

Journal
of
Near-Death Studies

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Volume 18, Number 1, Fall 1999



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JOURNAL OF NEAR-DEATH STUDIES (formerly ANABIOSIS) is sponsored by the International Association for Near-Death Studies (IANDS). The Journal publishes articles on near-death experiences and on the empirical effects and theoretical implications of such events, and on such related phenomena as out-of-body experiences, deathbed visions, the experiences of dying persons, comparable experiences occurring under other circumstances, and the implications of such phenomena for our understanding of human consciousness and its relation to the life and death processes. The Journal is committed to an unbiased exploration of these issues, and specifically welcomes a variety of theoretical perspectives and interpretations that are grounded in empirical observation or research.

The **INTERNATIONAL ASSOCIATION FOR NEAR-DEATH STUDIES** (IANDS) is a world-wide organization of scientists, scholars, near-death experiencers, and the general public, dedicated to the exploration of near-death experiences (NDEs) and their implications. Incorporated as a nonprofit educational and research organization in 1981, IANDS' objectives are to encourage and support research into NDEs and related phenomena; to disseminate knowledge concerning NDEs and their implications; to further the utilization of near-death research by health care and counseling professionals; to form local chapters of near-death experiencers and interested others; to sponsor symposia and conferences on NDEs and related phenomena; and to maintain a library and archives of near-death-related material. Friends of IANDS chapters are affiliated support groups in many cities for NDErs and their families and for health care and counseling professionals to network locally. Information about membership in IANDS can be obtained by writing to IANDS, P. O. Box 502, East Windsor Hill, CT 06028.

MANUSCRIPTS should be submitted in hard copy and on 3.5" computer disk, preferably formatted in Wordperfect or in Microsoft Word, to Bruce Greyson, M.D., Division of Personality Studies, Department of Psychiatric Medicine, Box 152, University of Virginia Health Sciences Center, Charlottesville, VA 22908. See inside back cover for style requirements.

SUBSCRIPTION inquiries and subscription orders should be addressed to the publisher at Subscription Department, Kluwer Academic/Human Sciences Press, 233 Spring Street, New York, N.Y. 10013-1578 or faxed to the Subscription Department at its number (212) 807-1047, or may be telephoned to the Subscription Department's Journal Customer Service at (212) 620-8468, -8470, -8472, or -8082. Subscription rates:

Volume 18, 1999-2000 (4 issues) \$275.00 (outside the U.S., \$320.00). Price for individual subscribers certifying that the journal is for their personal use, \$48.00 (outside the U.S., \$56.00).

ADVERTISING inquiries should be addressed to Advertising Sales, Kluwer Academic Publishers, P.O. Box 989, 3300 AZ Dordrecht, The Netherlands—telephone 31 78 639 2278 and fax 31 78 639 2323.

INDEXED IN Psychological Abstracts, Parapsychology Abstracts International, Social Work Research and Abstracts, Sage Family Abstracts, Health Instrument File, International Bibliography of Periodical Literature, and Sociological Abstracts.

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Editor's Foreword

This issue of the Journal includes both theoretical approaches to near-death experiences (NDEs) and empirical studies testing specific hypotheses. We lead off with a Guest Editorial by psychologist James Crumbaugh exploring the relevance to near-death studies of mathematician Frank Tipler's Omega Point Theory. Crumbaugh suggests that Tipler's brand of reductionism not only allows for spiritual phenomena, but offers mathematical proof of survival of bodily death, bestowing scientific legitimacy to religious and noetic concepts such as near-death experiences (NDEs). In another theoretical paper, forensic examiner and transpersonal psychologist Daryl Paulson explores an integrated model of NDEs that gives equal weight to three ostensibly conflicting perspectives: the NDE as a glimpse of an afterlife, the NDE as an artifact of a dying brain, and the NDE as a cultural phenomena. Paulson argues that no interpretation of NDEs can be complete without taking into account all three of these domains.

Next, transpersonal psychologist and counselor educator Kevin Prosnick presents a study investigating the relationship between NDEs, mystical and "peak" experiences, and measures of self-actualization and Gestalt resistance processes or psychological defenses. He reports that although NDEs were correlated with other mystical experiences, they were not significantly associated with self-actualization, nor with psychological defensiveness. In another empirical study, physician and medicolegal consultant Linz Audain explores the role of the "fear-death experience" as a cause of NDEs. As hypothesized, a significantly greater number of NDEs were precipitated by traumatic circumstances that might be associated with fear of imminent death, rather than by prolonged illness; however, his second hypothesis, that men, being more aggressive and risk-taking, report more NDEs than do women, was rejected. Audain then speculated on different mechanisms by which fear of death might produce NDEs.

This issue contains two book reviews. Transpersonal psychologist Jenny Wade reviews sociologists Craig Lundahl and Harold Widdison's *The Eternal Journey*, a comprehensive glimpse at the afterlife revealed in NDEs; and psychologist and shamanic student Timothy Green reviews Australian shaman and NDEr Robert Moss's *Conscious Dreaming*, which prescribes using "active dreaming" as a guide in one's

spiritual path. We end this issue with letters to the editor from Indian scholar V. Krishnan, questioning elements of the "theory of essence" presented in earlier issues of the Journal by psychologist Kenneth Arnette; by German surgeon Thomas Angerpointner objecting to gerontologist Bruce Horacek's review in the Journal of pediatrician Melvin Morse and Paul Perry's *Parting Visions*; and by Horacek in response.

Bruce Greyson, M.D.

Guest Editorial

A Contribution of Tipler's Omega Point Theory to Near-Death Studies

James C. Crumbaugh, Ph.D.
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ABSTRACT: A fundamental principle of behavioral and natural scientists is *reductionism*: all mental phenomena can be reduced to a physical basis. Phenomena that have no physical basis cannot really exist. For most scientists this rules out transpersonal, spiritual or noetic, and religious phenomena, all of which maintain strongly antireductionist positions. Thus near-death researchers have an uphill battle to stay scientifically afloat. However, mathematician Frank Tipler argues that, while reductionism is necessary to the scientific world, it does not negate the religious, noetic, or spiritual dimension of human experience. He demonstrates by hard-core physics the existence of God and religious and spiritual phenomena. While the proofs he offers can be understood only by other astrophysicists, his overall viewpoint is comprehensible by laypeople. I present his concepts and arguments, and highlight the value of this orientation for near-death studies. Tipler's work takes the steam out of scientific rejection of religious, spiritual, or noetic phenomena, and makes it possible to accept these phenomena while maintaining a strictly scientific posture. Near-death researchers can gain a greater degree of scientific acceptance by adopting Tipler's position on reductionism.

The Omega Point Theory defines *The Physics of Immortality* (Tipler, 1994), in which Frank Tipler, Professor of Mathematics at Tulane University, used hard-core physics and mathematics as a solution to prove the probability of survival of personality after death. The course of events predicted by this theory is consistent with the most common basic events reported in the literature on near-death experiences (NDEs).

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Throughout the ages the most difficult part of the survival hypothesis has been the development of a physics that would permit personality to survive death of the physical body. The majority of philosophers as well as behavioral and physical scientists have rejected the possibility of survival on the grounds of this failure. Most of the remainder have simply assumed, as many believing religionists do, that such a physics exists but is beyond human understanding and therefore not to be questioned.

A few scientists have continued to struggle with the problem. Among them have been Kenneth Ring (1982), who proposed the original idea that personality is carried by patterns of interacting wave phenomena much like those used in producing a hologram, and that the entire coding pattern can be reproduced by any small portion of that interference pattern that can be obtained. The late C. J. Ducasse, Professor of Philosophy at Brown University, employed the concept of a "psychic double," but did not theorize specifically as to its nature (Crumbaugh, 1956).

Raymond Wheeler (1935) and Gardner Murphy (1945) used an analogy stemming from the *gestalt* psychologists' concept of *transposition*, in which interacting energy fields follow a pattern isomorphic to the personality pattern, as a map is isomorphic to a country but not of the same material nature. Of course, the nature of these interacting energy fields remains unknown, though it is presumably a type of interaction between wave motions in energy fields that act in a similar fashion to those in the brain. I have extended this analogy to what happens in a tape recording (Crumbaugh, 1956). Let us say that Judy Garland's singing "Over the Rainbow" is recorded on a tape, and the tape is destroyed. One can recreate her voice at any time by a process analogous to but not identical with her vocal cords. This process may occur in a phonograph record, a motion picture film, or a videotape, and so forth. They all can reproduce the music pattern and Garland's vocal timbre to the extent that, by listening alone, one could not determine whether it were a recording or really she.

Now if the record is destroyed, the potential to recreate the voice and song exists as long as there is another recording in some form. But what if no such form can be found? Is this the end of Garland? Not if the number of songs and voices is finite, so that any combination could be reproduced by reproducing all possible combinations. And the number *is* finite, both as to music and as to personalities.

But one may ask—or perhaps gasp—whether I am suggesting that one could resurrect Garland by recreating not only everyone who ever

did live, but also everyone who ever could have lived? Yes, I am suggesting something like that, though one could before *completing* the reproductions cull out many of the unwanted ones by restricting the *known* parameters. For example, one might limit reproduction to the pitch range of the song, or the time signature, and so forth. Still a fantastic number of songs would be left, many of which had never been composed previously by human beings. Would all of these be recreated? Yes, they would; though the unwanted ones *could* then be destroyed. And, of course, in this total process a higher power must exist to carry out the resurrections and then the selections. And in this analogy we are the higher power.

But, one may shout, are we going to murder all of these never-before-existent human beings that we created? No; we *could*, but we wouldn't, unless these individuals wanted to be exterminated. But who would feed, clothe and house all of these resurrected beings, even all of those who *did* exist? Tipler's answer is that the Omega Point would. And it would take our place as the higher power, or God. Manipulations of mass and energy—which are potentially interchangeable as in the formula $E = mc^2$ —could utilize all of the cosmic materials, including stars, comets, planets, galaxies, and so forth, that were not already used in the resurrection process. The whole Omega Point process is a supercosmic utilization of everything that exists. The concepts of Ring, Wheeler, Murphy, Crumbaugh, and Ducasse can all be seen as analogous to the physical concepts of Omega Point Theory.

So what is this mysterious Omega Point? Does it have any physical reality, or is it just a mathematical concept? It is both. In *The Physics of Immortality*, Tipler (1994) delineated the future of the human race, indeed of all life in the universe and of the entire cosmos, showing that the physics of it all is consistent throughout cosmic history, and that the Big Bang of some 15 billion years ago will culminate some 85 billion years in the future in a colossal crash. This crash represents what the Jesuit philosopher Pierre Teilhard de Chardin has described as the end point, or Omega Point, the Big Bang being the beginning or Alpha Point. Of course, time estimates may differ wildly, but at present the "closed universe" cosmologists seem to favor a span of some 100 billion years between the Alpha and the Omega Points. And Tipler's theory will work only if it is a closed universe—that is, if the universe reaches a critical point of expansion and then "crashes." If it is an eternally expanding universe or an "open" universe, there is no hope for life in the long run: everything will eventually grow cold and die out. But in spite of some recent studies favoring an open universe,

at present the majority of astrophysicists seem to favor the closed universe concept. If true, the Omega Point can change human history, resurrect the dead, and create the second Eden, this time one of eternal bliss.

How does this relate to near-death studies? It relates through the fact that if Omega Point Theory is correct, the most commonly described NDE phenomena can be delineated under it. To understand this, let us sketch the basic principles of this theory and examine the elements that are common to both it and the typical NDE. The first and biggest advantage of Tipler's argument is that it accepts the noetic or spiritual dimension of human experience on the one hand, while on the other hand embracing a fundamental principle of both behavioral and physical hard sciences: *reductionism*, which most scientists consider essential to scientific understanding.

The concept of reductionism goes back to British Empiricist philosopher John Locke's dictum that "Nothing is in the intellect which is not first in the senses." In other words, all mental processes that really exist have a physical basis, and if religious concepts like the "soul" cannot be detected by physical means in a physical medium, they cannot actually exist. Religious, spiritual, or noetic points of view usually have hit a scientific stone wall by maintaining an antireductionist position.

Thus a wedge has long been driven between hard science and religious/spiritual phenomenological concepts, with an uneasy peace that has boiled down to "live and let live": religion is allowed on Sunday, provided we return to science on Monday. But Tipler argues that both reductionist and spiritual concepts are valid. He does this by showing that while all that is real is physical, the "spirit" is also physical. No, there is not any "soul" floating around without any material medium: in fact, the spirit ceases to exist when the body dies. But at the Omega Point it will be resurrected, even though the entire process is physical. It might be noted here that the late Herbert Armstrong, founder of the World Wide Church of God, had a similar concept.

So how do we get to this Omega Point? First, we must get used to the fact that, as both philosophers and scientists, as well as most theologians of both mainstream Christianity and Judaism have agreed, *experienced* time is a human construct that does not exist objectively. Of course, *chronos* or "proper" or siderial or "star" time functions apart from human experience. But what the Greeks called *kairos* or experienced time, in which a "siderial hour" may seem forever in a dentist's chair but only a moment in the arms of a loved one, ceases to exist at the

moment of death. Therefore the approximately 15 billion years that the cosmologists generally seem to estimate since the Big Bang creation of the universe may be only a short blip on a radar screen in comparison with the 85 or so billion years that lie ahead before we reach the Omega Point, the "end of time" or collapse and crash of the universe, the point at which Tipler said the resurrection will occur.

What creates this collapse? As noted on page 7, a preliminary axiom is that the universe is "closed," rather than "open" or expanding forever. The collapse follows from the universe's expanding to the point at which its critical mass is balanced by the gravitational strength of withdrawal from the expansion. Upon reaching this Omega Point, there is a "crash" due to a sort of "zero point" at which Tipler predicts, from known laws of physics, that certain fantastic things will happen. To understand this we must back up a bit to see what has been going on during the progress toward this Omega Point.

Tipler holds that our future belongs to a New World of cosmic travel unveiled by the astronauts, just as our present belongs to the New World opened up by Christopher Columbus. We will be forced by cosmic activity to abandon Earth and use its material elsewhere. During the 85 or so billion years before the "end of time" in the sidereal sense, fantastic developments of the quantum computer now on the drawing board will make possible the resurrection of all deceased personalities by *simulation*, the approximate regeneration of all bodies previously alive, followed by *emulation*, the regeneration in exact detail, at which point conscious experience will resume under the "Rip Van Winkle effect," as if no time has passed since death.

But what if the human race destroys itself by the atomic bomb before ever getting close to this end point? Tipler held that what is known as the "Eternal Life Postulate" will prevent this from happening. This postulate, like the Omega Point Theory itself, is far too complex to attempt to explain here, for only advanced mathematical physicists and cosmologists could follow Tipler's development of the advanced formulas upon which these concepts rest. Tipler presents the data by which such advanced scientists can follow and verify the logic of his conclusions; he occupies the last third of his book with these. The general *meanings* behind the many equations are comparatively easy to grasp, however, and Tipler wrote that anyone with a high school education should be able to follow them.

Whether or not the latter is true, the general reader will find his book fascinating and will marvel at the depth of scholarship through which Tipler encompassed almost every type of cosmic and astrophysical

concept, as well as virtually all systems of religion and philosophy in relation to each of the concepts in his theory. At this point the reader may be again asking just how such fantastic cosmology can relate to NDEs. The answer is that the passage of siderial or cosmological time from present death to the Omega Point involves the extensiveness of "black holes," dark matter that is too dense and therefore too heavy for light to escape from it, and cosmic travel through such space and eons of siderial time; and that everything that happens during those eons is compressed by the Rip Van Winkle effect to the *kairos* or experienced time of no more than going through a dark tunnel to the bright light and brilliant expanse of a New Life. This is predicted both by Omega Point Theory and noetic science as the end result, in which formerly living personalities are recreated.

Is this not a parallel to the most commonly reported type of NDE? And these formerly living personalities are not only recreated, but also, through the emulation process, recreated as the individual he or she wishes to be: one can choose to have a perfect body with all defects corrected, and as sexually attractive as one desires. Sex exists in Heaven, but there is no conflict over it, as each person can choose to have a perfect partner. The Omega Point will compute and produce this for each individual. And there is a "purgatory" through which those who have lived "badly," in ways that are inconsistent with social welfare, are given a chance to travel. They will be required to choose either "purification" or eternal destruction (permanent death).

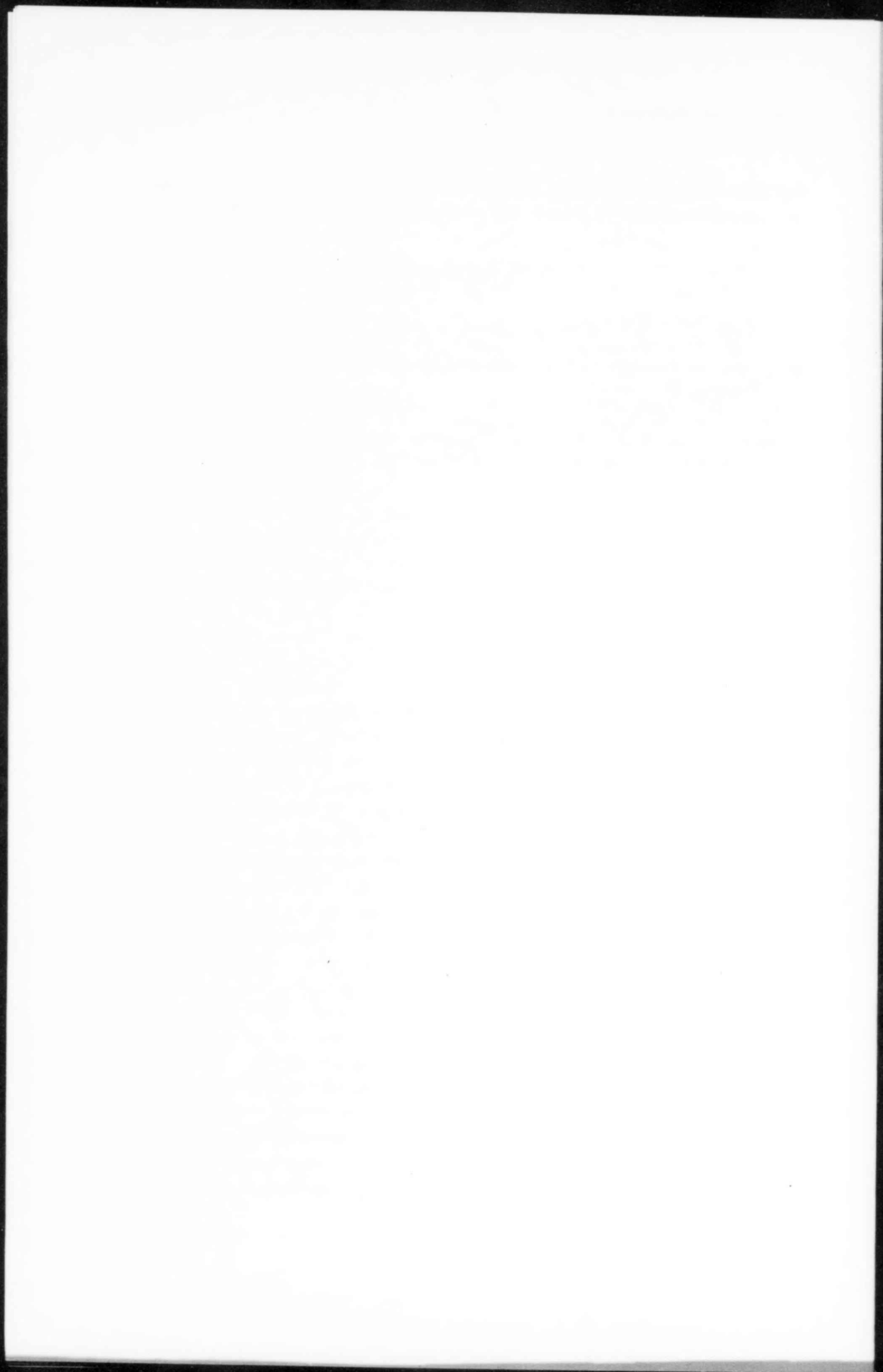
How all of this can work from the standpoint of hard-core physics is beyond the scope of the present paper. One must read Tipler's book to appreciate that he is not only serious but competent in presenting his work and in demonstrating the physics behind it, as well as presenting possible experimental designs that would test it.

I was granted an interview with Tipler, and as a result can testify that he is a level-headed person who not only believes passionately in his work but also can support it well through fingertip knowledge of every facet of the physics involved. Since I did not connect Omega Point Theory with NDEs at the time of that interview, I did not elicit Tipler's views on these phenomena. But it appears that NDE concepts can fit this theory without damage to either, and near-death researchers can gain an advantage through acceptance of reductionism without loss of the noetic or spiritual dimension. The latter can bring near death studies into the scientific community and thereby gain a higher level of scientific respectability, which will create a more receptive attitude on the part of scientific journals for publication of near-death studies.

It seems clear furthermore that the study of Omega Point Theory may be a possible source of new leads in the development of NDE theory.

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The Near-Death Experience: An Integration of Cultural, Spiritual, and Physical Perspectives

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ABSTRACT: The near-death experience (NDE) has been studied extensively from two conflicting perspectives: that the NDE is a glimpse into an after-death state and that it is the result of a dying brain. Of late a third perspective has emerged, that of NDEs being culturally determined. I propose an integrated model in which all three perspectives are viewed with equal weight.

The near death experience (NDE) has been studied extensively from a variety of perspectives (Atwater, 1988; Becker, 1993; Berman, 1996; Blackmore, 1993; Doore, 1990; Gallup & Proctor, 1982; Greyson & Flynn, 1984; Kastenbaum, 1984; Kastenbaum & Kastenbaum, 1989; Kellehear, 1996; Miller, 1997; Moody, 1975; Osis & Haraldsson, 1997; Ring, 1980, 1984; Rinpoche, 1992; Sabom, 1982; Sutherland, 1992; Zaleski, 1987). Over the years, two major divergent groups have emerged. One suggests that NDEs may be a glimpse into an after-death life state and, at the very least, provide increased personal meaning from the subjective experience. The other views NDEs as being merely the result of a dying brain. Of late, a third perspective has entered the arena, that NDEs reflect of cultural and social influences. In the first part of this paper, I will review current literature concerning the NDE and how it applies to each of these three domains.

Subjective (Spiritual) Domain

The subjective experience of the NDEr is the area of interest for this domain, as it is the focus area for those who argue that the NDE may

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provide a peek into an after-life state of being. Prominent investigators who have studied in this domain include Elisabeth Kübler-Ross, Raymond Moody, Kenneth Ring, Bruce Greyson, Carl Becker, Michael Sabom, Marie-Louise von Franz, William Serdahely, Cherie Sutherland, and Melvin Morse. Many popular writers who have experienced near-death states, such as Betty Eadie (Eadie and Taylor, 1992) and Dannon Brinkley (Brinkley and Perry, 1994), also focus in this domain.

Moody (1975) constructed an ideal or complete NDE which embodied all the common elements of the NDE and the order in which they typically occur. Although his model is the one on which all subsequent near-death research was based, it is important to keep in mind that his prototypical NDE narrative is not representative of any one person's experience but a composite of many individual experiences. Ring (1980) differentiated this "core" model into five distinct experience stages which he called the "basic thanatomimetic narrative": (1) feeling peace; (2) bodily separation; (3) entering the darkness; (4) seeing the light; and (5) entering the light. Ring (1980) described this model as linear and invariant, so that the more stages experienced, the deeper the NDE was thought to be. But as other investigators reported their findings, it became clear that the NDE was neither exclusively linear nor a process of invariant stages (Becker, 1993; Berman, 1996; Kellehear, 1996; Rinpoche, 1992; Serdahely, 1995; Sutherland, 1992).

Greyson (1993) proposed a four-fold subjective typology to be used for studying NDEs, which includes (1) cognitive, (2) affective, (3) paranormal and (4) transcendental components. The cognitive category includes thoughts and thought processes during the NDE, such as the life review, a distorted concept of time, and cognitive understanding of the NDE by the experiencer. The affective category includes the NDEr's feeling states during the NDE, such as peace, joy, bliss, and feelings of unity at a cosmic level. The paranormal category includes phenomena such as perceived travel out of one's physical body during the NDE, precognitive insights or visions experienced, extrasensory perception, and hyperacute sensual awareness. The transcendental category includes perceived travel to otherworldly realms, encounters with mystical beings, assistance by spirits, and the perception of a barrier, often referred to as "the point of no return."

It is interesting to note that there are a number of similarities between NDEs and states of consciousness described in various spiritual traditions such as Tibetan Buddhism (Govinda, 1959), yoga theory (Aurobindo, 1970, 1976; Chaudhuri, 1965), esoteric Christianity (Underhill, 1955), Theosophy (Blavatsky, 1979), and neo-Theosophy (Bailey, 1936), as well as various meditative states (Goleman, 1977;

Shapiro and Walsh, 1984) and altered states of consciousness (Tart, 1975), particularly those occurring after the ingestion of hallucinogens or after holotropic breathing (Grof, 1988). For example, individuals participating in various spiritual practices, experiencing holotropic breathing states of consciousness, and confronting Jungian archetypal images in dreams and active imagination practices often report witnessing the various gods and goddesses of mythology, as well as their own higher Self (Aurobindo, 1976; Grof, 1988; Jung, 1980; Rowan, 1993; Vaughan, 1995; von Franz, 1997; Whitmont, 1969). These figures may relate strongly to the "being of light" (Moody, 1975) and the various religious figures often reported by NDErs. Additionally, regions of consciousness described as the void or formlessness are commonly reported and discussed in the literature as associated with various spiritual traditions and the NDE (Bailey and Yates, 1996).

Objective (Physical) Domain

The objective or physical is the focus domain of most biophysically oriented investigators (Blackmore, 1993; Blackmore and Troscianko, 1988; Carr, 1981, 1982; Jansen, 1991, 1997; Nuland, 1994; Persinger, 1983, 1989; Rodin, 1980, 1989). Investigators focused in this domain tend to "explain" the NDE as an expression of a dying brain, and only that. Ernst Rodin (1980) argued that, as the oxygen in the brain declines to levels that do not support lucidity, anoxia occurs, resulting in hallucinations, mostly wishful, as death engulfs the individual. Daniel Carr (1981, 1982) and Karl Jansen (1991, 1997) wrote that the NDE is a result of endorphins or other neurochemicals produced to relieve the person of the pain and/or terror of death. Michael Persinger (1983) argued that instability and activity in the brain's right temporal lobe are responsible for the generation of NDEs, a view that Susan Blackmore also supports. Blackmore (1993) suggested that the tunnel experience with the perceived light at the end is the result of anoxia creating cortical disinhibition.

Biophysically oriented investigators usually define out-of-body states as autoscopic hallucinations caused by psychic trauma to the dying brain. That is, under the stress of dying, humans dissociate from their self-identity or ego and perceive themselves to be out of their bodies, when actually they are not (Kaplan and Saddock, 1995).

Moreover, there are numerous reports of phenomena similar to NDEs, resulting from increased carbon dioxide levels in the bloodstream and anesthetics such as nitrous oxide, chloroform, ether, and ketamine

(Blackmore, 1993; Meduna, 1950; Parkin, Miller, and Vincent, 1987). Additionally, fighter pilots subjected to rapid acceleration in training have reportedly lost consciousness from lack of blood oxygen to their brains, the so-called G-LOC phenomenon, and had near death-like experiences when they clearly were not in an "actual death episode" (Whinnery, 1989, 1997).

Cultural Domain

The term "cultural" refers to an intersubjective, shared world view attributable to social groupings (Honigmann, 1963; Merton, 1957). The world view consists of a common language, values, beliefs, rules, understanding and goals shared by groups within a society, as well as by the society as a whole. Culture is society's "personality" and is an evolutionary process that emerges as humans interact (Newman, 1997). Through culture, humans establish an order of conduct dictating how to act, how to dress, what to do, and what to say in a multitude of specific social situations (Newman, 1997; Parsons, 1951). Culture imprints humans' very ability to communicate with one another (De Saussure, 1959; Hoy, 1978; Polkinghorne, 1983).

Relative to NDEs, those who focus in the cultural domain argue that their interpretation of the NDE provides the correct explanation of the phenomenon (Doore, 1990; Kellehear, 1996; Sutherland, 1992). They point out that individuals who have NDEs report phenomena that are "culturally determined." Simply stated, a Christian tends to experience and interpret the NDE in Christian terms, a Buddhist in Buddhist terms, and an African tribal member in terms of that tribe's shared beliefs (Campbell, 1959; Eliade, 1954; Grof, 1994; Kellehear, 1996; Zaleski, 1987). This phenomenon has long been known in the field of clinical psychology, for instance, where Jungians have Jungian dreams and Jungian interpretations, Freudians have Freudian dreams and Freudian interpretations, and existentialists have existential ones (Caligor and May, 1968; Progoff, 1956; Vaughan, 1995).

Which Domain Is Correct?

The salient points of this paper are that all three NDE viewpoints *are correct*, because each explains the NDE from different but valid perspective, and that all three domains *are interrelated*. One cannot

adequately describe the NDE without taking into account all three domains since a multi-domain reality has been encountered. Interactions between multiple domains have been discussed repeatedly in recent years, for example in the realms of developmental psychology (Alexander and Langer, 1990; Commons, Richards, and Armon, 1984; Commons, Sinnott, Richards, and Armon, 1989; Kegan, 1994; Miller and Cook-Greuter, 1994; Sinnott, 1994; Sinnott and Cavanaugh, 1991; Sternberg, 1990), in statistical model building (Bailey, 1977; Box, Hunter, and Hunter, 1978; Christensen, 1977; Gibbons, 1976; Johnson and Wichern, 1982; Montgomery, 1991; Neter and Wasserman, 1974; Paulson, 1995; Rivett, 1980; Shapiro and Gross, 1981) and in qualitative experimental design processes (Borg and Gall, 1989, Denzin and Lincoln, 1994; Moustakas, 1990, 1994; Patton, 1990; Paulson, 1997b).

Early classical Greek philosophy categorized, and thus differentiated, human life into three spheres: morality, science, and art, which were constituents of Plato's "The Good, the True, and the Beautiful" (Copleston, 1960). The Good (morality) represented ethics and justice; the Beautiful (art), personal subjective aesthetics; and the True, the objective reality represented by science. Differentiation ultimately led to dissociation of the three life spheres, and to a large degree is what defines modernity (Anderson, 1995; Cahoone, 1996). Once dissociation occurred, science grew dramatically in both size and success, proclaiming that the other two spheres were inferior.

Ken Wilber (1995, 1996, 1997), a human science theorist, has further refined and integrated these three categories. The subjective, aesthetic areas corresponding to subjective beauty and valuation in general can be described in "I" terms. Morality, or the Good, which involves intersubjective, shared, mutual understanding, can be described in "We" terms. Truth, being objective, empirical knowledge, can be described in "It" terms. Additionally, Wilber argued (1995) that science (It) commits a logical error by reducing the other two spheres, "I" and "We," to "Its." A number of other individuals have voiced the same concern (Assagioli, 1965; Bugental, 1965; Maslow, 1966, 1971; May, 1953; Polanyi, 1958; Polkinghorne, 1983; Schneider and May, 1995; von Bertalanffy, 1968).

According to Wilber (1995, 1996, 1997), these domains—the "Big Three"—are represented, to some degree, in all phenomena. In the final section of this paper, I will show how the "Big Three" describe the NDE, as illustrated in Figure 1, keeping in mind that they are interdependent.

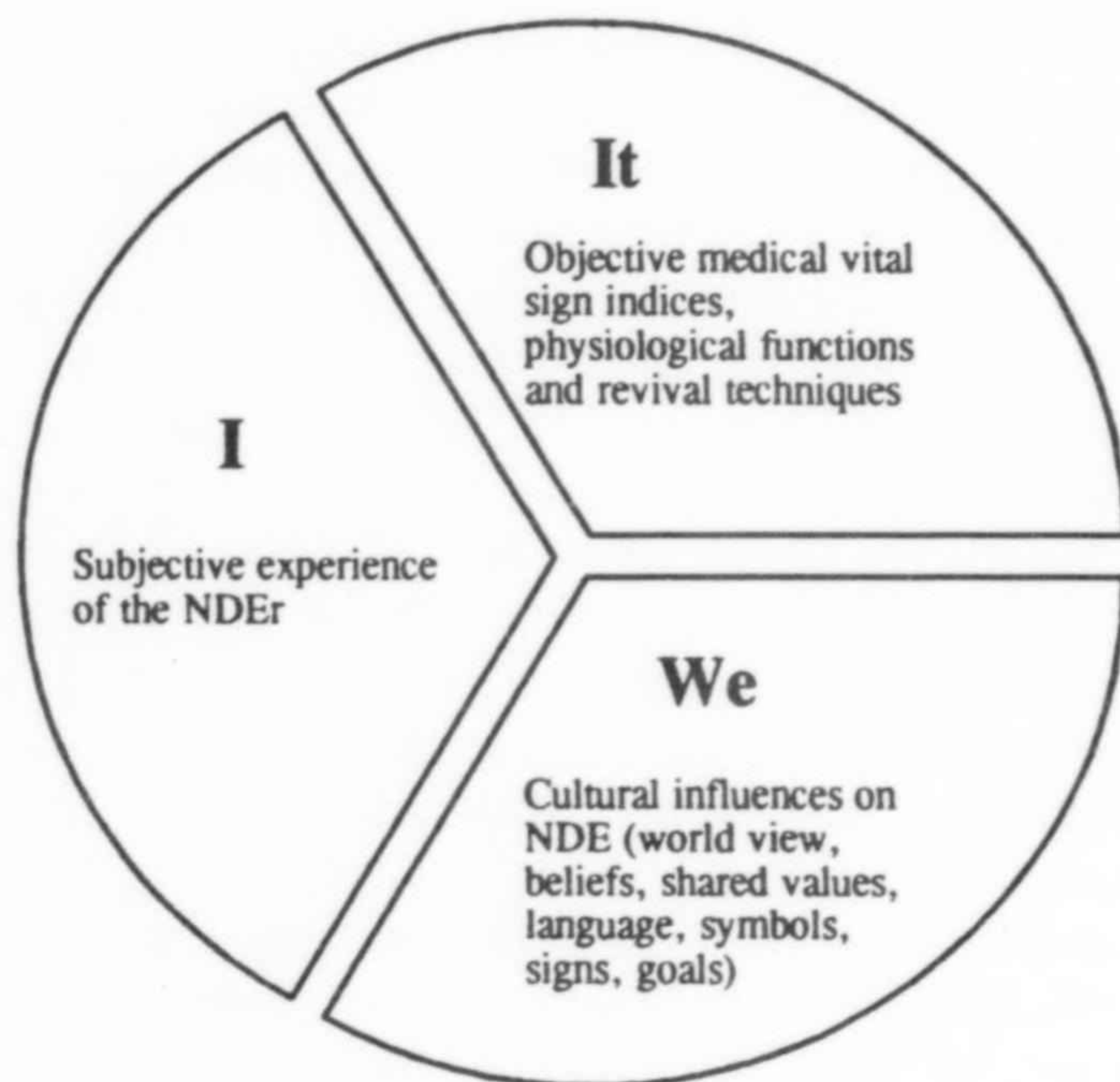


Figure 1. Near-death experience composed of Objective (It), Subjective (I), and Cultural (We) Domains.

The Near Death Experience in Terms of the "Big Three"

The objective domain, described as the "It" domain, represents medical vital signs, physiological functions of the NDEr, as well as revival procedures employed. In short, this "It" domain is the "objective (physical) domain" previously discussed. Cultural aspects, described as the "We" domain, correspond to the previously discussed "cultural domain." The personal subjective experience exists in the sphere of the "I" domain. It typifies what I have called the "subjective (spiritual) domain."

A General Approach to Research Designs

There are a number of valid experimental approaches to collecting useful data, such as the heuristic, phenomenological, or biostatistical (Montgomery, 1991; Moustakas, 1990, 1994; Patton, 1990; Paulson, 1995, 1997b, 1998), that provide accurate and reliable information as long as the theories generated from the data are based on the collected data (Glaser and Strauss, 1967).

The validity claims of each of the three domains can be confirmed, denied, validated, or rejected, on the basis of incisive criteria of fallibility (Audi, 1995; Regis, 1959; Wilber, 1995). There are three general criteria in conducting a valid study, which provide valid data for each of the three domains. The first criterion is use of a nonbiased, impartial research design, either qualitative or quantitative, to collect accurate and precise data (Borg and Gall, 1989; Paulson, 1995). In order to assure validity, research designs must satisfy "internal validity" requirements, such as random sampling, nonbiased sampling or questioning, nonconfounding of variables, measuring or describing significant variables using appropriate instrumentation, not confusing correlation with causation, awareness of one's own bias, prevention or acknowledgment of variable interaction, sufficient sample size to reduce the probability of both Type I and Type II errors, and prevention of the Hawthorne and John Henry effects (Borg and Gall, 1989; Campbell and Stanley, 1963; Denzin and Lincoln, 1994; Gibbons, 1976; Goldstein, 1964; Patton, 1990; Paulson, 1987; Velleman and Hoaglin, 1981).

The second criterion in conducting a valid study is that interpretation must be grounded in the collected data. That is, the interpretation must fit the data; the data must not be "massaged" to fit the interpretation or model (Ehrenberg, 1975; Moustakas, 1990, 1994; Patton, 1990; Paulson, 1987, 1995). The third criterion is that research studies should also be replicated in other geographic locations, using different subjects, and different investigators, to confirm the results obtained and the interpretation of those results. This will assist in assuring the "external validity" of the results (Montgomery, 1991; Patton, 1990; Paulson, 1995, 1997a).

Validity of Each Sphere

The "I" domain, the subjective (spiritual) perspective, is the region of subjective experience of the NDEr during the near death episode. Valid study results require truthfulness on the part of the NDEr in reporting the experience (Merton, 1957; Moustakas, 1990; Wilber, 1995). Since one is not dealing with observable behavior, but with internal states of consciousness, the only way one can access the NDEr's interior is through dialogue and interpretation. Two invalidating situations, termed sociologically the manifest and latent problems (Merton, 1957; Moustakas, 1994; Patton, 1990), may arise in interpreting the NDE phenomenon. The manifest problem occurs when the NDEr is consciously not telling the truth about his or her subjective experience. It

is viewed as a surface structure problem, for it is more easily identified than is the latent problem. The latent problem occurs when the NDEr is not consciously aware of being untruthful due to the action of psychological defense mechanisms, such as repression, suppression, or denial, preventing accurate NDE recall. This is considered a deep structure problem, for it is very difficult to identify. The validity claim in this area is based, then, not only on the NDEr's willingness, but on his or her ability to report truthfully the inner experience (Moustakas, 1994). And if the NDEr is telling the truth, is it the whole truth, or are deeper, unrecognized truths present (Wilber, 1995)? Whether or not the NDE is a peek into a life-after-death stage can be neither confirmed nor refuted. That the NDE can have an effect on the experiencer's post NDE life has been confirmed (Bailey and Yates, 1996; Ring, 1984; Sutherland, 1992).

The "It" domain, the objective (physical) perspective, is the region of observable physiological/biochemical characteristics of the NDEr, such as blood pressure, electrocardiogram, and carbon dioxide and oxygen blood gas levels (Gilman, Goodman, Rall, and Murad, 1985). For the data to be valid, they must accurately represent the NDEr's physical indices (Berveridge, 1957; Box, Hunter, and Hunter, 1978; Neter and Wasserman, 1974; Paulson, 1997a). There are, of course, surface and deep layers of truth, but these are available through observation, rather than interpretation. Deeper levels of observation become ever more available as new methods and more sensitive monitoring equipment come into use (Bailey, 1977).

The "We" domain, the cultural perspective, is dependent upon understanding the NDEr's cultural nuances, his or her morals, ethics, values, religious beliefs, and cultural world views, and, therefore, it is dependent on interpretation (Carr, 1948; Habermas, 1973; Searle, 1995). For the data to be valid, the researcher must command a knowledge, at once both broad and detailed, of the culture in question.

It should also be recognized that much of what we call reality is constructed or invented by cultures (Newman, 1997). The degree to which reality is constructed, however, is bound by objective reality (Searle, 1995). What humans believe to be true or real is often only partially so. Sociologists (Geertz, 1973; Merton, 1957; Newman, 1997; Parsons, 1951) are in general agreement, stating that three stages are present in socially-constructed reality: externalization, objectivation, internalization. Externalization is the initial stage, in which a theory, opinion or belief is accepted as "tentatively" being true. Objectivation is the next stage, in which the theory, opinion or belief is accepted as "fact." Internalization is when the "accepted fact" is incorporated into a person's psyche as "absolute" truth.

In evaluating and interpreting the NDE from the cultural perspective, at least two levels of meaning exist: surface and deep. The surface level looks at cultural motifs, the shared symbology of the culture (Merton, 1957). Yet at a deeper level, the cultural aspect of the NDE reinforces the cultural group's identity, leading to a deeper bonding of those in the culture (Newman, 1997; Parsons, 1951). For both the surface and deep structures, it is important to determine if the interpretation is really true. If true, is it the whole truth or are there other truths at deeper levels?

Integration

Because each of the three viewpoints partially describes the NDE, it will be most valuable to integrate all three into one cohesive model. Robert Kegan (1994), Jan Sinnott (1994), and Wilber (1995, 1996, 1997) have argued that it may be useful to apply "post-formal" cognitive processes when trying to understand complex, multi-dimensional phenomena such as the NDE, holding and integrating various divergent domains within one model. Each of the three domain perspectives, then, must be held in mind simultaneously. That is, each domain must be valued for its valid, but partial contribution to understanding this multi-dimensional phenomenon. For example, it is to be expected that physical correlates exist that correspond to the subjectively experienced phenomena of NDEs. Hence, both are equally important to understanding NDEs. Additionally, one's subjective experiences and interpretations of them by an investigator will be colored by the shared cultural beliefs, values, and expectations of both (Carr, 1948; Merton, 1957; Parsons, 1951). Integration, then, does not favor any perspective; it is a perspective (Paulson, 1993). With this said, investigators can still study their preferred domain of interest; however, they should recognize that greater understanding of the NDE requires the acknowledgment of truths revealed in all three domains.

Conclusion

In conclusion, the NDE can be studied from a subjective perspective, a physical perspective, and a cultural perspective. Each perspective has a portion of the truth, but is not the whole truth. To better understand the NDE is to study it from a full model, three-sphere perspective, honoring the insight to this unique phenomenon provided by each domain.

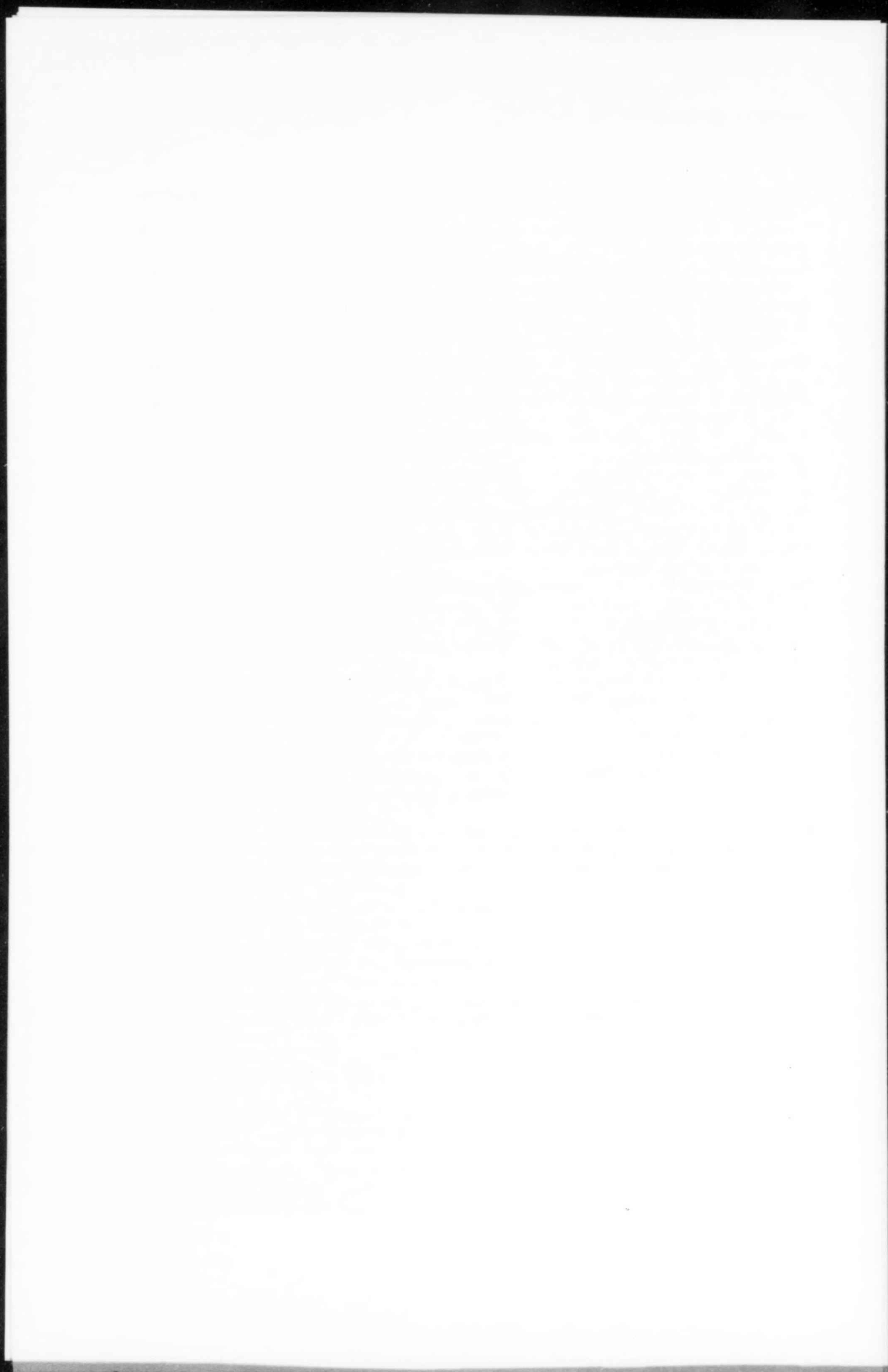
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Claims of Near-Death Experiences, Gestalt Resistance Processes, and Measures of Optimal Functioning

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ABSTRACT: The present study investigated the relationship between claims of near-death experiences (NDEs) and measures of self-actualization, Gestalt resistance processes, transfluence, mystical experiences, and claims of peak life experiences in a sample of 155 individuals. As hypothesized, I found significant positive correlations between the claims of NDEs and transfluence and mystical experiences. I found no significant correlations between claims of NDEs and the seven Gestalt resistances, suggesting that NDErs are neither more nor less resistant than nonNDErs. I also found no significant relationship between claims of NDEs and self-actualization or claims of peak life experiences.

Near-death experiences (NDEs) have been the focus of abundant research over the past 30 years, much of it focused on the phenomenological reports of the individual reporting the NDE (Greyson and Bush, 1992; Ring, 1980, 1984, 1992). Very little empirical data have been reported regarding the relationship between claims of near-death experiences, self-actualization, Gestalt resistances, transfluence, mystical experiences, and claims of peak life experiences. Gestalt resistances can be understood to be defensive styles or strategies that become problematic when they are overused or utilized without awareness (Perls, Hefferline, and Goodman, 1951/1977). Transfluence is a measure of transpersonal experiences.

The purpose of this study was to investigate the relationship between claims of near-death experiences and measures of the above-mentioned constructs. I hypothesized that claims of near-death experiences would

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be negatively related to Gestalt resistance scores as measured by a Gestalt questionnaire, and positively related to self-actualization, transfluence, mystical experiences, and claims of peak life experience. In other words, I expected individuals claiming to have had an NDE to possess low Gestalt resistances and vice versa. Likewise, I expected individuals claiming an NDE to report high self-actualization, transfluence, mystical experiences, and claims of peak life experience.

Method

Participants

A total of 155 individuals participated in the study. The nonprobability convenience sample was composed of 54 males and 101 females with ages ranging from 18 to 78. The majority of the sample was drawn from education and counseling students from three Ohio universities, with the remainder drawn from private sector organizations in the area. All 155 individuals were used in the correlations between claim of an NDE with the measures of Gestalt resistances, transfluence, and claim of peak life experience; while only 109 subjects completed the measure of self-actualization, 152 the measure of mystical experiences, and 119 the Short Lie scale, which was composed of three items from the MMPI-2 Lie scale and was administered as a check on social desirability.

Instruments

Claims of near-death experiences was measured by a single question—"Have you ever had a Near Death Experience?"—to which subjects could answer "yes" or "no."

Self-actualization was measured by the Short Index of Self-Actualization (SISA) (Jones and Crandall, 1986). I use a 5-point Likert-type scale, with responses ranging from 1 ("I Strongly Agree with this Statement") to 5 ("I Strongly Disagree with this Statement") for each of the 15 items. Alvin Jones and Rick Crandall (1986) reported an acceptable coefficient alpha (.65) and a 12-day interval test-retest reliability (.69) for the SISA using a 4-point Likert format.

The SISA was a modification of the first instrument to measure of self-actualization, the Personal Orientation Inventory (POI) (Shostrom, 1963), and is significantly correlated with the POI (Jones and Crandall, 1986). The initial validation study of the SISA found significant differences between persons nominated as self-actualizing and those nominated as non-self-actualizing (Jones and Crandall, 1986). The SISA

significantly correlated in expected directions with self-esteem and neuroticism (Jones and Crandall, 1986), boredom proneness (McLeod and Vodanovich, 1991), perfectionism (Flett, Hewitt, Blankstein, and Mosher, 1991) and creativity (Runco, Ebersole, and Mraz, 1991).

The Gestalt Contact Styles Questionnaire—Revised (GCSQ-R; Woldt and Kepner, 1993) was selected to measure the six traditional Gestalt resistances: confluence, desensitization, introjection, projection, retroreflection, and deflection. *Confluence* is the process whereby the boundaries between self and environment become undifferentiated to the point where awareness of self is lost in the environment, for example, in a group or another person. *Desensitization* is the process of blocking sensory contact or hindering sensory information from being recognized. *Introjection* is the process of passively accepting and incorporating material, such as rules or attitudes, from the environment without examining, challenging, or integrating that material. *Projection* is the process of disowning personally objectionable material, such as thoughts or feelings, and assigning this material to the environment, for example, to other people or objects. *Retroreflection* is the process of thwarting need fulfillment by redirecting impulses away from the environment and back toward the self, either by doing to oneself what one would like to do to others, such as pounding one's fist against one's forehead, or by doing to oneself what one would like others to do, for example, gently stroking one's forehead. *Deflection* is the process of avoiding or reducing the intensity of contact through various behaviors, for example, changing topics or using humor to relieve tension.

The 100 items on the GCSQ-R were responded to on the same 5-point Likert-type scale presented above. Robert Hoopingarner (1987) reported a total-score test-retest reliability of .83 for a 2- to 4-week interval, with all six resistance scales test-retest reliability exceeding .70.

The six resistance scales were derived through factor analysis (Woldt and Kepner, 1993). A number of empirical studies supported the construct validity of the resistance scales (Prosnick, 1996). The GCSQ-R is the only extant measure of Gestalt resistance processes with acceptable psychometric properties.

The seventh Gestalt resistance of egotism was measured by the egotism scale. *Egotism* is the process by which a person mentally separates from his or her experience and becomes a spectator of, or commentator on, that experience. I developed this egotism scale through factor analysis and reported an acceptable coefficient alpha of .76 (Prosnick, 1996). The egotism scale exhibited convergent validity with a measure of ego rigidity and discriminant validity with a measure of self-transcendence (Prosnick, 1996).

Transfluence is a measure of transpersonal experiences created through factor analysis (Prosnick, 1996). The types of experiences included on the Transfluence Scale include seeing auras and traveling out of body. I reported a high coefficient alpha of .90 for this scale which exhibited convergent validity with the Mysticism Scale (Prosnick, 1996).

Reported mystical experiences were measured by the Mysticism Scale (M Scale) (Hood, 1975). The Mysticism Scale is scored in a 5-point Likert-type format, with a range from 32 points measuring least mystical to 160 assessing most mystical, derived from factor analysis (Hood, 1975). A recent study by Ralph Hood, Ronald Morris, and Paul Watson (1993) established a three-factor structure for the M scale compatible with the conceptual work of Walter Stace (1960), from whom the scale items were initially developed. The M scale is the most frequently cited measure of self-transcendence, and is the most widely used and the only psychometrically acceptable instrument available for operationalized reporting of mystical experience.

Reliability for the M scale was in acceptable ranges: Cronbach's alpha coefficient of internal consistency was .92 (Stifler, Greer, Sneck, and Dovenmuehle, 1993). Correlational findings support the construct validity of the M scale. Convergent validity was indicated by significant positive correlations between the M scale and measures of intrinsic religious orientation, intense religious or spiritual experience, and openness to experience. The Intrinsic Religious Motivation Scale (Hoge, 1972), Religious Experience Episodes Measure (Hood, 1970), and Ego Permissiveness Scale (Taft, 1970) each correlated positively with M scale scores (Hood, 1975).

Claim of peak life experience was measured by a single question—"Have you ever had a 'Peak' or highly unusual, positive life experience?"—to which subjects could answer "yes" or "no." As a check on social desirability, three items from the MMPI-2 Lie scale were administered.

Level of Significance

In this exploratory study, I chose to take a bigger risk of making a type I error, so that possible relationships for further investigation could be identified. Therefore, alpha was set at $p = .20$. Bonferroni's inequality was used to correct for multiple simultaneous correlational tests (Grove and Andreasen, 1982); applying that to the 12 variables in this set of data, the required level of significance for each individual statistical test was set at $p = .017$.

Procedure

All participants were given a questionnaire including the above measures, and were given as much time as needed to complete it. All questionnaires listed the scales in identical order, since it has been empirically demonstrated that scale order has little affect on interscale correlations (Spector and Michaels, 1983).

Results

The number of study participants who responded "yes" to the question about having had a near-death experience was 25 (16 percent); while 88 participants (58 percent) responded "yes" to the question about having had a peak life experience.

Table 1 presents the possible range of scores, mean, standard deviation, and coefficient alphas for all study scales, while Table 2 presents zero-order correlations between claiming to have had an NDE and the other study variables. As can be seen, claiming to have had an NDE was significantly correlated with higher scores on the Transfluence Scale ($r = .21$) and the Mysticism Scale ($r = .23$). There were no significant relationships between the claim of having had NDE and the other study variables. There were no significant correlations between the Short Lie

Table 1
Statistics of Study Scales

<i>Scale</i>	<i>Possible Range</i>	<i>Mean</i>	<i>SD</i>	<i>Internal Consistency (Alpha)</i>
SISA	15-75	51.95	5.27	.67
Confluence	22-110	66.55	7.38	.59
Desensitization	12-60	33.65	5.57	.58
Introjection	23-115	75.61	6.16	.35
Projection	27-135	70.12	11.92	.85
Retroflection	43-215	109.08	15.81	.85
Deflection	43-215	102.79	15.42	.85
Egotism	11-55	27.01	5.48	.71
Transfluence	18-90	50.90	13.20	.90
M Scale	32-160	99.26	22.92	.96
Short Lie	3-15	6.43	1.65	.17

Table 2
Correlations Between Claim of
Having Had an NDE, Short Lie
Scale, and the Study Variables

<i>Variable</i>	<i>NDE</i>	<i>Short Lie</i>
Self-actualization	.05	.07
Confluence	-.15	-.08
Desensitization	.12	-.07
Introjection	-.15	.21
Projection	.01	-.13
Retroreflection	.01	-.06
Deflection	.00	-.11
Egotism	.01	-.05
Transfluence	.21*	-.11
Peak Life Experience	.17	.06
Mysticism Scale	.23*	-.17
Short Lie	.11	1.00

* $p < .017$.

Scale and any study variables, which suggests that a social desirability response set did not affect these data.

Discussion

This study supports the contention that individuals claiming to have had an NDE also report high rates of transfluence and mystical experiences. These findings indicate that persons claiming an NDE have had more transpersonal experiences than have the nonNDE sample. The study design did not permit distinguishing between transpersonal experiences that occurred prior to or after the NDE. Future research could determine whether "transpersonal experiencers" are predisposed to have NDEs, or whether NDEs make people more inclined to have transpersonal experiences.

No significant correlations were found between claim of NDEs and the seven Gestalt resistances. Thus NDErs as a group were neither more nor less resistant than the nonNDErs. No significant relationship was found between claim of an NDE and claim of a peak life experience.

Additionally, no significant relationship was found between claim of an NDE and self-actualization. Bruce Greyson (1992) reported a similar lack of significant relationship between actualization and occurrence or depth of NDEs.

A methodological limitation of the present study is that individuals claiming to be NDErs were identified neither by a standardized instrument nor by an interview, but rather a single "yes" or "no" question. Thus, some individuals may have broadly interpreted this question to include physical near-death encounters that may not have included the components of the psychospiritual NDE. This limitation notwithstanding, the results of this study are logically consistent with previous near-death investigations (Ring, 1980, 1984, 1992).

A future study could correct for the above limitation by utilizing a psychometrically sound instrument to identify the NDErs, like the one presented by Greyson (1983). This group could then be correlated with the same or similar measures chosen for this study. It may also be beneficial for future research to replicate the present study with other samples to assess the generalizability of the findings.

Future studies could also assess the causal nature of the relationship between claim of an NDE and transpersonal experiences, that is, transfluence and mystical experiences. For instance, does an NDE lead to increased transpersonal experiences, does high capacity for self-transcendence lead to greater likelihood of claiming an NDE, or is there a reciprocal relationship? It is also possible that other variables might control the relationship between claim of an NDE and transpersonal experiences.

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Gender and Trauma in the Near-Death Experience: An Epidemiological and Theoretical Analysis

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ABSTRACT: In this article, I explore the nature of the "fear-death experience" (FDE) by way of an epidemiological analysis, and discuss the FDE as one of several causal theories of the near-death experience (NDE). I then pursue two hypotheses: (1) if the FDE model is correct, one would expect to find that a number of NDEs are preceded by traumatic experiences; and (2) if the FDE model is correct, one would expect to find that more NDEs are experienced by males than females. Chi-squared analyses on data from more than 500 NDE cases revealed that the first hypothesis cannot be rejected, while the second hypothesis can be rejected. I discuss the theoretical implications of these findings.

One of the more interesting and recent hypotheses in the evolving scientific literature on the near-death experience (NDE) is the hypothesis that the experience may have little to do with objectively-defined imminent death. It appears that an NDE can be precipitated by the belief that one is dying. Ian Stevenson, Emily Cook, and Nicholas McClean-Rice (1989-90) have termed this the *fear-death experience* (FDE). The utility of identifying an FDE is that such an identification has the potential of directing the scientific community toward an accurate explanatory model of the NDE. This is possible because the analysis of an NDE as an FDE changes the analytical focus from imminent death to the *perception* of imminent death.

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Accordingly, the purpose of this article is to pursue an understanding of the FDE by way of an epidemiological analysis. If the FDE hypothesis is correct, one would expect to find that the preponderance of NDEs had occurred incidental to trauma. That is, the individual who experiences sudden, life-threatening trauma is more likely to believe that death is imminent and is therefore more likely to fear it. Conversely, the individual who has a prolonged illness may have very little way of knowing when death is imminent and is therefore less likely to fear it. Under the FDE hypothesis, one would expect to find more NDEs among the former set of individuals.

A FDE hypothesis also suggests the possibility of a positive correlation between the frequency of NDEs and male gender. For social reasons one might expect males to be more likely to be involved in life-threatening activities, such as war. Furthermore, one might also expect this to be true for biological reasons, such as increased testosterone level leading to more aggressive, life-threatening behavior.

Although it is easy to characterize the preceding propositions regarding the importance of gender and trauma to the incidence of the NDE, establishing their validity through a consultation of the NDE literature is a different matter altogether. A consultation of that literature reveals inconsistent conclusions among various investigators regarding the importance of gender and trauma to the incidence of the NDE. In many studies, there is no discussion at all of the importance of gender and trauma to the incidence of the NDE. Therefore, in the present article, I will attempt to reconcile these discordant strains in the near-death literature by pooling the respective data from several studies and analyzing them in the spirit of statistical meta-analysis.

In view of the foregoing, I have organized this article as follows. In Part I, I will discuss explanatory models of the NDE and FDE. In Part II, I will present summaries of NDE studies that have presented data on gender and trauma. In Part III, I will pool the data from these and other studies and analyze the results. In Part IV, I will discuss these results.

Explanatory Models of the NDE

Definition and Assessment of the NDE

A threshold problem that is confronted by any study that attempts to pool NDE data is the problem of disuniform definitions and assessments of NDEs. With regard to definitions of the NDE, there are four such definitions that are relevant to this article. First, Raymond Moody's

(1975) original characterization of the 15 elements of an NDE, such as a ringing noise and dark tunnel, laid a foundation for subsequent scientific work on NDEs. Yet even Moody was quick to point out that the NDEs of his interviewees were disuniform so that not all 15 elements were necessarily present in any given NDE. As a second definition, Kenneth Ring (1980) in his work with interviewees, recharacterized Moody's elements into the five stages of an NDE, such as euphoria and out-of-body experience.

A third definition of the NDE is that suggested by Michael Grosso (1981). Grosso maintained that "two types of NDEs" (p. 4) could be identified. The first type is the *deathbed vision* experienced at "the hour of death" by someone who is ill. The second type occurs where individuals suddenly find themselves in a life-threatening situation. This distinction between NDEs on the basis of their preconditions—that is, trauma versus nontrauma—is clearly the kind of distinction that is being pursued in this article.

A final definition of the NDE was suggested by Bruce Greyson (1985), who has proposed a typology of NDEs. According to this typology, there are three classes of experiences that are possible within the NDE. These types of experiences are transcendental, such as seeing mystical beings; affective, such as experiencing peace; and cognitive, such as reviewing one's life. What is significant for purposes of this article is that Greyson found that preconditions to the NDE affected the nature of the experiences that occurred during the NDE. Individuals who anticipated death, as in attempted suicide, were more likely to have transcendental and affective rather than cognitive experiences. Greyson also found that the subjects within each class of experience did not differ demographically within his sample of 89 cases across three classes of experiences.

With respect to the assessment of NDEs, there are two instruments that are currently used to achieve this goal. The first instrument, developed by Ring (1980), is his Weighted Core Experience Index (WCEI), which he developed from his interviews with NDEs. The second instrument, an NDE Scale developed by Greyson (1983) and tested on 67 subjects, is an instrument that has proven reliable in identifying the presence of an NDE. The WCEI remains useful for quantifying the depth of any given NDE.

As I will discuss further below, the pooling methodology of this article will involve a consideration of NDEs that occurred up to 250 years ago. Therefore, despite the meritorious nature of the WCEI and the NDE Scale, it will not be possible at this time to apply these instruments to

the NDEs that pre-date them. For purposes of this article, I will assume that reported and recorded NDEs are valid NDEs.

Traditional Neurobiological Models of the NDE

It is useful to pause at this point to consider the broader background of explanatory models against which the present article is written. If one consults the NDE literature, it is possible to find a number of authors who argue that explanatory models of the NDE can be classified in one of two ways. For example, Susan Blackmore (1993) argued that there are "two alternative points of view" (p. 3) regarding the NDE. One point of view, the "afterlife hypothesis," maintains that the NDE is a real experience in which the "soul is travelling in a non-material world beyond the limitations of space and time" (p. 4). Another point of view, the "dying brain hypothesis," maintains that "[a]ll the phenomena of the NDE are believed to be products of the dying brain" (p. 4). Moody (1975) also argued that the choice between explanations of the NDE is a choice between "supernatural explanations" and "natural (scientific) explanations" (p. 156).

Unfortunately, one possibility that is ignored by this distinction between supernatural and natural explanations of the NDE, is the possibility that the NDE is a *real* supernatural event that cannot be explained within the confines of the present scientific technology. The history of science is littered with examples of scientific explanations that preceded the development of the appropriate technology (Audain, *in press*). For now, however, it is useful to briefly consider the nature of traditional explanations of the NDE whose purpose it is to explain the NDE without having to appeal to anything supernatural.

Moody (1975) presented a number of cogent arguments to refute the more traditional explanations of the NDE. For example, the pharmacological explanation of the NDE is untenable simply because many of his subjects had received no drugs when they experienced their NDE. Moreover, individuals who have taken hallucinogenic drugs have vague and varied experiences that do not resemble the NDE. The hypoxic brain explanation is untenable because many of the NDEs occurred before bodily injury or stress occurred to the body; that is, many of the NDEs were FDEs. "Autoscopic hallucinations" are distinguishable from the NDE on phenomenological grounds; for example, in the autoscopic hallucination, the hallucinating individual sees him- or herself alive, from the neck up, conversing; there are no associated features such as a life review, tunnel, or beings of light.

Parenthetically, in addition to the traditional explanation of the NDE, there are purely psychological explanations of the NDE that Moody (1975) also refuted. I will not discuss these explanations here, for in the final analysis, they also must be premised on some underlying biological or physical explanation of the NDE.

The practice of proposing biological or physical explanations of the NDE without appealing to the supernatural is a practice that continues unabated. This is as it should be, for it is unlikely that there will be a scientific understanding of the NDE without such a pursuit of knowledge and truth. Having said that, it is equally clear that there are two phenomena within the NDE that cannot be explained by traditional explanations. These are the veridical observation phenomenon and the precognition phenomenon. I will consider each of these phenomena briefly below, followed by a discussion of three of the more recent traditional explanations of the NDE; and I will then discuss yet a third phenomenon: the fear-death experience phenomenon.

The Veridicality and Precognition Phenomena

The veridicality phenomenon arises when NDErs recount things that they observed during their NDE, and these observations are subsequently confirmed. However, under present scientific theories, it is not possible to explain how these observations could have been made while the individual was without vital signs and being resuscitated. Moody (1988) recounted four such experiences. For example, in one experience, the subject not only described all of the resuscitation procedures that were performed on him, but he also described the emergency room nurse and gave her name; while out of his body he had walked through her in the hallway and had read her name tag. In another experience reported by Moody, a woman who had been blind for 50 years was able to describe the resuscitation procedures, equipment, and other items in the room during her NDE, things that she could not possibly have known anything about because of her lifelong blindness. The NDE literature continues to report these veridical observations (Ring and Cooper, 1997; Ring and Lawrence, 1993).

The precognition phenomenon arises when the experiencer returns from the NDE with predictions about the future, and these predictions come true without the intervention of the subject. Perhaps the most celebrated case of this is that of Dannion Brinkley, one of Moody's subjects, who apparently predicted the downfall of the Soviet Union and the Persian Gulf War 14 and 15 years before their occurrence

(Brinkley and Perry, 1994). Ring (1982) has characterized these precognitions as being either "personal flashforwards" if they pertain to the subject's personal life or "prophetic visions" if they are predictions on a societal or planetary scale. Craig Lundahl (1993) has recently identified yet a third kind of precognition: an "otherworld personal future revelation," similar to flashforwards but different in that they are received while the subject is in the "otherworld" and not during the life review.

Explanations of the veridicality and precognition phenomena continue to elude traditional explanations of the NDE. For example, Melvin Morse, David Venecia, and Jerrold Milstein (1989) have proposed that NDE-like memories are genetically encoded in the temporal lobe and are activated by serotonergic mechanisms that in turn are activated by physiological stress. Although they discuss hallucinations, nowhere in the article do they discuss the veridicality or precognition phenomena. Indeed, how could parents pass on genes that contain specific knowledge of medical technology, years before the invention of the equipment, permitting, for example, veridical observation of resuscitation equipment?

Similarly, Jean-Pierre Jourdan (1994) has argued that much of the NDE can be explained through an analysis of the N-methyl-D-aspartate (NMDA) receptors that are found in the hippocampus. It has been established that these receptors are important in the long-term potentiation of hippocampal neurons, resulting in the formation of memories. Jourdan theorized that the "sensory disconnection" of an NDE causes the release of "neuroprotective substances" that block the NMDA receptors, thereby precluding long-term potentiation. As a consequence, "internal memories...take the place of the missing sensory input" (Jourdan, 1994, p. 191). Unfortunately, when considered in the light of the veridicality phenomenon, Jourdan's theory suffers from the same temporal difficulty as Morse's theory: how can the subject's brain have a precise internal memory of things that were never neuronally encoded and had no way of being encoded?

Finally, one of the more interesting, recent, and direct efforts to explain the veridicality phenomenon is found in the work of Juan Gómez-Jeria and Juan Saavedra-Aguilar (1994). They argued that recall of NDE events involves the "priming" of memory through the use of conscious and unconscious environmental stimuli. The individual is particularly attuned to these stimuli during the altered NDE state. This information is combined with previous knowledge to give a "story" that is highly credible. There is enormous difficulty here: how do these

authors explain to Ring and Madelaine Lawrence's (1993) patient the nature of the stimuli in the emergency room that allowed her to see the red shoe in the corner of the hospital roof while she was out of her body?

"Fear-Death" Models of the NDE

The fear-death experience represents one of the more interesting and recent challenges to the NDE scientific community. In a seminal study, Stevenson, Cook, and McClean-Rice (1989-90) examined the medical records of NDErs to discover whether those subjects were medically and objectively near death. They discovered that 45 percent of the patients were objectively near death, while 55 percent were not. However, 83 percent of the patients believed they had been near death. These data led Stevenson and his colleagues to conclude that not all NDErs are necessarily near death. They concluded that those experiences that occur when the subject is not near death might be more appropriately labeled the "fear-death experience."

More recently, Glen Gabbard and Stuart Twemlow (1991) reviewed the literature on the FDE, concluding that the "key determinant" of the NDE is the "perception of being near death, independent of the actual reality of the situation" (p. 41). In discussing the FDE, Gabbard and Twemlow cited their earlier study of 339 subjects with out-of-body experiences (Twemlow, Gabbard, and Jones, 1982). From that study, they concluded that none of the characteristics of the NDE was "exclusive" to the NDE, although many of them were "significantly more likely to occur" when the subject believed death was imminent (Gabbard and Twemlow, 1991, p. 42). Unfortunately, they were led to conclude that the NDE or out-of-body experience is a psychological defense mechanism that protects the individual from imminent death. Neither the veridicality nor the precognition phenomenon was discussed within their review. Further, Gabbard and Twemlow were forced to speculate mightily as to how a 2½-year-old child who had an NDE while having no conception of death was able to develop such an elaborate psychological defense mechanism.

Even more recently, Keith Floyd (1996) demonstrated that precognition is possible within an FDE. In the case reported by Floyd, a patient who was scheduled to receive electroconvulsive therapy for her depressive symptoms was opposed to the therapy and believed she was going to die upon receiving it. Shortly after receiving the electric shock, the patient had an NDE with a precognition that was confirmed two years later. Floyd concluded that one possible explanation for the NDE was

the patient's belief that she was going to die once she received the electric shock.

In conclusion, the intellectual challenge that faces the scientific community is to develop theoretical models that explain the FDE while simultaneously addressing the veridicality and precognition phenomena. These models can perhaps best be appreciated against a background of empirical data. It is to a discussion of these data that I now turn.

Epidemiological Studies of the NDE

The Moody Data (1975)

There can be little doubt that Moody's 1975 publication of his interviews of more than 150 NDErs represents one of the seminal works in the development of the NDE literature. Unfortunately, Moody's book offered no tabulation of his reported cases according to gender or the presence of trauma as the precondition to the NDE. Moody did, however, offer an opinion, based on his experience, that NDEs were under-reported by males. Notwithstanding this epidemiological limitation of Moody's book, it is possible to analyze the cases he discussed to draw some conclusions as to the gender of the subject and the existence of trauma or nontrauma as the precondition to the NDE. To be sure, this analysis was not possible in each of Moody's reported cases. However, of 59 cases in which gender could be identified, 31 of the subjects were female while 28 were male. Of 25 cases in which NDE preconditions could be identified, 22 NDEs were precipitated by trauma, while 3 were precipitated by nontraumatic circumstances.

The Ring Data (1980)

Ring's 1980 analysis of 104 NDE cases from 102 subjects is thought to be the "first major study to quantify and analyze NDE data" (Basford, 1990, p. 59). Moreover, in his study, Ring considered the specific questions regarding gender and trauma that are the focus of the present article. Of his 102 subjects, 57 were female, while 45 were male. With regard to the preconditions to the NDE, 52 subjects had illness as a precondition, while 26 subjects experienced an accident and 24 attempted suicide. Unfortunately, nowhere in his book did Ring define what constituted an "illness." It is difficult to know therefore how many of Ring's illness-related NDEs might have been precipitated by trauma.

Notwithstanding this limitation, it is significant to note that Ring detected some gender differences in his study. Specifically, he found that the NDEs of women were more often associated with illness while those of men were more often associated with accident and suicide.

The Sabom Data (1982)

Sabom's (1982) investigation of 116 subjects has been called "the most rigorous medical inquiry [of NDEs] to date" (Basford, 1990, p. 80). Of the 33 subjects who experienced NDEs, 26 subjects experienced NDEs after cardiac arrest, 2 experienced NDEs after accidents, while 5 experienced NDEs in a comatose state. In terms of gender distribution, 26 of the patients were male, while 7 were female.

The Twemlow and Gabbard Data (1984)

Twemlow and Gabbard (1984) reported the results of a survey that had been sent to 700 individuals who had claimed to have out-of-body experiences. Of the 700, 34 had had NDEs. The objective of Twemlow and Gabbard's study was to determine the effect of demographic and preexisting conditions on the NDE. Of the 34 NDErs, there were 22 women and 12 men. Regarding preexisting conditions, 9 of the subjects had experienced illnesses prior to the NDE, while 25 had experienced physical trauma of some kind, such as eclamptic convulsion or surgery. Twemlow and Gabbard's results regarding gender differences in preexisting conditions were consistent with Ring's (1980): their male subjects were more likely to have had their NDEs as a result of accident or physical injury.

Other Data

Two other broad sources of data are worth mentioning at this point. The Gallup Poll (Gallup and Proctor, 1982) surveyed 1,500 adult Americans and concluded that approximately 5 percent of the American population had experienced an NDE. They reported that the incidence of NDEs was approximately equally distributed across genders. However, NDEs were more likely to be induced by trauma, such as accidents or childbirth, than by close brushes with death without trauma. The Gallup Poll has been called "[t]he most comprehensive survey of NDE incidence to date" (Basford, 1990, p. 75).

The other source of data is the bibliography of the NDE literature by Terry Basford (1990), a comprehensive annotated bibliography of the NDE literature from 1847 to 1989. A count of the published NDEs summarized by Basford for which gender data were available reveals that 43 of the subjects experiencing NDEs were men, while 12 were women. With regard to preconditions, a count of cases in which precondition data were available reveals that 35 NDEs were induced by trauma, while 13 were induced by nontraumatic circumstances.

Gender and Trauma in the NDE: An Epidemiological Analysis

Method

The basic approach pursued in this study was to pool data, from as many sources as possible, related to the gender distribution and incidence of trauma associated with NDEs. The data presented above are the major studies relied upon for purposes of this article. I retrieved additional data from (1) studies listed in the *Psychological Abstracts* that were accessible; (2) studies listed in the Basford (1990) bibliography that were accessible; (3) all studies published in the *Journal of Near Death Studies* from 1988 to 1996; and (4) studies published in the bibliography of the recent NDE anthology compiled by Lee Bailey and Jenny Yates (1996).

The underlying analytical methodology that informed the approach taken in this article was the methodology of *meta-analysis*, defined as "the analysis of analyses." The basic method of meta-analysis is that "[e]ach data point used for analysis is obtained from an individual study rather than from an individual subject" (Wolf, 1986, p. 11).

Strictly speaking, the pooling of raw data that I pursued in the present paper is not meta-analysis as it is currently practiced, which involves the analysis of test statistics from individual studies (Petitti, 1994, pp. 15-19). The reality, however, is that the field of near death studies is very much in its scientific infancy, and in many of the studies discussed above and in those to be discussed below, test statistics and control samples are absent. In light of this, the solution I pursued in this article is a second-best solution in the form of an analysis of the raw data from individual studies. It is clear that there are potential problems with this pooling methodology. For example, whatever selection bias may have been present in the original raw data is perpetuated in

Table 1
Gender and Trauma in the NDE

<i>Study</i>	<i>Gender</i>		<i>Precondition</i>	
	<i>Male</i>	<i>Female</i>	<i>Traumatic</i>	<i>Nontraumatic</i>
Moody (1975)	28	31	22	3
Ring (1980)	45	57	52	50
Sabom (1982)	26	7	5	28
McLaughlin and Maloney (1984)	12	28		
Twemlow and Gabbard (1984)	12	22	25	9
Basford (1990)	43	12	35	13
Morse and Perry (1990)	6	4	6	2
Serdahely (1990)	1	2	3	0
Sutherland (1990)	15	35		
Serdahely (1991)	5	5		
Gibson (1994)	28	40		
Pacciolla (1996)	38	26		

the meta-analysis. Yet because of the paucity of data on NDEs, it would seem better to have some possibly biased data, rather than no data at all. Moreover, it is possible that some of the biases of the individual authors will cancel out one another.

Data and Results

The data on gender and the presence of a trauma precondition in NDEs are presented in Table 1.

With respect to gender, the total number of males from Table 1 is 259, while the total number of females is 269. This gender difference was not statistically significant (chi-squared = 0.19, $df = 1$). Therefore, we cannot reject the null hypothesis that there is no difference between the number of males and females who experience the NDE; the present data suggest but does not prove that the numbers of males and females who have NDEs are comparable. This result is consistent with the majority of the studies discussed above.

With respect to the incidence of trauma as a precondition to an NDE, the total in the traumatic precondition column is 148 and the total in the nontraumatic column is 105. This difference in preconditions was statistically significant (chi-squared = 7.68, $df = 1$, $p < .01$, one-tailed).

Therefore, the null hypothesis that there is no difference between trauma and nontrauma as a precondition for an NDE can be rejected; the present data suggest that the incidence of NDEs is higher in the presence of trauma than in its absence. It is important to note that the chi-squared analysis cannot be used to support a claim about the relative importance of trauma to the incidence of NDEs, because the total number of traumatic and nontraumatic brushes with death is not known.

Discussion

What the preceding data make clear is that a pressing challenge to any model of the NDE is to explain why trauma might be important to the incidence of NDEs. The discussion above suggests a first approximation to an answer: namely, that if the near-death experience is in reality a fear-death experience, then it follows that unexpected, life-threatening, traumatic situations, in which one would be inclined to fear death the most, would be expected to precipitate more NDEs than would nontraumatic circumstances. The data suggest that this will be true irrespective of the gender of the individual.

In view of this first approximation to understanding the importance of trauma to the incidence of NDEs, as a second approximation, the question that now arises is this: How is the human organism physiologically different in a condition in which it is fearing death? There are at least three possible answers to this question, any combination of which could conceivably be correct. Specifically, the fear of death might bring forward within the organism (1) endogenous opioids, (2) limbic involvement, and/or (3) adrenergic involvement.

Other investigators have commented on the possible role of endogenous opioids and the limbic system in triggering a NDE (Saavedra-Aguilar and Gómez-Jeria, 1989). However, in view of the data in this article and the FDE data, what one must postulate is that there is release of opioids and limbic involvement in anticipation of the pain that the traumatic experience will inflict upon the organism, such as during the fall from the cliff, or before a grenade explodes. A similar physiological story can be told about the release of adrenergic neurotransmitters: the release of epinephrine and norepinephrine from the adrenal medulla can occur rather instantaneously in anticipation of a fight or flight response. Two decades before these experiences were named NDEs, Carl Jung (1955) speculated on a possible role for the

sympathetic system in bringing on such experiences. Unfortunately, other investigators have not pursued that line of reasoning.

If the foregoing considerations are correct, then if individuals are able voluntarily to control the release of these chemical substances in the right mix and quantities, then they could achieve voluntary NDEs. This would explain why the individual who has been trained to achieve an out-of-body experience can have an experience that is similar to an NDE.

Yet the explanatory story regarding the NDE cannot end here. It will be recalled from the discussion above that the pressing challenge faced by an explanatory model of the NDE is to address the veridicality, precognition, and fear-death phenomena. An explanatory model that is based only on neurotransmitters is forced to ignore or dismiss the veridicality and precognition phenomena because it is unable to explain them. In searching for more robust explanatory models, one possibility is to look for explanations that integrate, but do not rely solely on, neurotransmitters, such as explanations beyond the third dimension. A discussion of such an explanation is beyond the scope of the present article. However, elsewhere I have discussed some of the possibilities for such an explanation (Audain, *in press*).

Conclusion

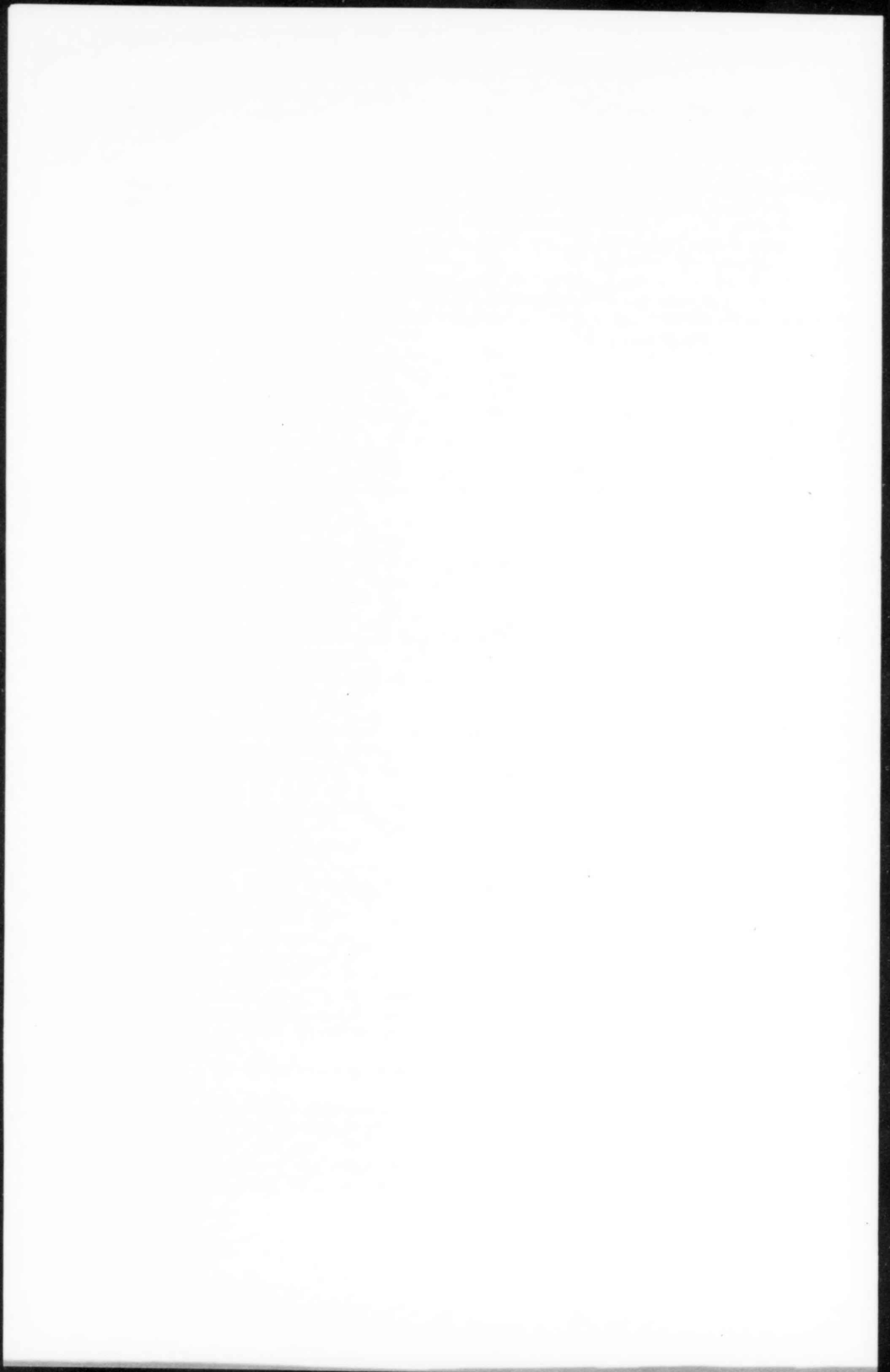
The purpose of this article has been to address the role that gender and a precondition of trauma play in the incidence of NDEs. Having empirically addressed the nature of that role, I attempted to explain from a theoretical standpoint why trauma might be a precondition to the onset of an NDE. It seems to me relatively clear that the debate over the etiology of the NDE is a debate that will continue for some time. I can only hope that this article has made a small contribution toward the clarification of the issues within that debate.

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BOOK REVIEW

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The Eternal Journey: How Near-Death Experiences Illuminate our Earthly Lives, by Craig R. Lundahl and Harold A. Widdison.
New York, NY: Warner, 1997, 294 + xxvi pp, \$24.00, hb.

The Eternal Journey is a popular book presenting the most comprehensive glimpse of the afterlife revealed in near-death experiences (NDEs) published to date. Written in an engaging, easy-to-read style by Craig Lundahl and Harold Widdison, two well-known sociologists in the NDE field, the book is much more than this, however. Its ambitious intent is to answer the question, "what is the purpose of life and the meaning of death?" (p. 12). To accomplish this goal, the authors offer eyewitness testimony from the dying concerning souls awaiting incarnation, life on earth, and what happens after death. Seldom has so much of the range of human experience appeared in a mass-market book, and it contains a significant amount of new material. Detailed descriptions of the realm of light introduce many aspects of the afterlife never explicated before.

The book seeks to "enlighten us about the reality, purposes, and meaning of life and death" (p. 11). However, the authors never state that their version of enlightenment, purpose, and meaning comes largely from a single source: the Church of Jesus Christ of Latter-day Saints (LDS, or Mormons). Mormon ideology permeates the entire book, but identification with this organization is not apparent to the average reader who is the audience for this mass-market book. As much as I respect these researchers' previous work, their affiliation makes a difference, given the reason for writing *The Eternal Journey*. Like controversial NDEr Betty Eadie, Lundahl and Widdison's concealment of their ideological bias is in marked contrast to the straightforward stance of other Mormon

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writers, such as Brent and Wendy Top (1993) and Arvin Gibson (1992). The nature of this bias is particularly relevant in a work purporting to reveal the "reality" about the "meaning of life." The LDS ideology is so pervasive in the book that it deserves treatment here before the contents of the book can be properly reviewed.

First, both authors are Mormons, a fact omitted from their otherwise rather exhaustively listed qualifications. Rather, their authority as objective scientists is stressed not only in the endnotes but in Melvin Morse's foreword. Second, the evidence they present is overwhelmingly drawn from Mormon NDEs, a skewed sample never identified as such in the text, and one that is unconventionally obscured in the references. To his credit, Morse alerts readers that, "*The Eternal Journey* is based on the authors' research of over two hundred years of recorded near-death experiences with some from the Mormon community" (p. xxiv). However, "some" appears to be quite an understatement; of the almost 300 citations, at least 150 were from identifiable Mormon sources, very possibly more. In fact, except for citing mass studies like the Gallup Poll and Kenneth Ring's research to establish the universality of certain NDE features, the actual number of sources is quite small. Three Mormons—Arvin Gibson, Betty Eadie, and Lee Nelson—account for 93 citations alone. Some chapters come almost exclusively from Mormon records. Finally, the unusual referencing style discourages checking on these sources. Instead of the customary numbered citations in the text matched with numbered endnotes, no citations appear in the text, and the endnotes are not numbered. "Sources for Quoted Material (by order of appearance)" (p. 272) require the reader to guess what constitutes "quoted material," to count up through anything appearing to be a quote to arrive at a point, and then to count down from the list of citations for that chapter. Without text numbering, the casual reader is unlikely to suspect there are endnotes; for more sophisticated readers, this cumbersome procedure renders accurate referencing very difficult.

Thus, the book, intended as an objective study of representative near-death experiences from the general population conducted by objective scientists, is in fact a tract written by Mormons about mainly Mormon experiences. With the LDS slant in mind, the true value of the book can be more easily assessed, and indeed, it still does have a lot to offer. Morse's foreword warmly endorses Lundahl and Widdison's distillation of the cumulative wisdom in this book in way that acknowledges the limitations of the research. Then the book follows a roughly chronological outline, moving from visions of pre-incarnate life to the meaning of

earthly life, death, the afterlife, and the ways in which these threads come together.

The book begins by introducing NDEs and declaring the authors' intent to use these experiences to "enlighten us about the reality, purposes, and meaning of life and death" (p. 12). The authors argue in Chapter 2 for the "reality" of the near-death experience, a concept they do not distinguish from validity. To give Lundahl and Widdison credit, they do not make any unsubstantiated claims, although they skirt rather close in using subtleties of language indistinguishable from reality claims for the average reader. The prevalence of NDEs, their similar features, and the absence of a comprehensive counterexplanation are evidence "for the reality of the NDE" (p. 28). They gloss over differences, suggesting that, for example, *The Egyptian Book of the Dead*, *The Tibetan Book of the Dead*, *The Aztec Song of the Dead*, and the Old and New Testament are congruent sources concerning the afterlife. Moreover, they rely heavily on the Gallup Poll (Gallup and Proctor, 1982), claiming that "over 22 million" have had NDEs (p. 14), a figure hardly any researcher credits.

Chapter 3, "Pre-Earth Life and Its Purposes," presents NDE visions of life before incarnation. Here humans work on "personal development and preparation for earth life" (p. 46) in a spirit realm where they volunteer to come to earth, contract with other spirits to have relationships as family or friends, select their mission and station in life, and prepare for the testing of earthly existence. The addition of this kind of information to the near-death literature could be a valuable way of tying in features from other anomalous experiences, such as annunciation visions and pre- and perinatal records (for an overview, see Wade, 1996), so it was gratifying to see the connection made here. But alternative or supporting materials that might have bolstered the case are omitted, perhaps owing to ideological choices. The reader is not told that virtually all the sources in this chapter are Mormons, so he or she might easily infer from the text that it is routine for female NDErs to see spirits they feel impelled to bring into the world as their own children, even at the risk of their own lives. A typical excerpt from a woman whose NDE resulted from near-fatal complications of her third pregnancy states:

"Against the doctor's advice, I became pregnant four more times, losing two of the babies prematurely, coming near death again with another of the pregnancies. I knew that several people I had seen at the end of the tunnel were to be my future children, so I continued getting pregnant until I felt I had brought them into the world." (pp. 41-42)

In the chapter "Earth Life and Its Purposes," the authors employ the life review and other revelations to show that the purpose of earthly life is to love and serve others, gain knowledge, grow spiritually, and fulfill a personal mission. Although larger studies like Raymond Moody's and Ring's are cited, once again the majority of illustrations are Mormon or conservative Christian. Since crosscultural studies exist in this arena—even crosscultural Christian studies, like Carol Zaleski's (1987)—the concentration of 19th and 20th century evangelical Christian NDEs appears to be an editorial limitation. Additionally research such as Ring's (1984) consistently shows that NDErs move away from traditional, organized religions toward a more personalized spirituality, so the evangelical Christian narratives presented can hardly be considered representative.

Readers are told that

The family is the basic unit on earth and in the spirit world. This basic unit is formed of unique spirits who elected to join as families in the pre-mortal world . . . [from] commitments made by parents to their children, children to their parents, children to each other, and all family members to more distant relatives. (p. 66–67)

I am not aware of this revealed knowledge in other NDE accounts; certainly the reincarnation and regression literatures indicate quite a different relatedness (Bache, 1990; Gabriel and Gabriel, 1992; TenDam, 1990; Woolger, 1988), leading me to suspect that this conclusion is yet another Mormonism. In the section on the Future of the Earth, Ring's findings on prophetic visions of cataclysm presented here are supported by accounts from other sources, all predicting increasing turbulence and destruction before a new era of peace and harmony. Ring's published qualifications (1988) that such visions should not be taken literally have not been incorporated into this book.

Chapter 5 focuses mainly on the painless separation of consciousness from the body, stressing that there is nothing to fear in this transition to another state. In later chapters, however, a number of accounts show that some people do experience fear, bringing to mind Karlis Osis and Erlendur Haraldsson's (1977) research on frightening deathbed visions in India. Such contradictions occur throughout the book, resulting in unqualified statements of certainty in early chapters at odds with both the stories and content of later chapters. Broad generalizations are made on the basis of very few sources, such as the allegation in Chapter 6 that "infants who die are cared for, instructed, and grow. And when their parents' time comes to die, these children might well

be the ones there to greet their parents" (p. 91), an assertion resting on three citations. Nevertheless, the allegations in this chapter about the different experiences of infants, children, and adults entering the afterlife are very intriguing, and if substantiated by other researchers, would be a valuable addition to the field.

The chapter on the spirit body was one of the most original and thoroughly developed innovations to near-death research. In it, the authors meticulously describe the sense of the body that survives death in terms of its appearance, wholeness, capabilities, and sensory perception. A wider number of sources and considerable illustrative material support the contention that the spirit body resembles the material body, except that it is complete and perfect, with increased sensory, movement, and mental capabilities. The examples provided are unusually uplifting, and the research generally appears to be more universal. All in all, this chapter is one of the greatest contributions of the book.

The next chapter on the location of the afterlife seems somewhat more speculative, and it is hard not to make comparisons with Zaleski's work (1987) concerning the impact of culture on NDEs, as Lundahl and Widdison not only maintain that the spirit world is "located right here on our physical earth" but in another dimension, and that it is "segmented into spheres organized around qualities of love, service, and personal preparedness" (p. 139). The presentation of these levels deviates significantly from the original division into "Cities of Light" and the "Realm of Bewildered Spirits" identified by nonMormon sources, such as Moody (1977) and George Ritchie (1991), although it is reminiscent of the influence of Dante and others on the Western Christian tradition.

Following chapters offer a wealth of new material fleshing out the spiritual realm: topology; descriptions of animal, plant, and insect life; pastoral and city lifestyle; work; administration; clothing; social roles; architecture and layouts of the cities; and travel between the cities. The authors have done an unusually fine level of qualitative analysis of near-death research to discover these findings, and in some cases have incorporated data from many sources. This innovative contribution suggests rich avenues for further research, especially in crosscultural contexts. The authors' findings that the activities in the realm of light focus on keeping genealogical records (why, given the known relationships of families there?), missionary work (to whom?), performing in choirs and musical organizations, administrative record keeping, and so forth, may reflect a strong Mormon cultural overlay that might well be absent from other records. In this vein, I was surprised to note that

"there is no 'menial' work in the spirit world" (p. 189), yet people sweep streets, and women can expect to cook, perform other kitchen duties, weave cloth, and make clothing. Readers are also told that "Activities in the spirit world are tightly controlled" (p. 191) by restrictive guards, elders, and administrators.

The authors provide a deeper treatment of the beings of light, called angels, than do other researchers. "The designation 'angel' has been assigned to any being that emanates light, wears clothing that dazzles the eye, or possesses qualities thought of as being angelic" (p. 199). Distinctions between beings of light presumed to be holy personages, such as Christ, radiant deceased humans, and "angels" were not clear to me from the data, but the authors seek to categorize angels by their activities (protection, guardianship, warning, guidance, escorting, bearing arms, delivering messages) and characteristics. These sections draw heavily on deathbed visions as well as NDEs, as well as the popular literature on angels concerning miraculous rescues from threatening situations.

Chapter 14 is devoted to the Realm of Bewildered Spirits, or frightening NDEs, based on studies they cite by Maurice Rawlings (1978), Bruce Greyson and Nancy Evans Bush (1992), George Gallup (Gallup and Proctor, 1982), and Mormon experiencers. Accounts supporting traditional Christian views of hell and Satan are given prominence; Don Brubaker's story constitutes about one-fourth of this chapter.

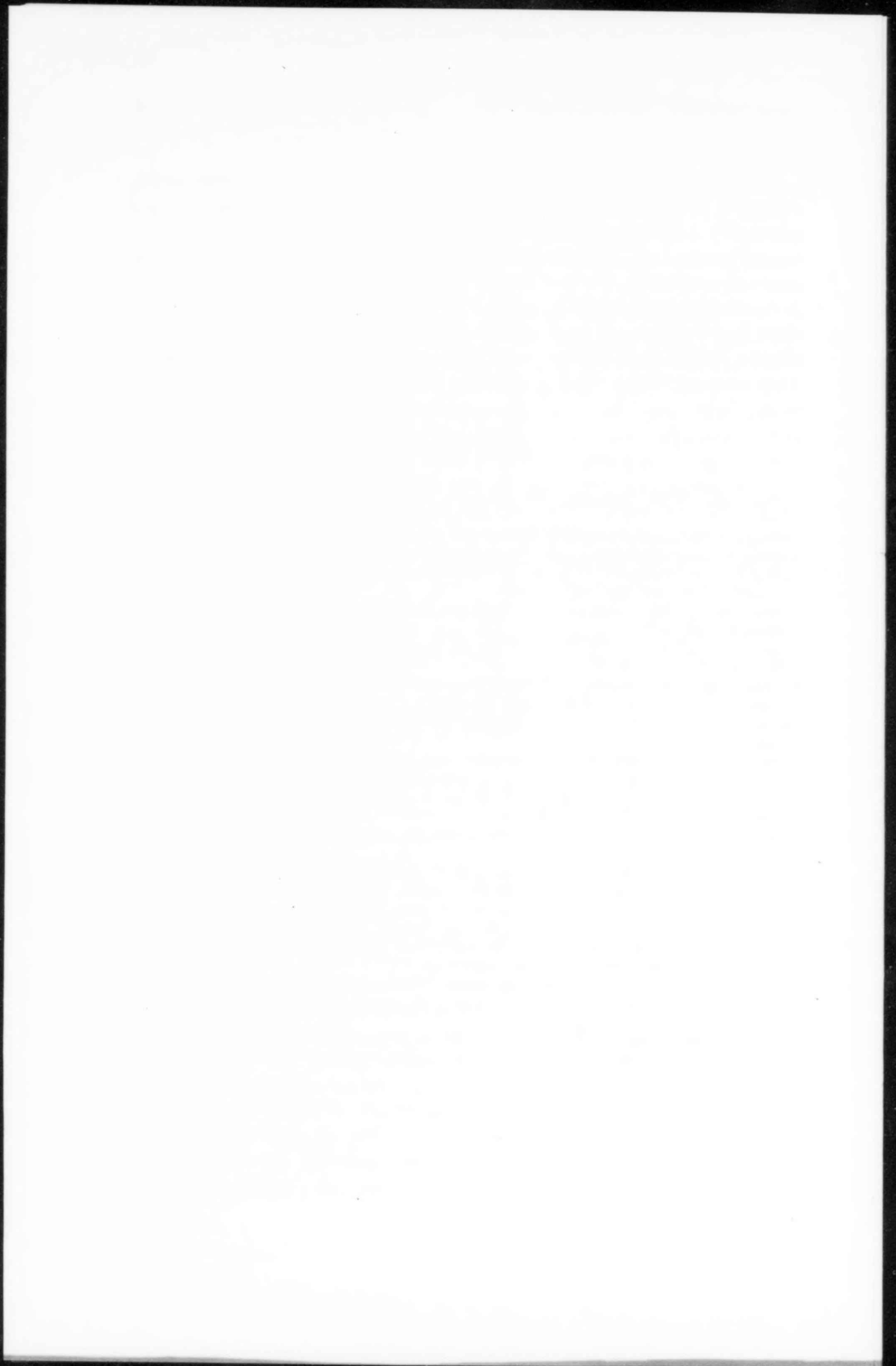
In the final chapters, the major themes come together. In an anti-abortion, anti-planned-pregnancy stance, readers are told, "Some people saw spirit children who appeared to be sad and were informed that their sadness was due to the plans of their prospective parents to stop having children or not to have any children" (p. 244), such as one mother of ten. I found myself wondering if this was a tract or representative NDE finding. Other reincarnation traditions, such as Tibetan philosophy (Maiden and Farwell, 1997), present very different views, as does the perinatal literature (Gabriel and Gabriel, 1992; Wambach, 1981); none of these is mentioned. In revisiting the life review and its impact on how people conduct their earthly lives, Ritchie and Emanuel Swedenborg are brought in as authorities on the dangers of addiction to tobacco and alcohol and of "adultery and whoredom" (p. 258), in addition to various sources warning about suicide and other transgressions important in Christian traditions. The rest of the life review material is much more representative of other near-death research.

At the end, the authors reveal their religious orientation when they write, "In essence, this *body of scientific data* provides what appears

to be newly discovered, or possibly rediscovered, *truth*" (p. 266, italics added). I have no quibble with the inspirational message that "living a better life will improve our situation in death" (p. 267), that "all life has meaning, that we all have some purpose for being on earth, and that death does not destroy us or our relationships" (p. 268), or that "most important in life and death is love" (p. 268). These uplifting sentiments radiate from all near-death studies, and they shine from this book, as well. What I do question is their presentation as "scientific truth" in a work whose proselytizing ideology is never straightforwardly acknowledged.

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BOOK REVIEW

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Conscious Dreaming: A Spiritual Path for Everyday Life, by Robert Moss. Crown Trade Paperbacks, New York, NY \$16.00.

Possibly no one has done more to revive the ancient practice of shamanic dreaming than Robert Moss. For readers of this journal, Moss's work should be of special interest because he traces its development to a series of near-death experiences (NDEs) he experienced during childhood. He reports having actually died a number of times while suffering repeated bouts of pneumonia between the ages of 2 and 11. Moss refuses to use the term "near-death experience" in referring to these episodes because, for him, there was nothing "near" about them. These were death experiences, and qualifying them seems an unnecessary capitulation to skeptics, a sentiment with which many NDErs will undoubtedly agree.

Moss recalls traveling during his death experiences to far-off places and reliving past lives. At the age of 7, he was first visited by a radiant young man who called himself Philemon. Philemon became Moss's spirit teacher, providing him with ongoing instruction on a number of matters clearly beyond the experience of a young child. Unable to find anyone in his own culture who shared or validated these experiences, Moss, a native of Australia, encountered the first person who seemed to understand him when he befriended an aboriginal boy named Jacko, whose culture knows of, and honors, the Dreamtime.

I could not help feeling compassion and empathy for the young Moss who clearly felt extremely isolated and alone for many years. It made me reflect on many accounts of NDEs I have heard or read about over the years from people whose experiences were invalidated by those closest to them, as well as by our society as a whole. It made me more conscious

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of how important the work of validating these experiences is for NDErs, especially for children.

Rather than deny or attempt to repress his own experiences, Moss, like all great thinkers, courageously follows them, molding them into what the subtitle of the book aptly describes as a "spiritual path for everyday life." His approach, which he refers to as *active dreaming*, is actually a combination of lucid (or, the term he prefers, "conscious") dreaming and traditional shamanic methods. Much of his own work has to do with using dreams as a method of precognitively mapping out his life. For example, Moss describes one dream in which he was told, "Troy will be very important in your life." As a former professor of ancient history, his first association to the dream was that it referred to the ancient city of Troy. Only later did he make the connection between his dream and the town of Troy, New York. He had a series of dreams and by simply following the information provided in them, he comfortably relocated to a farm in Troy, New York.

Moss describes another episode in which his deceased father came to him in a dream, appeared agitated, and gave him information which seemed to indicate he wanted his wife, Moss's mother, to relocate. The information included the name Rodriguez, which meant nothing to Moss. However, when Moss telephoned his mother, she quickly identified a Mr. Rodriguez as the realtor who had sold her the home in which she was living. As events unfolded, the realtor was able to help Moss's mother relocate to a retirement community that had also been shown to him in the dream, where she comfortably spent the last years of her life.

Moss does not offer a theory of dreamwork. His approach is a method based on working with leaders in the area of dreamwork, lucid dreaming, a variety of shamanic traditions, as well as 30 of years working with his own dreams. One of the more interesting techniques is dream reentry, a method of reentering the dream, either through guided imagery or shamanic drumming, in order to remember more of the dream or to get more information about it. I have found this technique especially useful on waking up in the morning. By using it, I have remembered large sections of dreams I was unable to recall on waking up. At other times, I have remembered entire dreams using this approach.

In sharing dreams with others, Moss describes a series of rituals that he uses in his workshops. These include forming a circle, lighting a candle, calling on earth energy and light energy, and the use of drumming to call up the dreams. Participants are then asked to share any dream they wish with the group, speaking in the present tense in order to draw

the other group members into the dream. The members of the group are then given the opportunity to ask questions that may clarify their understanding of the dream. Following this, everyone is invited to answer the question of, "If this were my dream . . ." hopefully providing the dreamer with information that may be relevant to his or her own dream.

I must admit that it is a great gift to come upon someone whose ideas are so close to my own. And it is even a greater gift when that person has more experience, and is farther along the same path than oneself, which is how I would describe my relationship to Moss.

In an article which appeared in this journal, I discussed the phenomenological overlap between lucid dreams and NDEs and argued that lucid dreams may offer one method of replicating components of an NDE in a laboratory setting (Green, 1995). Since that time, in my work with a group of colleagues and friends, none of whom are NDErs, we have been able to replicate collectively during the lucid dream state almost all of the components of an NDE. In an article that appeared in the magazine *Shaman's Drum* (Green, 1996), I presented the case of a woman who had a deep NDE during which she was met by a deceased friend. Since her NDE, she has been visited by her friend on an ongoing basis during dreams. He often gives her advice and helps her in a variety of ways, much as Philemon helped the young Moss.

Moss has also worked with contemporary teachers of Western shamanism, as have I. Despite being quite skeptical, he attended a basic workshop on shamanic techniques taught by a former professor of anthropology and practicing shaman, Michael Harner. Kenneth Ring (1989, 1990) and I (Green, 1996, 1998) have pointed out that an NDE is actually a time-honored form of shamanic initiation. Prior to reading Moss, I speculated (Green, 1998) that because an NDE is a shamanic initiation, NDErs should be expected to learn the skill of shamanic journeying more quickly. I was pleasantly surprised to find that Moss provides us with an excellent example of this.

While at a basic workshop on shamanism, and learning to journey using sustained drumming, Moss traveled to the Upper World, one of several shamanic realms. Despite his skepticism, he experienced a powerful journey, during which he rose from the upper branches of a tree, through a cloud-like membrane, explored various dimensions of the Upper World, was forced to outmaneuver or outwit threatening gatekeepers, and saw many forms of the Goddess. At a certain level he was forced to change form (referred to as *shapeshifting* in the shamanic literature), became lightning, came face-to-face with an entire pantheon of figures from many religious traditions, and finally, "Beyond them,

behind them, projecting from its own center, was an immense *being of Light*" (italics mine).

Following his journey, Moss returned to ordinary reality only to find a group of very concerned people gathered around him. He was told he had been "gone" for 12 minutes beyond the time the drum beat sounded for people to return, that he did not seem to be breathing or have a pulse and appeared dead! Moss's own conclusion was: "I felt I had died and come back in some quite literal sense, just as I had done in my childhood illnesses—with the vital difference that this time the experience was *intentional*."

In Chapter Five, Moss introduces the concept of shamanic dreaming. He defines the shamanic dreamer as "a conscious dreamer who has developed the ability to enter the dreamworld at will, to communicate with dream guides, to journey across time and space and into other orders of reality, and brings back gifts of healing and insight for the benefit of others." This definition echoes the position of many, including myself, who have noted that lucid dreams are phenomenologically identical to shamanic journeys. The only difference is that shamans use their lucid dream journeys to gather useful information and to be of assistance to those in their community.

Some of Moss's chapters read like descriptions of the various components of an NDE. In Chapter Seven he discusses dreams of the departed, in Chapter Eight takes up the theme of guides and guardian angels, and in Chapter Nine Moss discusses dreams of healing. He writes that, "When you are ready to make this journey, you will find that in dreaming you can not only explore the territory described by NDE survivors, but go far beyond the threshold where they usually stop. You can study many worlds beyond the physical plane. You can study the soul's transitions after physical death and investigate alternative afterlife possibilities."

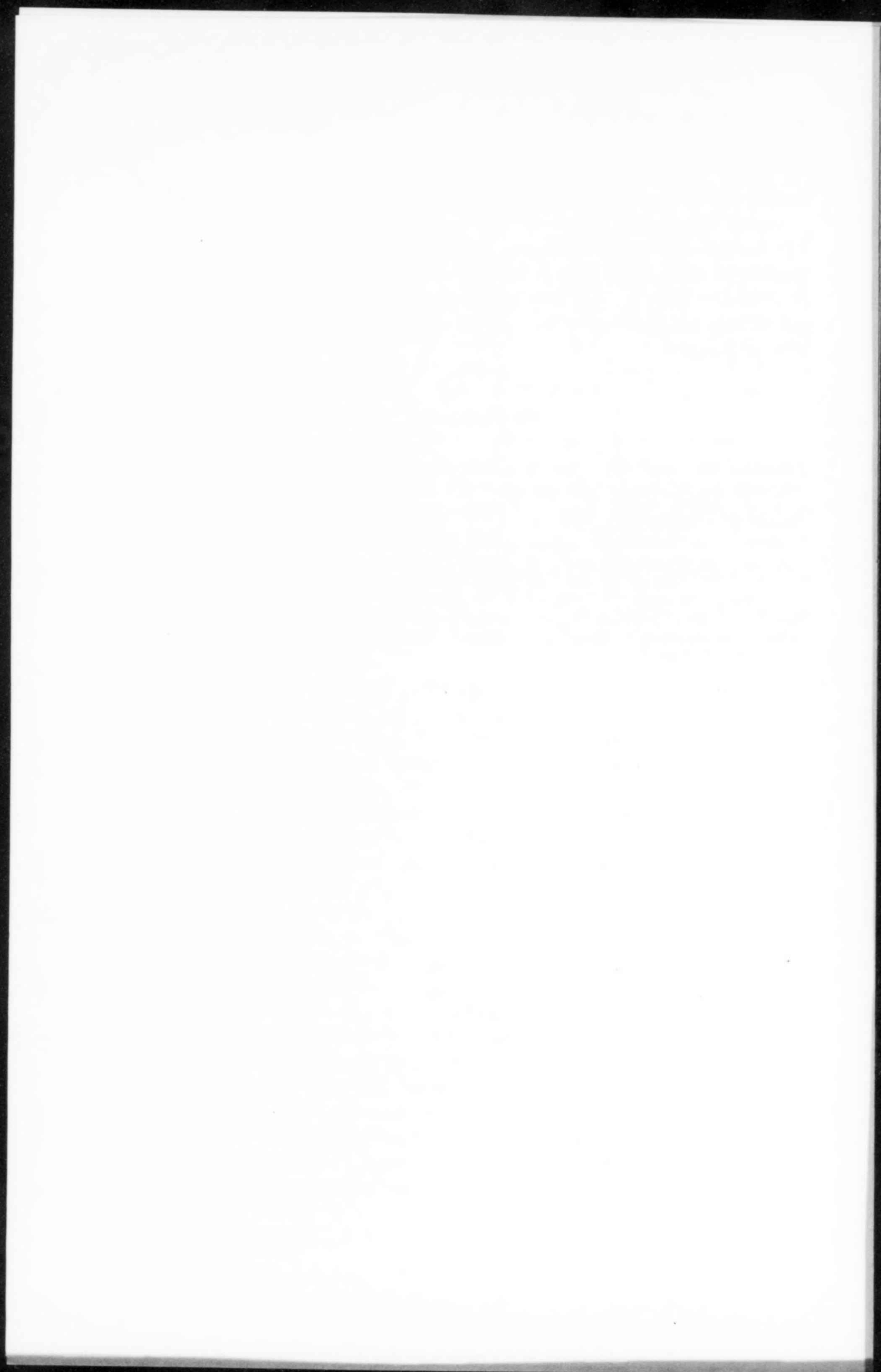
Although I am skeptical that conscious or shamanic dreams take one *beyond* the realm experienced during a deep NDE, I am also intrigued by that idea. Moss's point with regard to being able to journey repeatedly into the same realm and study different aspects of it is both accurate and important. An NDE is a spontaneous event that, by definition, occurs at the point of apparent physical death. Conscious dreams and shamanic journeys provide one with a method for replicating the same experience, at will, and without physical injury or illness.

Although I was deeply impressed by Moss's book, I would have enjoyed reading more about his early death experiences, which he mentions in passing and then fails to return to. Despite this, I consider *Conscious*

Dreaming to be a unique synthesis and contribution, and an excellent example of how one man was able to integrate and build on his NDE. For anyone who is a dreamer, an NDEr, or who has chosen to follow the shamanic path, *Conscious Dreaming* is a book you will want to read. And having done so, you may agree with me that Moss is one of those gifted individuals who walk between the worlds and truly deserve the title of shaman.

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Letters to the Editor

The Theory of Essence

To the Editor:

I am sympathetic to J. Kenneth Arnette's (1995) attempt to solve the problem of mind/body interaction by resorting to the physics of electromagnetism and quantum mechanics. Unfortunately, the solution he proposed—the theory of essence—raises a number of questions for which I do not find satisfactory answers in his paper. For example, if, as Arnette claimed, the essence has something in common with the body, then it does not belong to a differing order of reality, or “stuff,” but is an entity of the same order. If that is the case, does not his statement that the essence and the body are “extremely different” mean only that many of their characteristics are different?

Arnette wrote that the essence is composed of “something other than matter” (p. 80). What is the basis of this claim? Do we know exactly what matter is? There is as yet no conclusive answer. Can we then say for certain that there is something that is not matter? How the essence, which is made of nonmatter, generates an electrical field has not been explained. If it has an electrical field, can it be free of gravity? If the essence has a physical aspect, will it not be subject to disintegration or change, just as the physical body is? If it does not undergo change, what is the explanation?

Though Arnette told us that after bodily death the essence leaves “this universe” (p. 80), he gave no indication of how it comes into existence, how it becomes associated with a body, and, if there is an interval between its “birth” and association with a body, where it exists during this period. Furthermore, what is the reason for suggesting that a disembodied essence leaves “this universe”?

Arnette made it clear that “The essence is dependent on the accuracy and integrity of physical (biological) systems . . . for the sensory data and physical causality it needs in order to negotiate the world and life in it” (p. 97). Then how does it perceive the physical environment correctly during clinical death or similar situations when the biological systems are found not to be working normally? Also, if it goes to “another

universe" without the benefit of the physical body, how does it negotiate the new environment?

Arnette pointed out that a detached essence can pick up the thoughts of those in physical form by interacting with their essences. But is there any instance of similar communication the other way round, from a disembodied essence to essences in physical form—that is, people in their normal state? If not, why not?

More questions could be asked about the theory of essence, but I think I have made my point. As I have stated above, there can be only one order of reality, and we see different characteristics of it at different levels of analysis or in different situations (Krishnan, 1994, 1996).

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Review of *Parting Visions*

To the Editor:

This letter is concerned with Bruce Horacek's review of *Parting Visions* by Melvin Morse and Paul Perry (1994), published in the Spring 1998 issue of the *Journal*. I have read Morse's book, and found it very interesting and adding to our knowledge of near-death experiences (NDEs) and related phenomena. Therefore I was very disappointed by Horacek's review of this book. I think that Morse simply has not deserved such harsh criticism. Everybody who works in this field tries not only to present raw data, but to express his or her conclusions and impressions as well. Not every sentence can be proven "scientifically." A critical review is proper, but a harsh dismissal is not justified. Morse should go on with his work!

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- Horacek, B. (1998). [Review of *Parting visions: Uses and meanings of pre-death, psychic, and spiritual experiences*, by Melvin Morse, with Paul Perry]. *Journal of Near-Death Studies*, 16, 223-227.
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Response to Angerpointner

To the Editor:

I am sorry that Thomas Angerpointner perceived my review of *Parting Visions* (Horacek, 1998) to be harsh. My criticisms of some aspects of Melvin Morse's work should not detract from my overall, closing assessment that "this is a well-written book that articulates very nicely the vision, passion, and faith of a man who sees death-related visions as a meaningful and integral part of our lives" (p. 227). I agree with Angerpointner that Morse's book adds to our knowledge of near-death experiences and related phenomena; I disagree that my review was "a harsh dismissal" of Morse's work.

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INSTRUCTIONS TO AUTHORS

THE JOURNAL OF NEAR-DEATH STUDIES encourages submission of articles in the following categories: research reports; theoretical or conceptual statements; papers expressing a particular scientific, philosophic, religious, or historical perspective on the study of near-death experiences; cross cultural studies; individual case histories with instructive unusual features; and personal accounts of near-death experiences or related phenomena.

GENERAL REQUIREMENTS: Logical organization is essential. While headings help to structure the content, titles and headings within the manuscript should be as short as possible. Do not use the generic masculine pronoun or other sexist terminology.


MANUSCRIPTS should be typed on one side of the page only, and double spaced throughout. A margin of at least one inch should be left on all four edges. Except under unusual circumstances, manuscripts should not exceed 20, 8½ × 11" white pages. Send manuscripts to: Bruce Greyson, M.D., Division of Personality Studies, Department of Psychiatric Medicine, Box 152, University of Virginia Health Sciences Center, Charlottesville, VA 22908.

TITLE PAGE should contain the names of the authors, as well as their academic degrees, affiliations, and phone number of senior author. A name and address for reprint requests should be included. A footnote may contain simple statements of affiliation, credit, and research support. Except for an introductory footnote, footnotes are discouraged.

REFERENCES should be listed on a separate page and referred to in the text by author(s) and year of publication in accordance with the style described in the Publication Manual of the American Psychological Association, 3rd Edition, 1983. Only items cited in manuscripts should be listed as references. Page numbers must be provided for direct quotations.

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