which can be experienced through a deceased SoC. Still I have eluded to provide a model of what I theorize consciousness really is. First of all, I would like to provide a summary of consciousness

based on my own life long studies of this mysterious, but engaging topic. Throughout history, scientists and philosophers have studied consciousness from three noticeable mindsets. With each mindset, some philosophers and scientists have reached their own conclusions that consciousness can be explained as:

- an epiphenomenon a by-product of the brain/nervous system
- 2) a **phenomenon** a process of the mind/body interface
- 3) a **noumenon** a metaphysical soul/mind.

From what I've learned, most of the research studies have focused on number one with number two coming in a distant second. An example of number two is Hamerhoff's theory, which postulates an interface between consciousness and the physical realm at the "Planck scale" of 10-³³ centimeters and 10⁻⁴³ seconds. ¹⁶⁹ Some theoreticians have attempted combining mindsets one and two. Zizzi's theory explains how conscious experience emerges from the quantum gravity threshold of the inflationary universe.¹⁷⁰ Amoroso's Noetic Field Theory interprets how individual intelligence arises from a teleological noumenon.¹⁷¹ This brings us to number three, which proposes that consciousness is essentially unobservable to sensory perception and even unknowable through use of logical deduction. Benjamin acknowledges that human consciousness is evident but not physically detectable.¹⁷² Since there is no substantial proof of consciousness, i.e. nobody really knows what consciousness is with certainty nor can tell us what it looks like; the noumenon mindset seems to make the most sense for now.

After studying numerous viewpoints from various cultures around the world, I have reached the conclusion that consciousness includes four primary functions:

- 1) Being (to be)
- 2) Doing (to do)
- 3) Having (to have)
- 4) Knowing (to know)

All other functions of consciousness are really variations or combinations of these. There is also an essential ability involved for each of these functions:

- 1) Attention
- 2) Intention
- 3) Potention
- 4) Retention

For number one, I define attention as the facility of being aware. The adjective for attention is attentive and the verb is to attain. This includes becoming, noticing, letting, achieving, maintaining, etc. For number two, I define intention as the faculty of volition. This includes doing, willing, deciding, performing, etc. The term intention comes from the word **intent**, which means *aim* or *purpose*. For number three, I define potention as the capability for having experience. The term potention comes from the word **potent**, which means strength or power. This includes describing, explaining, obtaining, realizing, etc. And for number four, I define retention as the capacity of cognition. The adjective for

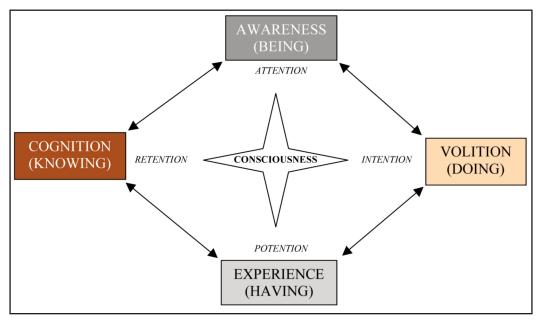


Figure 7. The Primary Functions and Essential Abilities of Consciousness. All other functions and abilities are theorized to be variations or combinations of these. Consciousness is defined as the source of all experience including cognition, volition and awareness.

retention is *retentive* and the verb is to *retain*. This includes knowing, learning, acquiring, remembering, understanding, etc. As we can observe, all of these functions and abilities tend to overlap with the other. Based on these primary functions and essential abilities (see Figure 7), consciousness can be defined as the source of all experience including cognition, volition and awareness.

CLOSING STATEMENTS

In closing, I hope these models can help answer some important questions about the nature of consciousness by providing an explanation of how it can manifest in the physical world through various quantum states and qualum streams. As I have discussed throughout this paper, death is not the end of consciousness. While many NDErs and mystics have shed some valuable insight about the nature of consciousness, it may take some time before scientists are able to comprehend their discoveries as evidence for the continuum of consciousness beyond death. Using both quantumtative and qualumtative methods will definitely help with this process. would also like to encourage anyone interested in consciousness to consider the noumenon explanation. For me, I feel it has really provided a core understanding of what consciousness truly is. My final model and definition of consciousness is primarily based on this mindset.

• • •

CORRESPONDENCE: Christian J Hallman, Ph.D. hallmancj@qualityhfw.com

ACKNOWLEDGEMENTS: I would like to personally thank Thomas Campbell, Manjir Samantha-Laughton and Larry Dossey for providing some very helpful feedback.

REFERENCES & NOTES

- K. Osis, Phenomena Suggestive of Life After Death: A Spiritual Existence, In C.T. Tart (ed.), Body Mind Spirit: Exploring the Parapsychology of Spirituality (Hampton Roads Press, Charlottesville, VA, 1997), pp. 163-170.
- E. Kubler-Ross, On Death and Dying (Macmillan Publishing Company, Inc., New York, 1969).
- C. Neiman & E. Goldman, After Life: The Complete Guide to Life After Death (Labyrinth Book, New York, 1994).
- 4. R.O. Faulkner (trans.), Ancient Egyptian Book of the Dead (Barnes & Noble, New York, 2005).
- P.M.H. Atwater, Is There a Hell? Surprising Observations About the Near-Death Experience, *Journal of Near-Death Studies* 10, 3 (1992).
- 6. S. Rinpoche, *The Tibetan Book of Living and Dying* (Revised and Updated Version) (HarperOne, New York, 2002).
- 7. E. Swedenborg, *Heaven and Hell* (Swedenborg Foundation, Inc., West Chester, PA, 2000).
- 8. R.H. Robinson & W.L. Johnson, *The Buddhist Religion: A Historical Introduction* (Third Edition) (Wadsworth Publishing Co., Belmont, CA, 1982).
- J. Klimo, Channeling: Investigations on Receiving Information from Paranormal Sources (Revised and Updated) (North Atlantic Books, Berkeley, CA, 1998).
- G.E. Schwartz & W.L. Simon, The Afterlife Experiments. Breakthrough Scientific Evidence of Life After Death (Atria Books, New York, 2002).
- S. Roney-Dougal, Where Science and Magic Meet (Element, Rockport, MA, 1991).
- W.G. Roll, Poltergiests, Electromagnetism and Consciousness, *Journal of Scientific Exploration* 17, 1 (1993) pp. 75-86.
- M. Morse & P. Perry, Parting Visions: Uses and Meanings of Pre-Death, Psychic, and Spiritual Experiences (HarperCollins, New York, 1996).
- 14. I. Stevenson, Twenty Cases Suggestive of

- Reincarnation, Second Edition (Revised and Enlarged), (University of Virginia Press, Charlottesville, VA, 1974).
- I. Stevenson, Birthmarks and Birth Defects Corresponding to Wounds on Deceased Persons, *Journal of Scientific Exploration* 7 (1993) pp. 403-410.
- C. Bowman, Children's Past Lives: How Past Life Memories Affect Your Child (Bantam Books, New York, 1998).
- 17. S.K. Pasricha, J. Keil & J.B. Tucker, Some Bodily Malformations Attributed to Previous Lives, *Journal of Scientific Exploration* **19**, 3 (2005), pp. 359-383.
- 18. J.B. Tucker, Life Before Life: A scientific Investigation of Children's Memories of Previous Lives (St. Martin's Press, New York, 2005).
- 19. J.E. Beichler, Life and Death in the Big City! The Geometric Structure of Dying, Yggdrasil: *The Journal of Paraphysics* 2, 2 (2000).
- 20. R. Moody, *Life After Life* (Bantam Books, New York, 1975).
- K. Ring, Life at Death: A Scientific Investigation of the Near-Death Experience (William & Morrow Co., New York, 1982).
- 22. B.J. Eadie, *Embraced by the Light* (Gold Leaf Press, Placerville, CA, 1992).
- P.M.H. Atwater, Beyond the Light: The Mysteries and Revelations of Near-Death Experiences (Avon Books, New York, 1994).
- 24. D. Brinkley & P. Perry, Saved by the Light (Villard Books, New York, 1994).
- 25. M. Morse & P. Perry, *Closer to the Light* (Villard Books, New York, 1990).
- B. Steiger & S. Hansen-Steiger, Children of the Light: The Startling and Inspiring Truth about Children's Near-Death Experiences (Signet, New York, 1995).
- H. Hone, Light at the End of the Tunnel: A Real Life-First Person Story of Life After Death (American Biographical Center, Santa Barbara, CA, 1985).
- 28. B. Bethards, *There is no Death* (New Century Publishers, Indianapolis, IN, 1988).
- P. Kircher, Love is the Link: A Hospice Doctor Shares Her Experience of Near-Death and Dying (Larson Publications, New York, 1995).
- D. Morrissey, You Can See the Light: How You Can Touch Eternity – And Return Safely (Stillpoint Publishers, Walpole, NW, 1997).
- P.L. Berman, The Journey Home (Pocket, New York, 1988).

- 32. K. Ring & E.E. Valarino, Lessons From the Light: What We Can Learn From the Near-Death Experience (Moment Point Press, Needham, MA, 2000).
- 33. J. Mauro, Bright Lights, Big Mystery. *Psychology Today* (July 1992).
- P. van Lommel, R. van Wees, V. Meyers & I. Elfferich, Near-Death Experience in Survivors of Cardiac Arrest: A Prospective Study in the Netherlands, *The Lancet* 358, 9298 (2001), pp. 2039-2045.
- 35. S. Nuland, *How We Die* (Knopf, New York, 1994).
- T.L. Baumann, God at the Speed of Light: The Melding of Science and Spirituality (A.R.E. Press, Virginia Beach, VA, 2001).
- M. Sabom, Light & Death: One Doctor's Fascinating Account of Near-Death Experiences (Zondervan Publishing House, Grand Rapids, MI, 1998).
- 38. G.M. Woerlee, Cardiac Arrest and Near-Death Experiences, *Journal of Near-Death Studies* 22, 4 (2004), pp. 235-249.
- 39. K.R. Vincent, The Near-Death Experience and Christian Universalism, *Journal of Near-Death Studies* 22, 1 (2003), pp. 57-71.
- 40. C.C. French, Dying to Know the Truth: Visions of a Dying Brain, or False Memories? *The Lancet* **358**, 9298 (2001), pp. 2010-2011.
- P.C. Bressloff, J.D. Cowan, M. Golubitsky, P.J. Thomas, & M. Wiener, What Geometric Visual Hallucinations Tell Us about the Visual Cortex, *Neural Computation* 14, (2002) pp. 473-491.
- 42. S. Blackmore, *Dying to Live* (Prometheus Books, Buffalo, 1993).
- E.M. Krupitsky & A.Y. Grinenko, Ketamine Psychedelic Therapy (KPT): A review of the Results of Ten Years of Research, *Journal of Psychoactive Drugs* 29 (1997), pp. 165–183.
- 44. K. Jansen, *Ketamine: Dreams and Realities* (Multidisciplinary Association for Psychedelic Studies, Sarasota, FL, 2001).
- R. Strassman, DMT: The Spirit Molecule (Park Street Press, Rochester, VT, 2001).
- 46. Anonymous. *The Holy Bible: With Deuterocanonicals/Apocrypha*. New York: American Bible Society.
- C.J. Hallman, Part One: A Multidimensional Model of the Dreaming State of Consciousness, Subtle Energies & Energy Medicine 18, 2 (2007), pp. 75-91.

- 48. C.J. Hallman, Part Two: A Multidimensional Model of the Released State of Consciousness, *Subtle Energies & Energy Medicine* **18**, 3 (2007), pp. 89-111.
- R.L. Atkinson, R.C. Atkinson, E.E. Smith,
 D.J. Bem & S. Nolen-Hoeksema, *Hilgard's Introduction to Psychology* (Thirteenth Edition),
 (Harcourt College Publishers, Fort Worth, 2000).
- P. Davies, The Mind of God: The Scientific Basis for a Rational World (Simon & Schuster, New York, 1992).
- R.G. Geen, Human Motivation: A Social Psychological Approach (Cole, Belmont, CA, 1995).
- 52. J. Long, (2003). Emotions and the Near-Death Experience, http://www.nderf.org/emotions.htm
- 53. C. Swanson, *The Syncronized Universe* (Poseidia Press, Tucson, AZ, 2003).
- 54. C.T. Tart, Who or What May Survive Death? In C.T. Tart (ed.), *Body Mind Spirit: Exploring the Parapsychology of Spirituality* (Hampton Roads, Charlottesville, VA, 1997), pp. 171-197.
- K. Ring & S. Cooper, Mindsight: Near-Death and Out-of-Body Experiences in the Blind (William James Center for Consciousness Studies, Institute of Transpersonal Psychology, Palo Alto, CA, 1999).
- D. Piper & C. Murphey, 90 Minutes in Heaven: A True Story of Death and Life (Revell Books, Grand Rapids, MI, 2004).
- 57. D. Brubaker, Absent from the Body: One Man's Clinical Death, a Journey through Heaven and Hell (Peninsula Publishing, Los Altos, CA, 1996).
- 58. E. Underhill, *Practical Mysticism* (J.M. Dent & Sons LTD., London, 1914).
- E.W. Cook, B. Greyson, & I. Stevenson, Do any Near-Death Experiences Provide Evidence for the Survival of Human Personality after Death? Relevant Feature and Illustrative Case Reports, *Journal of Scientific Exploration*, 12, 3 (1998), pp. 377-406.
- X.T. Wang, Emotion within Reason: Resolving Conflicts in Risk Preference. Cognition and Emotion 20, (2006), pp. 1132-1152.
- 61. D.D. Burns, *Feeling Good* (Penguin Books, New York, 1980).
- 62. D. Gamon & A.D. Bragdon, Building Mental Muscle: Conditioning Exercises for the Six

- Intelligence Zones (Barnes & Noble, New York, 1998).
- 63. A.R. Damasio, Descartes' Error: Emotion, Reason, and the Human Brain (G.P. Putnam, New York, 1994).
- B. Parkinson & A.M. Colman (Eds.), Emotion and Motivation (Longman, London & New York, 1995).
- Z. Kövecses, Emotion Concepts (Springer-Verlag, New York, 1990)
- P.M.H. Atwater, Coming Back: The After-Effects of the Near-Death Experience (Ballantine Books, New York, 1988).
- P. Fenwick, & E. Fenwick, The Truth in the Light: An Investigation of Over 300 Near-Death Experiences (Penguin Books, New York, 1996).
- S. Krippner, Altered States of Consciousness, In J. White (Ed.), *The Highest State of Consciousness* (Anchor Books, Garden City, NY, 1972).
- K.R. Rao, Some Reflections on Religion and Anomalies of Consciousness, In C.T. Tart (ed.), Body Mind Spirit: Exploring the Parapsychology of Spirituality (Hampton Roads, Charlottesville, VA, 1991).
- D. Cocoran, When Ego Dies: A Compilation of Near-Death and Mystical Conversion Experiences (Emerald Ink, Inc., Hot Springs National Park, AK, 2004).
- R. Frager, & J. Fadiman, *Personality and Personal Growth* (Fourth Edition) (Longman, New York, 1998).
- 72. D. Goleman, *The Meditative Mind: The Varieties of Meditative Experience* (G.P. Putnam's Sons, New York, 1988).
- K. Ring, Near-Death and UFO Encounters and Shamanic Initiations: Some Conceptual and Evolutionary Implications, *Revision* 11, 3 (1989).
- B. Harris-Whitfield, Final Passage: Sharing the Journey as This Life Ends (Health Communications, Deerfield Beach, FL, 1998).
- H.T. Hunt, On the Nature of Consciousness (Yale University Press, New Haven, CT, 1995).
- R.E. Cytowic, *Synesthesia* (Springer-Verlag, New York, 1989).
- R.E.L. Masters & J. Houston, *The Varieties of Psychedelic Experience* (Holt, Rinehart and Winston, New York, 1966).
- F.A. Wolf, Taking the Quantum Leap: The New Physics for Nonscientists (Harper & Row Publishing, San Francisco, 1981).

- A. Goswami, The Self-Aware Universe: How Consciousness Creates the Material World (G.P. Putnam's Sons, New York, 1993).
- 80. R. Rosenthal, Experimenter Effects in Behavioral Research (New York: John Wiley, 1976).
- R. Wiseman & M. Schlitz, Experimenter Effects and the Remote Detection of Staring, Journal of Parapsychology 61 (1997), pp. 197-207.
- J.J. McDermott, The Writings of William James (The University of Chicago Press, Chicago, 1977).
- H. Schmidt, The Strange Properties of Psychokinesis, *Journal of Scientific Exploration* 1, 2, 1987.
- 84. S. Hameroff & R. Penrose, Orchestrated Reduction of Quantum Coherence in Brain Microtubules: A Model for Consciousness? In S.R. Hameroff, A.W. Kaszniak & A.C. Scott (eds.,) Toward a Science of Consciousness The First Tucson Discussions and Debates (MIT Press, Cambridge, MA, 1996), pp. 507-540.
- G.E. Schwartz & W.L. Simon, The G.O.D. Experiments: How Science is Discovering God in Everything, Including Us (Atria Books, New York, 2006).
- M. Caudill, Suddenly Psychic: A Skeptic's Journey (Hampton Roads Publishing Co., Inc., Charlottesville, VA, 2006)
- 87. W.A. Tiller, W.E. Dibble & M.J. Kohane, Conscious Acts of Creation: The Emergence of a New Physics (Pavior, Walnut Creek, CA, 2001).
- 88. L. McTaggart, *The Field: The Quest for the Secret Force of the Universe* (HarperCollins Publishers, New York, 2002).
- P. Yam, Exploiting Zero-Point Energy, *Scientific American* (December, 1997), pp. 82-85.
- J.E. Whinney, Psychophysiologic Correlates of Unconsciousness and Near-Death Experiences, Journal of Near-Death Studies 15, 4 (Summer 1997).
- M. Persinger, The Neuropsychological Bases of God Beliefs (Praeger, New York, 1987).
- 92. B. Greene, The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory (Vintage Books, New York, 1999).
- 93. L. Lederman, & D. Teresi, *The God Particle:* If the Universe is the Answer, What is the Question? (Delta, New York, 1993).

- 94. C.S. Powell, Zero Gravity: New Schemes to Float Free Aren't Just Science Fiction, *Discover* **20**, 5 (May 1999), pp. 31-32.
- A.T. Catherall, P. Lopez-Alcaraz, K.A. Benedict, P.J. King & L. Eaves, Cryogenically Enhanced Magneto-Archimedes Levitation, New Journal of Physics 7, 118 (2005). http://www.njp.org/
- L. Xiaogan, Taoism, In A. Sharma (ed.), Our Religions (HarperSanFrancisco, New York, 1993).
- 97. J.C.H. Wu, (trans.) Lao Tzu's: Tao Te Ching (Shambala, Boston, 1990).
- 98. R. Morris, *The Nature of Reality* (McGraw Hill Book Co., New York, 1987).
- A.S. Gami, D.E. Howard, E.J. Olson & V.K. Somers, Day-Night Pattern of Sudden Death in Obstructive Sleep Apnea, *The New England Journal of Medicine* 352, 12 (2005), pp. 1206-1214.
- 100. K. Nelson, M. Mattingly, S.A. Lee & F.A. Schmitt, Does the Arousal System Contribute to Near-Death Experience? *Neurology* 66 (2006), pp. 1003–1009.
- 101. J. Long & J.M. Holden, Does the Arousal System Contribute to Near-Death and Outof-Body Experiences? A Summary and Response, *Journal of Near-Death Studies*, 25, 3 (2007), pp. 135-169.
- L. Levitan & S. LaBerge, Other Worlds: Out-of-Body Experiences and Lucid Dreams, Nightlight 3 (1991) pp. 2-3.
- 103. R.L. van De Castle, *Our Dreaming Mind* (Ballantine Books, New York, 1994).
- 104. H.A. Green, Life and Death: The Pilgrimage of the Soul (A.R.E Press, Virginia Beach, VA, 1999)
- M. Samantha-Laughton, Punk Science: Inside the Mind of God (O Books, Winchester, UK, 2006).
- 106. S. Parnia, D.G. Waller, R. Yeates & P. Fenwick, A Qualitative and Quantitative Study of the Incidence, Features and Aetiology of Near-Death Experiences in Cardiac Arrest Survivors, *Resuscitation* 48 (2001), pp. 149-156.
- 107. G. Nichol, I.G. Stiell, P. Hebert, G.A. Wells, K. Vandemheen & A. Laupacis, What is the Quality of Life For Survivors of Cardiac Arrest? A Prospective Study, *Academic Emergency Medicine* 6 (1999), pp. 95–102.
- 108. M. Flavell, Witness From Beyond (Hawthorne

- Books, Portland, OR, 1975).
- P.M.H. Atwater, We Live Forever: The Real Truth about Death (A.R.E Press Virginia Beach, VA, 2004).
- 110. P. Rae-Heath & J. Klimo, *Suicide: What Really Happens in the Afterlife?* (North Atlantic Books, Berkeley, CA, 2006).
- 111. R.A. Moody, *Reflections on Life After Life* (Bantam Books, New York, 1977).
- 112. B. Steiger, One with the Light: Authentic Near-Death Experiences that Changed Lives and Revealed the Beyond (Signet, New York, 1994).
- G.G. Ritchie & E. Sherrill, Return from Tomorrow (Revell Books, Grand Rapids, MI, 1995).
- 114. K.E. Williams, Nothing Better than Death: Insights from Sixty-Two Profound Near-Death Experiences (Xlibris, Philadelphia, PA, 2006).
- 115. B. Greyson, The Near-Death Experience Scale, In B. Greyson and C. Flynn (Eds.), *The Near-Death Experience, Problems, Prospects, Perspectives* (Charles C. Thomas, Springfield, IL, 1984), pp. 45-59.
- 116. K. Ring, (1984). Further Studies of the Near-Death Experience, In B. Greyson and C. Flynn (Eds.), *The Near-Death Experience, Problems, Prospects, Perspectives* (Charles C. Thomas, Springfield, IL, 1984), pp. 30-36.
- 117. P. van Lommel, Brain Death and Disorders of Consciousness In C. Machado & D.A. Shewmon, (Eds.) Advances in Experimental Medicine and Biology (Kluwer Academic/Plenum Publishers, New York, Boston, Dordrecht, London, Moscow, 2004), pp. 115-132.
- 118. C.R. Lundahl & H.A. Widdison, *The Eternal Journey: How Near-Death Experiences Illuminate Our Earthly Lives* (Warner Books, New York, 1997).
- 119. L. Dale, Crossing Over & Coming Home (Emerald Ink, Inc., Hot Springs National Park, AK, 2004).
- A. Fenimore, Beyond the Darkness: My Near-Death Journey to the Edge of Hell and Back (Bantam Books, New York, 1995).
- 121. H. Storm, My Decent into Death: A Second Chance at Life (Double Day, New York, 1995)
- 122. H. Pittman, *Placebo: What is the Church's Dope?* (The Philadelphia Church, 1980).
- 123. B. Rommer, Blessing in Diguise: Another Side

- of the Near-Death Experience (Llewellyn Publications, St. Paul, MN, 2001).
- S.S. Farr, & D.J. Chesbro, What Tom Sawyer Learned from Dying (Hampton Roads Press, Charlottesville, VA, 1993).
- 125. G. Bubulka, *Beyond This Reality* (Word Dancer Press, Sanger, CA, 1994).
- N. Dougherty, Fast Lane to Heaven: Celestial Encounters that Changed My Life (Hampton Roads Press, Charlottesville, VA, 2001).
- 127. R. Wallace, & C. Taylor, *The Burning Within* (Gold Leaf Press, Detroit, MI, 1994).
- R. Gerber, Vibrational Medicine: New Choices for Healing Ourselves (Bear & Company, Santa Fe, NM, 1988).
- B.L. Seaward, Managing Stress: Principles and Strategies for Health and Wellbeing (Jones & Bartlett Publishers, Boston, 1994).
- L. Randall, Warped Passages: Unraveling the Mysteries of the Universe's Hidden Dimensions (HaperCollins Publishers, New York, 2005).
- 131. F. Capra, *The Tao of Physics* (Shambhala, Berkeley, CA, 1975).
- 132. J. Long, (2002). Another Look at Beings Encountered During the Near-Death Experience. www.nderf.org/beingsstudy.htm
- J. Antonette, Whispers of the Soul: Journeys to the Other Side of Life (Josiane Antonette, 1998).
- 134. D. MacDougall, Hypothesis Concerning Soul Substance Together with Experimental Evidence of the Existence of Such Substance, *Journal of the American Society for Psychical Research* 1 (1907), pp. 237-244.
- B. Haisch, *The God Theory* (Weiser Book, San Francisco, 2006).
- 136. T. Folger, The Magnificent Mission. *Discover*21, 5 (May 2000), pp. 44-49.
- 137. W. Parfitt, *The Elements of the Qabalah* (Barnes & Noble Books, New York, 1991).
- D.C. Matt (trans.), Zohar: The Book of Enlightenment (Paulist Press, Ramsey, NJ, 1983).
- 139. K. Armstrong, A History of God: The 4,000-Year Quest of Judaism, Christianity and Islam (Ballantine Books, New York, 1993).
- 140. P. Besserman (ed.), *The Way of the Jewish Mystics* (Shambhala, Boston, 1994).
- L.W. Bailey & J. Yates, The Near-Death Experience: A Reader (Routledge, New York, 1996).
- 142. B. Lee, Tao of Jeet Kune Do (Black Belt

- Communications LLC., Valencia, CA, 1975).
- 143. W. Stace, *The Teachings of the Mystics*, (Mentor Books, New York, 1960)
- 144. R.J. Miller (ed.), The Complete Gospels: Annotated Scholars Version (Polebridge Press, Sonoma, CA, 1992).
- K. Wilber, Quantum Questions (Shambala, New York, 1984).
- 146. B.S. Bloom, Taxonomy of Educational Objectives: The Classification of Educational Goals (David McKay Co., Inc., New York, 1965)
- D. Passig, A Taxonomy of Future Higher Thinking Skills, *Informatica* 2, 1 (2003), pp. 79-92
- 148. W.C. Gough & R.L. Shacklett, The Science of Connectiveness (Part I), Subtle Energies and Energy Medicine 4, 1 (1993), pp. 57-76.
- W.C. Gough & R.L. Shacklett, The Science of Connectiveness (Part II), Subtle Energies and Energy Medicine 4, 2 (1993), pp. 99-123.
- W.C. Gough & R.L. Shacklett, The Science of Connectiveness (Part III), Subtle Energies and Energy Medicine 4, 3 (1993), pp. 187-214
- 151. C. Petitmengin-Peugeot, The Intuitive Experience. *Journal of Consciousness Studies*, 6, 2-3 (1999), pp. 43-77.
- D. Bohm, A Discussion Between Professor Maurice Pryce and Professor David Bohm (pp. 61-81), *Quanta and Reality* (American Research Council, USA, 1962).
- 153. R, Anderson, Intuitive Inquiry: A Transpersonal Approach, In W. Braud & R. Anderson's (eds.) Transpersonal Research Methods for the Social Sciences (Sage Publications, London, 1998).
- F. Vaughan, Awakening Intuition (Anchor Books, New York, 1979)
- G.J. Chaitin, *The Unknowable* (Springer-Verlag, Singapore, 1999).
- K. Gödel, On Formally Undecidable Propositions of Principia Mathematica and Related Systems I. *Monatshefte für Mathematik und Physik*, 38, (1931), pp. 173-198.
- 157. A. Church, An Unsolvable Problem of Elementary Number Theory, *American Journal of Mathematics*, **58**, (1936), pp. 345-363.
- 158. A.M. Turing, On Computable Numbers, with an Application to the Entscheidungs

- Problem, Proceedings of the London Mathematical Society, 2, 42, (1936-7), pp. 230-265.
- D.J. Shallcross & D.A. Sisk, *Intuition: An Inner Way of Knowing* (Bearly Limited, Buffalo, NY, 1989).
- C. de Quincey, Radical Knowing: Understanding Consciousness through Relationship. (Park Street Press, Rochester, VT, 2005).
- R.G. Jahn & B.J. Dunne, Margins of Reality (A Harvest/HBJ Book, San Diego, 1987).
- W. James, Essays in Radical Empiricism (Harvard University Press, Cambridge, MA, 1976)
- 163. J. Funderburk, Science Studies Yoga: A Review of Physiological Data (Himalayan International Institute of Yoga Science & Philosophy of USA Honesdale, PA, 1977)
- 164. S. Wolinksy, Quantum Consciousness: The Guide to Experiencing Quantum Psychology (Bramble Book, Norfolk, CT, 1993).
- 165. P. Goldberg, *The Intuitive Edge* (Jeremy P.Tarcher, Inc., Los Angeles, 1983).
- J.E. Collins, Mysticism and New Paradigm Psychology (Rowman & Littlefield Publishers, Inc., Savage, MD, 1991).
- 167. B. Dainton, Stream of Consciousness: Unity and Continuity in Conscious Experience (Routledge, London, 2000).
- 168. D. Ingebo-Barth, *The Conscious Stream* (Universal Publishers, Anchorage, AK, 2000)
- 169. S. Hameroff, Funda-Mentality: Is the Conscious Mind Subtly Linked to a Basic Level of the Universe? *Trends in Cognitive Sciences* 2, 4 (1998), pp. 119-127.
- 170. P.A. Zizzi, Emergent Consiousness: From the Early Universe to Our Mind, *NeuroQuantology* 3 (2003), pp. 295-311.
- 171. R.L. Amoroso, An Introduction to Noetic Field Theory: The Quantization of Mind, *The Noetic Journal* 2, 1 (1999), pp. 28-37.
- 172. P. Benjamin, Mind Matter, *The Noetic Journal* 4, 4 (2003), pp. 351-360.

 ∞ ∞ ∞