

Journal
of
Near-Death Studies

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Volume 19, Number 4, Summer 2001



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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.

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Editor's Foreword

This issue of the Journal contains three empirical articles on diverse facets of near-death studies. In the first, clinical psychologist J. Timothy Green reports a detailed case of a woman who, following a near-death experience (NDE), began having shamanic journeys and healing abilities. Because she had had no awareness of shamanism prior to her NDE, Green interprets that experience as a shamanic initiation, and he suggests that formal training in shamanic practices may help some NDErs realize their desire to enter helping professions.

In our second article, psychologists Kay Ketzenberger and Gina Keim report a survey of college students' knowledge of and attitudes toward NDEs. They found that both knowledge and attitudes were normally distributed, and that those with more knowledge had more favorable attitudes toward NDEs. Next, sociologist Craig Lundahl describes a previously unidentified type of glimpse into the future, which he calls a "prophetic revelation," that occurs in a small number of deep NDEs. He compares and contrasts these revealed precognitions with the three types of "flashforward" previously identified in NDEs: the prophetic vision, the personal flashforward, and the otherworld personal future revelation.

This issue of the Journal includes three book reviews. In the first, Australian NDEr, religious scholar, and retired physicist John Wren-Lewis reviews physics professor John Tipler's *The Physics of Immortality*, which argues that modern physics not only permits but requires an omniscient and omnipotent God and the eventual resurrection of all humans to eternal life.

P. M. H. Atwater has been writing provocative books about her own and others' NDEs for more than 20 years. Her fans hail her work as insightful and daring, raising aspects of the NDE that other authors ignore; while her critics characterize her work as subjective impressions without any solid empirical foundation. As with many controversies, there may be some truth in both positions and a fair assessment may lie somewhere in the middle. The Journal has received two unsolicited reviews of her book *Children of the New Millennium* typifying these divergent reactions to Atwater's work, one by German pediatric surgeon Thomas Angerpointner and the other by sociology professor

Harold Widdison; we publish them both in this issue and encourage readers to ponder the issues they raise.

We end this issue with two Letters to the Editor stimulated by prior articles in the Journal. Indian scholar V. Krishnan questions some of philosopher Carl Becker's assumptions in our Fall 1995 issue regarding the implications of NDEs for the question of survival of bodily death; and Bogomir Golobič from Slovenia corrects a geographical error in Lundahl's comparison in our Fall 2000 issue of NDEs and Marian visions of Medjugorje.

Bruce Greyson, M.D.

The Near-Death Experience as a Shamanic Initiation: A Case Study

J. Timothy Green, Ph.D.
Capistrano Beach, CA

ABSTRACT: The field of near-death studies shares a number of interesting, often compelling, similarities with the ancient spiritual tradition known as shamanism. Not least among these similarities is the fact that a near-death experience (NDE) is a time-honored form of shamanic initiation. I present a case example illustrating how a deep NDE can propel a person who had no prior knowledge or interest in shamanism into spontaneous, often classic, shamanic experiences, while living an apparently normal life in the midst of modern Western society.

KEY WORDS: near-death experience; shamanism.

Shamanism is an ancient spiritual tradition that had been practiced in many tribal and preliterate societies for at least 30,000 years, and which is based on the ability to enter into a state of ecstasy. Although there are many aspects to shamanism and many different types of shamanic practitioners, central to all shamanic activities is what is referred to as the *shamanic journey*. During these journeys, the shaman leaves his or her body, enters into spiritual reality, and communicates with spirit helpers he or she encounters there. Often shamans have what is called a *tutelary spirit helper*, which usually appears in the form of a person or deity. Shamans also develop relationships with the spirits of different animals, referred to as *power animals*, who assist them in their work. The role of a shaman is to utilize his or her ability to enter into ecstatic trance and make contact with sacred reality, in order to assist members of his or her community for a wide variety of reasons.

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Leading authorities in the areas of shamanism and near-death studies have noted a number of interesting parallels and commonalities shared by the two fields (Green, 1998; Halifax, 1990; Harner, 1980; Ingerman, 1991; Kalweit, 1984, 1987; Peters, 1990; Ring, 1989, 1990; Walsh, 1990). In answer to the question of whether near-death experiences (NDEs) are similar to shamanic journeys, Michael Harner, considered by many the world's leading authority on shamanism, wrote:

Yes. The shaman's journey starts with an experience of going through a tunnel of some kind, usually with a light at the end, and this is very similar to descriptions of the so-called near-death experiences. But the shaman goes all the way through the tunnel and explores the world that people feel themselves passing into at the time of death. (1987, pp. 5-6)

From within the field of near-death studies, Kenneth Ring was the first to note the strong connection between NDEs and shamanism:

By coming close to death, the NDEer has inadvertently and involuntarily been initiated into a shamanic journey. . . .

By taking the shamanistic perspective, we can appreciate that the plane of experience NDEers enter into during their near-death crisis is the same one that shamans learn to access freely during the course of their training. Therefore, strictly speaking, this realm is not one that awaits us only after death. It exists now and is in principle available *in life* to anyone who has learned the "access code." (1990, pp. 208-209)

Sandra Ingerman in a very real sense straddles both fields. She is a prominent shamanic practitioner, a writer, and also an NDEr. She wrote of her own NDE and how it impacted the development of her shamanic skills:

Traditionally shamans have been people who have had a near-death experience, life threatening illness, or a psychotic break. In my case, I almost drowned, and this near-death experience showed me the way to the other side. Many survivors of near-death experiences report going to a great blinding light that pulsates only love. In my own near-death experience in 1971, I too was received by the light. For me, this light represented the Father and Mother God. I started thinking about God's being pure light. The Bible says that God created man in his own image. What that means to me, then, is that we are really balls of light. I started to experience myself as being light surrounded by matter, the body. We are a body; we have a mind; and we have this beautiful light that shines in us that is Spirit, which connects us to the divine. (1991, p. 202)

Previously in this Journal I discussed the overlap between NDEs and shamanism, noted the consensus of opinion that an NDE is a classic

form of shamanic initiation, and suggested that NDErs would be among the best candidates for further training in shamanism and that, by incorporating shamanic techniques, the field of near-death studies could broaden its scope to include a therapeutic clinical methodology based on the experience of ecstasy (Green, 1998).

And finally, transpersonal psychiatrist Roger Walsh, in a quote that could easily have been written to introduce the following case study, wrote:

Shamans learn, sometimes over many years, to induce and direct their journeys. Yet around the world people who have never even heard of shamanism may be surprised to find themselves having journeylike experiences. These may erupt spontaneously and entirely unsought as out-of-body experiences (OOBEs), lucid dreams, or near-death experiences (NDEs). Such experiences have presumably occurred throughout human history. As such they may have provided the inspiration for consciously induced journeys, first in shamanism, then in other religious traditions, and most recently in psychotherapy. (1990, p. 148)

If Walsh is correct that such experiences have occurred throughout history, we would expect them still to be occurring now, in modern Western society. And in fact that is exactly what we find. The following case study illustrates how an NDE can spontaneously lead an individual who had no previous knowledge or interest in shamanism into what are at times classic and time-honored shamanic experiences.

Mary's NDE and Shamanic Initiation

In the course of my work as a clinical psychologist, people are sometimes referred to me who have had NDEs, and who are having problems understanding their experiences and readjusting to everyday reality. One day I picked up a message in my office from a woman I shall call Mary. The message she left with my answering service said that another psychologist, one who attended a lecture I had given on NDEs, had referred her to me.

Mary had been involved in an automobile accident in November, 1992, while on her way to a meeting. During the accident she had a deep NDE which she was now having difficulty understanding and coping with. Mary had suffered a number of physical injuries as a result of the accident. Psychologically, her most pressing problem was that she no longer wanted to live. She was not suicidal in the typical sense; she just did not want to be alive in *this* realm any longer. Like so many other NDErs, Mary had gone into a light during her experience, a light

that had been so attractive that she desperately wanted to return to it. She was convinced that if she could die physically, she would find herself very much alive within that light with its perfect peace, love, and acceptance. As will be clear from the following account, little else seemed to matter to her at that time.

During our first few sessions, I was able to help Mary by validating her experience and assuring her that she was not crazy. I told her of others whom I knew who had undergone similar experiences, and suggested she read P. M. H. Atwater's (1988) book, which deals specifically with difficulties people have following NDEs. She also read during this period books by Raymond Moody (1975, 1977) and Melvin Morse (Morse and Perry, 1990, 1992). I was able to arrange for Mary to speak to another woman who had had a deep NDE. She later told me that this was one of the most helpful things for her during this difficult period of adjustment.

As I got to know Mary, I learned that prior to her NDE she had been a very conventional woman in most ways. She was a Caucasian woman in her 40s and she had been happily married to the same man for more than 20 years. The couple had no children and she worked as a bookkeeper in a company owned by her husband. She was a very meticulous, detail-oriented person and she was also good with numbers. She described herself as a "workaholic." A typical day was one during which she worked all day, went home, had dinner with her husband, and then the two would continue working at home until late at night. They often worked seven days a week.

Mary was also very involved with her appearance. She would not leave the house without having her makeup on and being dressed up. She shopped for clothes at the best stores as often as three times a week and kept closets full of expensive outfits. The two most important things in her life were working hard and making money.

Although as a child she had been raised in a strict Protestant church, Mary was not a particularly religious person. As an adult, she had not been a member of any church and she had never been especially interested in spiritual matters. However, she loved animals and had a deep appreciation for nature. When she was in natural settings or witnessed some of the miracles of nature, such as the birth of a child, she sensed that there was a higher being of some kind. She had not given much thought about whether or not there was an afterlife.

Much of this changed abruptly that afternoon in November, 1992, when a man came through a stop sign and hit her car on the driver's side. Mary never saw the other car approach and has no memory of

the accident itself. The last thing she recalled prior to the accident was the sign of a nearby Coco's restaurant. The following is the account of the initial portion of her NDE:

I was driving to an appointment and I remember seeing the sign at the Coco's restaurant and all of a sudden I was flying down this really big dark, black tunnel. I could see this white light at the end. I was thinking that the tunnel was really scary, but for some reason because the light was there it made me feel everything was going to be O.K. I remember I couldn't wait until I got to that light. Something about it seemed like it was really wonderful. I got to it and I went right into it. After I was in it, I started noticing other lights around and they all looked the same, but they were people. I could feel that they loved me, and then all of a sudden I looked at one of the lights, and I knew it was Frank Myers. He said, "It's not your time and you need to go back." I just said, "O.K." The next thing I knew, I felt myself rushing back through the tunnel.

Prior to her NDE, Mary had known a man whom I shall call Frank Myers, who worked in the office of her veterinarian. The two had become friends, in part because they shared a love for whippets, a particular breed of dog. Frank became ill in 1989. After a prolonged bout of fatigue, he was diagnosed with leukemia. He began a course of radiation treatments that were very unpleasant. He went into remission, but one day over lunch, he told Mary that if the leukemia recurred he would refuse further treatment and let nature take its course. The leukemia did recur and Frank died approximately nine months later. This was the same Frank Myers that Mary met during her initial experience and who, as we will see shortly, was to become such a significant part of her life from that time on. I continue with Mary's account at the point where she has returned to her body at the scene of the accident:

Then the next thing I felt was the left side of my head and it hurt really bad. I felt like I was leaning practically into the passenger's side of the car. My body was half way between both seats and the pain in my head was so terrible, it hurt so much, that I felt like I left my body again, only this time I didn't go through the tunnel, I went right into the light. When I went into the light there were all of these lights. And there was a big light or the major light—I don't know what you would call it—God or Jesus, but it was definitely a higher being that has something to do with why we are all here. Anyway, I went back into it and there were all of these people and they were all letting me know that they loved me and one of the lights I knew was Frank Myers. I just started talking to him and he said, "Well you're going to have to go back because this is not part of the plan." And I said, "Oh no, I'm not going back. I did that last time and my head hurt really bad and I don't

want that pain." I felt like we were walking around or moving around over there. The more that we moved around it seemed like there were more of these lights that were beings and they were letting me know that they loved me. And I could hear the most beautiful music. It was absolutely beautiful. I have never heard music like that on this earth. And so then Frank said, "Well you really do need to go back." And I said, "No, I don't know what's happening here, but I am not going back."

To this point in her experience, Mary's account corresponded in almost every detail to that of other NDErs. She found herself being propelled down a dark tunnel-like area, saw a light, entered into the light, heard celestial music, and saw other spiritual presences, one of which she identified as God or Jesus. Mary also saw and communicated with a deceased friend who told her it was not her time and she must return. Although the first time she did not resist, the second time she was adamant that she did not want to return because of the pain in her body:

Then he told me I need to go back and I said, "No. I can't go back." I started to get very upset and I said, "That pain in my head, I can't bear it." I started feeling these other people around and they started letting me know that they loved me and they would help me no matter how hard it was. I said, "What about the pain in my head?" Frank said he would help me with that so I agreed to return.

I started to come back, but I really didn't want to. I started begging, saying, "Please don't make me go back." At that point, he showed me all of the prayers that I had ever said in my entire life. There were a lot of prayers but they went really fast. It was like a panoramic view of them and I saw in the prayers where I had prayed to reach the goals that we had come here to reach. Then he said, "Now after seeing that, don't you realize that you are part of the plan?" Then all of a sudden, I remembered something and I said, "Oh, all right," and I agreed to come back. He kind of laughed and told me not to worry, that life was only the blink of an eye. He said that I was part of the plan and I must do this.

While many people who have NDEs report a panoramic replay of their entire lives, Mary saw not her life, but all of the prayers that she had ever prayed. After viewing these prayers she remembered something that caused her to agree to return to earthly life.

Mary later told me that what she saw was her spiritual self prior to her birth. She realized not only that had she agreed to enter physical life, but that she had participated in the decision about what her life would be like, what goals she would attempt to attain, and what lessons she would learn. She now sees life as a sort of "school for the spirit": we take on physical form to come here to learn specific lessons,

or to achieve specific goals, and then we return to the spiritual realm. This is a commonly held belief among individuals who have had deep NDEs.

After Mary agreed to return, she again found herself at the scene of the accident, where her account continued as follows:

Then I saw all of these people on earth and I got really confused and I didn't know which one was my body. I saw a bunch of men and women and there was a body laying on the sidewalk but it never occurred to me that might be my body. I almost walked right into this one man. I was just going to take whatever body I came to first and then Frank said, "No, not that one." I said, "Which one am I supposed to get into?" Frank said the one on the sidewalk. At that point I didn't recognize my body. I didn't feel I was a woman or a man or anything. I was just getting into a body that they pointed out. So I got into the body. I remember these lights fading, like they were fading into the distance. The next thing I remember, I woke up in the hospital. I had no idea where I was and all of a sudden I remembered the Coco's sign and I thought, "I've got to get to the Coco's sign and find the lights."

In Mary's mind the Coco's sign had become associated with entering into the light, simply because it was the last thing she remembered seeing prior to the accident. For a long time following this, she was quite fixated on the Coco's sign. At one point, she actually forced her husband to drive her to the sign and simply sit in the car to see if somehow, by doing so, she would reenter the light. Another time, while sitting in a different restaurant, she became so focused on the Coco's sign that she had a spontaneous out-of-body experience (OBE) and found herself there.

After her NDE, Mary also had difficulty identifying, as well as identifying with, her physical body. She was confused and ready to enter whichever body she came to first. Frank intervened and directed her to the correct body, which Mary then reentered. Many people who report NDEs describe this sense of detachment from their physical body. People often report that during OBEs associated with NDEs they may see their body and realize it is their body but they feel no attachment to the physical body while in that state. Many will say that their *real* self was the self that they experienced while out-of-body.

Mary was then transported to a local emergency room. Her account continued from the point where she found herself in the hospital:

The next thing I knew I started lifting up. My head down to my waist started lifting up out of my body and I looked around and that's the first glimpse I got of the hospital. But I didn't know what it was. I thought, "Well this is really weird. Where am I?" In my mind I still had to get to the Coco's sign to get back to the light and I thought, "This is really

strange." So all of a sudden, when I thought I was trying to get off of the bed, the rest of my body came out and I found myself floating around on the ceiling in what must have been the emergency room of the hospital. I was looking down and all of these doctors and nurses were running around and I thought "Why are these people acting this way?" As I looked at it, I got this terrible feeling. I thought, "Oh my God! This is so much stress and so overwhelming, how could they stand this?" Then I thought, "I've got to find the Coco's sign," and that's when I started floating around in the hospital. I could just go through walls. I went into this room and there was this lady lying in this bed. She had short dark hair and it was kind of curly and she had dark colored skin. She had blood coming out of her nose and she had her eyes closed and all of these doctors were doing all of this work on her, sticking things down her mouth. They were moving around in there really fast. One of the doctors came into the room and said that some s.o.b. had just mowed her down. There was a nurse and she said, "She's a goner." I was looking at this and I still didn't realize I was in a hospital. Then all of a sudden I felt this presence up at the ceiling with me. I guess you could call it a spirit or soul. It was looking down at the body also. We were looking at the body together and after a while this presence disappeared. It just sort of floated off and went away. I heard the doctor down below just say, "That's it, she's gone."

The next thing I thought was that I had to get to the Coco's sign to get back to the light and find out what was going on. So I went back to the area where they have all of the beds and they have curtains marking off where the beds are. I just started flying through the curtains as fast as I could, thinking I've got to find my body. I was really frantic. All of these thoughts were happening at the same time. Somehow, I remembered that the doctor who was treating me had these really thick glasses and I thought, "O.K., I'll have to find this man and then I'll know that's the body where I should go. All of a sudden, I saw this doctor with the thick glasses and there was this body lying on the bed. So I felt like I went into my body through my head. All of a sudden I opened my eyes and there was the doctor with the thick glasses.

Mary was released from the hospital in the care of her husband the night of the accident. If her account ended at that point, I would have been quite impressed. She had described an NDE that was entirely consistent with hundreds of others that I have heard and thousands that other researchers have documented. Her account also included almost all of the components that are commonly associated with NDEs.

But in a real sense, this is only the beginning of Mary's story. Since her NDE, she has been in almost daily contact with her deceased friend Frank Myers, who has become something of a guardian angel or spirit teacher for her. True to his word, he has helped her on numerous

occasions with both physical and psychological problems. Although he often comes to her during sleep, a number of times she has seen and interacted with him while fully conscious. The first time this occurred was just a few days after the accident. Mary was resting at home when:

I decided to walk down stairs and here was this light, like a form, but the feet didn't touch the ground. It scared me. Then all of a sudden it became a person and it was Frank and he had clothes on like humans have but his feet still didn't touch the stairs. I said, "Oh, I'm glad it's you." I said I'd been trying to get back to that Coco's sign and find that light and I have no idea what was happening. I said, "You've got to help me explain something to these people." I was totally conscious when this happened. When he was on the steps he had a little dog named Teddy and I said to him, "What are you doing with Teddy? That's Gary's dog." I said, "Oh my God, is Teddy with you?" He said that he was and he looked so happy. I could see Teddy licking Frank's face. I said, "This is really unbelievable." I asked him why he didn't have Pistachio with him. He said that Teddy and he worked real well together. He has had Teddy ever since he has been coming to see me. I said, "I just want to go with you." So I begged Frank to take me and he told me to remember that I am part of the plan and I must stay here for the time being. Then he smiled and he said, "We'll come back when you are ready." I started crying and threw a fit.

Frank Myers was taking on the role of what shamanic traditions call a *spirit teacher* for Mary. In shamanic cultures, the spirit teacher has a special relationship with the shaman. The shaman can call upon the spirit teacher to ask questions, for help with problems, or for healings. Although the shaman is said to be in control of his or her spirit teacher, in the sense that they are in direct and ongoing contact with them, spirit teachers display an unmistakable independence and distinct existence from the shaman, something that has been apparent throughout Frank's relationship with Mary.

But shamans also often work with what they refer to as *power animals*, the spirits of animals that help and guide them in their journeys into the shamanic realm. Here I had a woman walk into my office who clearly had no knowledge of shamanism, and not only was she in contact with a spirit teacher, but in addition *the teacher had a spirit animal with him!* Domestic animals, such as dogs and cats, are not usually identified as power animals in shamanic cultures, and this dog has never acted in the role of a power animal for Mary. Nevertheless, the fact that Frank would present himself with an animal and state that "they work well together" is entirely consistent with both shamanic belief and practice.

I was so amazed by the obvious shamanic themes occurring spontaneously in Mary's case that I asked her if she was at all familiar with shamanism. She told me that the first time she had heard the term was when the other psychologist, who was treating her with conventional psychotherapeutic methods, had mentioned it while listening to her account. She asked him what the term meant and he told her to look it up in the dictionary, which she later did. At this point, I also briefly explained shamanism to her. Mary's visits with Frank continued:

The second time I saw him I just couldn't go to sleep and I decided to get a drink of water. I walked into the kitchen and there in the window was Frank. I dropped the glass in the sink and broke it and I said, "Oh, you scared me." All this time I was crying and I was so upset; I wanted to go into the light. I couldn't eat, I couldn't sleep, I couldn't do anything. I was just thinking about this light and I said, "I am so glad that you came back." I told him he had to take me to the light, that I didn't belong here. I told him I felt like a stranger even in my house. He said, "Your head is hurting; you're upset." He said, "We're going to help you with that." I kept crying and asking him to please take me with him. Then I felt like he was moving away and finally I couldn't see him anymore.

Central to shamanism is what is referred to as the *shamanic journey*. During these journeys, the shaman will enter into the spiritual or shamanic realm and travel, often to distant places. Frank will often simply appear to Mary, usually in a dream, but one in which she is conscious and in control of her faculties, and take her on journeys. Mary's descriptions of these journeys are quite similar to accounts of lucid dreams or OBEs. Initially, Mary was somewhat frightened of these journeys, fearing she would get lost and not be able to find her way back to her physical body. Frank assured her that this would not happen and repeatedly admonished her against being too serious. Mary described a journey with Frank that took them deep into the ocean:

One time we went down into the Pacific Ocean. We were flying deep down. He was showing me these barrels of stuff that our government dumped there. They had bad things in them and he showed me all these barrels. He said that this was really bad and that it had to stop because it was making things out of balance and that mankind will be really sorry. I asked if it would make us extinct and he said no, but we are going to have a real rough time. I felt like we were swimming on the floor of the ocean not too far from Japan and we went all the way past close to Australia. It seemed like we went really fast. When the trip was over we came back and sure enough I could recognize my house and I came back down through the ceiling and got back in bed.

This concern about the earth and maintaining balance in and with nature is a theme often heard in shamanism. Mary reports another time-honored shamanic theme, of being in nature and communicating with animals, that arose during another journey:

Another time we went up to Lake Arrowhead and they have these big trees and I was at the top of these trees and touching these acorns and flying around and communicating with these birds that were perching on these trees. I could feel their happiness and how happy they were to have these big trees. It was just really a wonderful feeling. We were talking about how beautiful it was: the birds in the trees and how blue the sky was, just how magnificent it was.

In most shamanic cultures, sustained drumming is used to produce the altered state of consciousness that allows one entrance into the shamanic realm. I discussed this with Mary and suggested that, if she were interested in doing so, I could guide her through a form of shamanic journeying using a tape recording of drumming that can be done in a office setting. I felt this might help her cope more effectively with her intense need to reenter the light. My reasoning was that if she were able to reenter the light even for a brief period of time it might help her readjustment to physical life. She agreed to do this and, after careful preparation, she came in and listened to a drumming tape in the my office. When she arrived for her appointment she was experiencing pain that radiated from her hip down to her toes on her left side.

Almost immediately after turning on the tape, Mary reported she was suddenly in the light again and Frank Myers was there. She had no sensation of going anywhere. She experienced it more as suddenly becoming conscious that he was right there in the room with her. He told her that he was aware of the pain in her hip and he made some adjustments which she experienced as a physical sensation of the realigning of her leg.

When the drumming ended, she was somewhat disturbed and disoriented. The drumming caused her to have a headache and the intensity of the experience was somewhat overwhelming for her. However, she reported that she no longer had any pain or discomfort in her leg and the pain never returned. This is a clear example of a spontaneous healing, which occurs quite frequently in shamanic states of consciousness.

Since her accident, Mary has had difficulty sleeping. One aspect of this has been a recurrent nightmare of running through a hospital with doctors and armed guards chasing her. In the nightmare, Mary would find herself running down corridors and hiding under beds, only to be discovered and having to continue running. These dreams caused her to

wake up repeatedly throughout the night and she had difficulty going back to sleep. Again, Frank intervened on her behalf:

I would run out and find another bed to hide under and I was just really panicked and scared. I kept thinking they were going to hurt me. Then all of a sudden—and this has happened numerous times—Frank would be there, snap his fingers and they would disappear. When they would disappear he would smile at me and say, "Come on, let's go for a walk," or sometimes he'd say, "Let's go have fun." I would tell him that I felt like I just didn't belong here, I don't fit in anymore and I think I lived past my time of dying. Maybe somebody made a mistake. I just wanted to die. He'd say no, that the plan was perfect and there was no way a mistake could be made. He told me I had to trust that he knew what he was talking about. He told me not to worry, that he could help me. And I said, "Well I can't keep having these nightmares; they're scaring me and making me tired all day." He explained that whenever I had one he would always be there to help me. He said, "I made them go away this time." I smiled and said yes and then I would find myself begging him to please let me come over there. At one point I was so desperate I said, "Did I do something wrong? Is that why I have to stay here?" He said, "No, it's not about that; it's just that it isn't your time to go and you have something else to do." He always tells me, "Don't worry; life is short. Life is the blink of an eye." He said that, although we over here have a tendency to believe in time and space, there really isn't any time or space.

At one point, Mary consulted a psychiatrist because of her sleep disturbance. He gave her a prescription for a commonly used sleeping pill. Because he was very specific about the instructions for the use of the medication, Mary thought that if she took all 25 pills at once, it might be a lethal dose. When she got home, she took the pills out of the container and lined them up on the counter. She was deciding whether or not to leave her husband a suicide note when:

Suddenly something really strange came over me. It was like a feeling in my heart. Something told me or made me look into the mirror, like I was being guided to do this. It was a very strange feeling. I looked in the mirror and there was Frank and all of my whippets that had died. He was still holding Teddy and he had the lady that had raised me with him. She looked younger than she was when she died. I was just sitting there and I was so flabbergasted seeing this in a mirror. But somehow it gave me the feeling that everything was O.K. The really horrible feeling I had before this went away. I guess you'd call this a vision. I really don't know what to call these things. By the time all of this happened I was just so thrilled to see all of my dogs, and the lady who raised me was saying, "I am with you too; you don't have to worry." After that I even felt better physically. I didn't feel so much pain in my

body when it was over. So I just threw all the pills away and forgot about attempting suicide.

On another occasion, Mary was sitting in her bedroom when her dog alerted her to a similar vision of Frank in the mirror.

Another time my dog got up on the little bench that I sit on in my dressing area and she started pawing and whimpering and trying to put her paw on the mirror. I could see her and I wondered what she was doing. I'd never seen her act that way before. Finally, I walked out and I looked in the mirror and there was Frank. I said, "I can't believe this is happening. I can't believe that my dog can see this." The dog was still whimpering and batting at the mirror the whole time. Frank was just smiling, like he was visiting.

Mary's experience of seeing deceased friends in a mirror is similar to a type of divination work that is often seen in shamanism. Mircea Eliade (1964) discussed the fact that quartz crystals are used in many shamanic traditions throughout the world to see and communicate with spirits or to divine messages or information. This is also very close to Raymond Moody's work with what he refers to as "facilitated visionary encounters" (Moody, 1992; Moody and Perry, 1993), based on the ancient Greek tradition of the Oracles of the Dead. Moody became convinced that ancient accounts of seeing apparitions of dead relatives were actual encounters with those apparitions. He developed a procedure that consists of carefully preparing a person throughout the day and then, at dusk, seating the individual in front of a mirror surrounded entirely by black curtains. The mirror is slightly elevated in such a way that the person is looking into a mirror that is empty and reflecting nothing. Moody has found that almost 50 percent of the people who have gone through this procedure report vivid apparitions of dead relatives or friends and, more importantly, that these encounters are often therapeutic.

Mary had a friend named Gary who also liked dogs. In fact, Teddy, the dog that accompanied Frank on his visits to Mary, had been Gary's dog. One night Frank gave Mary specific instructions that turned out to be quite helpful to Gary:

In the dream Frank told me to tell Gary about the experiences, and I said, "I can't do that." He told me to tell him about the NDE, and I said, "No, I might lose his friendship." He said, "I want you to tell him about Teddy." He said, "It is time to do this, and you have to tell him about the NDE and tell him that Teddy is O.K." I woke up in the morning and I thought, "Do I dare?" Then I had such a compulsion to do this,

I just couldn't stop myself from calling Gary and telling him. I called him and said, "I have a story to tell you that has been happening for a year, and I don't know how you are going to take this." He said, "I can take a lot of things." I said, "No, this is something that's really wild."

I started telling him the story from the NDE to the point when Frank kept coming to me and had Teddy with him. He was silent for a long time and then he said, "Is Teddy O.K.?" I said, "He's wonderful, he's so happy, he's just such a happy little guy." Then he started crying. I asked him why he was crying. I thought it was because of Teddy. Then he told me that he was crying because his aunt had died that morning at about 3:00 o'clock. He had been up all morning crying and was upset because he was very close to her. He told me that I had no idea how much this telephone call meant to him, how much better it made him feel.

Mary also experienced an apparent OBE that included me. While at that time I had become fairly good at having lucid dreams, and had even had some apparent OBEs, I have no memory of this experience or anything like it, and I certainly take no credit for it:

I dreamed that we were flying around out of our bodies and we went down to Esperanza's house and went into her bedroom, and she was laying down on her bed with her dark hair pulled back from her face on her pillow. You and I were talking and we knew it was Esperanza's house. You said to me, "Can you feel the vibration?" I said, "No, I can't feel anything." You said that she must be on another plane and you told me to be real, real still and you can feel the vibration. I became real still mentally and I could feel the vibration. When I felt it, it scared me. I said, "I'm getting out of here." You said you could tell from the vibration that she was on another plane. So we were just hovering around this ceiling talking about this vibration and her being on another plane for what seemed like a long time.

Mary had apparently received a great deal of help and good information from Frank. During our sessions, I frequently found myself suggesting she consult Frank about problems. Recently, Mary called me to ask my opinion about a family problem. After listening to the problem, I gave her my opinion. I then suggested she ask Frank what she should do. She told me she had already done so and that his advice was the same as mine. I didn't tell Mary at the time, but I was secretly glad, and somewhat relieved, that my advice had concurred with that of her spirit teacher.

Mary is fortunate to have a husband who seems to be able to take all these things in stride. Many people who have deep NDEs find that the changes that occur are very difficult for their family and friends to accept and deal with. Her husband has also been able, at times, to

verify things she has told me. For instance, while writing this account, Mary told me the following story.

More than a year ago she had been having chronic pain, and a chiropractor had given her a transcutaneous electrical nerve stimulation (TENS) unit, a small electrical device used to help relieve chronic pain. Mary lost the unit and tried to find it a number of times without success. She felt bad about not being able to find and return the unit and she discussed the matter with her husband on more than one occasion. Finally, she told him that she felt the only thing she could do was to pay the chiropractor for the missing unit.

That night Frank came to Mary in a dream and the two discussed a number of matters. Frank then mentioned he was aware Mary had been upset about the missing TENS unit and he would help her find it. He told her it was in a box in the garage. Mary said that the garage was filled with boxes and that she would never be able to find it. Frank told her that this box was green and she would be able to find it the next morning. Mary then said, "But what if I forget this dream?" Frank told her that when she got up in the morning she would not remember the dream, but when she took her first sip of coffee it would come back to her.

The next morning Mary got up and, just as Frank had said, the moment she took her first sip of coffee, the entire dream came back to her. She went into the garage and found a green box with the missing TENS unit inside. I spoke to her husband the same day and he verified that she had indeed found the TENS unit, which had been missing, by his own recollection, for more than a year.

These experiences are so numerous that space does not allow me in this paper to describe all the times Frank has been of assistance to Mary in ways both large and small. I will relate one more, to show how these encounters have led directly to important life changes for Mary.

Mary had been a smoker for almost 20 years. She smoked up to two packs of cigarettes a day and felt that it was useless to try to quit, simply because it was such a difficult habit to overcome. She also did not feel any real motivation to quit smoking, although she knew that it was bad for her health. During this period of time she developed a chronic lung infection that was never diagnosed conclusively. Some of the physicians who had examined her felt her condition was consistent with cancer, whereas others felt that it was related to a rare childhood condition.

One night in a dream Frank came to her and told her that he was going to help her stop smoking. When she awoke the next morning

she forgot the dream, but remembered it when she took her first sip of coffee. Unlike most other mornings, she also suddenly realized that she had simply forgotten to light a cigarette. She went the rest of the day without smoking and realized that she had absolutely no craving or desire to smoke. At this writing she has not smoked a cigarette in more than four months.

Like many other NDErs, Mary would like to work in the helping professions in the future. She has often told me that she would especially like to work with young people who are dying, who feel that it is not their time to go, to try to help them make their transition with less fear. She has not been able to do so yet, because her health has been so unpredictable that she cannot commit to being somewhere, even as a volunteer, a certain number of days per week. My overall impression is that much of Mary's time and energy over the last four and a half years has been taken up dealing with her physical problems and trying to reestablish some sense of normality in her life.

Mary has not sought out formal training in shamanism, nor is she interested—at least at this point in her life—in practicing shamanism. Although in many shamanic cultures, once the individual has been called by the spirits to practice, to refuse to do so is to invite all sorts of problems, including illness and even death, this does not appear to be the case with Mary.

On a more personal note, meeting Mary when I did was an amazing synchronicity. It was at about that time that I had become interested in shamanism and was working my way through as much of the literature on the subject as I could find. It had become clear to me that the connection between NDEs and shamanism was both strong and important. And although I had heard or read thousands of NDEs, I have never encountered an experience that so clearly illustrated as many of the phenomenological aspects of the two experiences.

On the other hand, I am sure Mary's story is not unique. I have little doubt that many NDErs would see the connection between their own experience and shamanism once it was pointed out to them. And having done so, they may also realize what shamanic cultures have always been aware of: that an NDE, while a profound spiritual experience in itself, is also an initiation. This initiation can be developed through practice and apprenticeship into the time-honored method of spiritual healing known as shamanism. Many NDErs return with a deeply felt need to enter the helping professions, and I can think of no better way to give expression to this need than seeking out formal training in shamanism.

References

- Atwater, P. (1988). *Coming back to life: The aftereffects of the near-death experience*. New York, NY: Dodd, Mead.
- Cowan, T. (1996). *Shamanism as a spiritual practice for daily life*. Freedom, CA: Crossing Press.
- Doore, G. (1990). *What survives? Contemporary explorations of life after death*. Los Angeles, CA: Tarcher.
- Eliade, M. (1964). *Shamanism: Archaic techniques of ecstasy*. Princeton, NJ: Princeton University Press.
- Green, J. (1998). Near-death experiences, shamanism, and the scientific method. *Journal of Near-Death Studies*, 16, 205-222.
- Halifax, J. (1990). The shaman's initiation. *Revision: The Journal of Consciousness and Change*, 13(2), 53-58.
- Harner, M. (1980). *The way of the shaman*. San Francisco, CA: Harper.
- Harner, M. (1987). The ancient wisdom in shamanic cultures. In S. Nicholson, S. (Ed.), *Shamanism* (pp. 3-16). Wheaton, IL: Quest Books.
- Ingerman, S. (1991). *Soul retrieval: Mending the fragmented self*. San Francisco, CA: Harper.
- Kalweit, H. (1984). *Dreamtime and inner space*. Boston, MA: Shambhala.
- Kalweit, H. (1987). *Shamans, healers, and medicine men*. Boston, MA: Shambhala.
- Moody, R. A. (1975). *Life after life*. Covington, GA: Mockingbird Books.
- Moody, R. A. (1977). *Reflections on life after life*. St. Simon's Island, GA: Mockingbird Books.
- Moody, R. A. (1992). Family reunions: Visionary encounters with the departed in a modern-day psychomanteum. *Journal of Near-Death Studies*, 11, 83-121.
- Moody, R. A., and Perry, P. (1993). *Reunions: Visionary encounters with departed loved ones*. New York, NY: Villard.
- Morse, M., and Perry, P. (1990). *Closer to the light: Learning from the near-death experiences of children*. New York, NY: Villard.
- Morse, M., and Perry, P. (1992). *Transformed by the light: The powerful effect of near-death experiences on people's lives*. New York, NY: Villard.
- Nicholson, S. (Ed.). (1987). *Shamanism: An expanded view of reality*. Wheaton, IL: Theosophical Publishing House.
- Peters, L. (1990). Mystical experience in Tamang shamanism. *Revision: The Journal of Consciousness and Change*, 13(2), 71-85.
- Ring, K. (1989). Near-death experiences and UFO encounters as shamanic initiations: Some conceptual and evolutionary implications. *Revision: The Journal of Consciousness and Change*, 11(3), 14-22.
- Ring, K. (1990). Shamanic initiation, imaginal worlds, and life after death. In G. Doore (Ed.), *What survives: Contemporary explorations of life after death*. Los Angeles, CA: Tarcher.
- Walsh, R. (1990). *The spirit of shamanism*. Los Angeles, CA: Tarcher.



The Near-Death Experience: Knowledge and Attitudes of College Students

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ABSTRACT: There is a considerable literature documenting the effects of a near-death experience (NDE) on persons who actually undergo the experience, in terms of their attitudes and opinions about NDEs. However, investigations of how much nonexperiencers know about NDEs and their attitudes towards them are in short supply. This study examined the relationship in people who have not had an NDE between attitudes toward and knowledge of near-death experiences. Subjects were undergraduate students, with a mean age of 32 years. The Near-Death Phenomena Knowledge and Attitudes Questionnaire was employed to assess attitudes toward and knowledge of NDEs. Results indicated that both knowledge and attitudes were relatively normally distributed, and that level of knowledge significantly predicted attitudes towards NDEs, accounting for 34 percent of the common variance.

KEY WORDS: knowledge of near-death experiences; attitudes to near-death experiences.

Since ancient times it has been recognized that people who experience a brush with death sometimes report profound and unusual phenomena. Raymond Moody (1975) labeled this complex collection of subjective changes the near-death experience (NDE). In the early 1970s, Elisabeth Kübler-Ross began a public discussion about the existence of near-death phenomena, doing more to arouse public acceptance and curiosity about NDEs than any other single figure (Walker and Serdahely,

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1990). There is no universally recognized definition for the NDE, nor is there agreement on whether it is best viewed as one complex and multifaceted state or as several distinct entities (Roberts and Owen, 1988).

Several investigators have attempted a preliminary classification of NDEs. Kenneth Ring (1980) interviewed 102 patients who had come close to death, concluding that there is a "core" near-death experience that evolves in a characteristic pattern, with earlier stages reported more frequently than later ones: (1) an experience of peace, well-being, and absence of pain; (2) a sense of detachment from the physical body, progressing to an out-of-body experience (OBE); (3) entering darkness, a tunnel experience with panoramic memory and predominantly positive affect; (4) an experience of bright, warm, attractive light; and (5) entering the light, meeting persons or figures.

Moody (1975) emphasized that no two NDEs are identical, all the above elements are not necessarily present, and the sequence of stages may vary. Ring (1980) agreed that most people do not experience all five stages. Bruce Greyson (1985) categorized NDEs into discrete types, indentifying transcendental, paranormal, affective, and cognitive components. One of the most frequently reported aftereffects of NDEs is a reduced fear of death and a more favorable life outlook (Flynn, 1982; Moody, 1975; Ring, 1980), although a small number of persons have reported terrifying NDEs (Greyson and Bush, 1992).

Public testimonies regarding near-death experiences have become increasingly prevalent during the 20th century. Whether because of better life-saving techniques, increased lifespans, or more frequent and candid disclosures, NDEs are relatively common today (Walker and Serdahely, 1990). Thousands of case studies have documented NDEs, particularly over the past 25 years. According to a Gallup Poll, 5 percent of the adult population report having gone through a near-death experience (Gallup and Proctor, 1982), an estimated eight million persons.

We cannot reliably answer, however, the question of how the NDE phenomenon has been received by the population at large. Surveys of numerous professional groups, including physicians, nurses, psychologists, and members of the clergy and other selected communities have investigated subject knowledge, acceptance, and understanding of NDEs (Moore, 1994; Orne, 1986; Royse, 1985; Walker and Russell, 1989). These surveys suggested that the effects of information about NDEs include comfort, hope, and inspiration. In a survey of primarily male religious clergy, David Royse (1985) found attitudes to be positive and generally supportive of people who have undergone a near-death experience. An Australian survey showed that women, younger persons,

and those who professed a belief in life after death were more likely to react positively to the NDE (Kellehear and Heaven, 1989).

For all the work that has been done on the effects of NDEs (Flynn, 1986; Grey, 1985; Ring, 1980, 1984), there has been little published regarding how nonexperiencers (nonNDErs) are influenced by their exposure to information about NDEs. The lack of research on this topic is surprising considering the many historical reports about NDEs and the immense publicity from the mass media on the topic. Most of the population have not had an NDE. That we know so little about how most people respond to the NDE-based material now available to the general public is a notable deficit in the field of near-death studies (Ring, 1995).

Recent research has begun to explore this question. Ring (1992; Ring and Rosing, 1990) compared the beliefs and values of a control group of subjects, who were interested in NDEs but had never experienced one themselves, to those of NDErs. Results showed that the control group, after becoming interested in NDEs, exhibited many of the same positive effects as the NDErs, though to a lesser degree. Controls tended to show the same value profiles as NDErs as well (Ring, 1995). Investigating the impact of NDEs on subjects who have not experienced one themselves, Ring (1995) found that nonNDErs who took a course on the near-death experience expressed feelings, values, and beliefs that were practically identical to those commonly expressed by NDErs. While the NDErs attributed their attitudes to having undergone a near-death experience, the nonNDErs reportedly derived the same effects simply from exposure to the NDE course.

Research to date has been based primarily on samples who have had a near-death experience; it is limited for those who have not had an NDE. Also, there is little mention of the general relationship between level of knowledge about NDEs and attitudes towards them. The current study was conducted to investigate whether a relationship exists between public knowledge of and attitudes towards the near-death experience.

Method

Subjects

The sample consisted of 50 undergraduate students (27 women and 23 men) enrolled in the University of Texas of the Permian Basin. All stated they had not had a near-death experience. Demographic

information was collected on gender, age, race, religious preference, marital status, and whether or not the student was acquainted with anyone who had undergone an NDE. Subject age ranged from 19 to 53, with a mean of 32 years ($SD = 9.6$ years). Thirty-nine subjects (78 percent) were Caucasian, with the remaining 11 (22 percent) being Hispanic. Twenty-nine subjects (58 percent) were married, 14 (28 percent) single, and the remaining 7 (14 percent) reported being either divorced or separated. Thirty-three subjects (66 percent) described their religious preference as Protestant, seven (14 percent) as Roman Catholic, four (8 percent) as "other," and six (12 percent) as "none." Fourteen participants (28 percent) reported knowing someone who had experienced an NDE.

Instrument

The Near-Death Phenomena Knowledge and Attitudes Questionnaire (Thornburg, 1988), which assesses attitudes and knowledge about NDEs, was modified for use with this subject pool. The word "student" was substituted for "physician" or "nurse," "people" for "patients," and items based on the study subject being a health care provider or possessing medical knowledge were omitted. The instrument yields a knowledge score and an attitude score. The knowledge component consists of 16 true/false/undecided items; scores range from 0 to 16, with higher scores indicating greater knowledge. The attitude component consists of 16 5-point Likert scale items ranging from "strongly agree" to "strongly disagree;" scores range from 16 to 80, with higher scores signifying more positive attitudes. No normative scores were available.

Results

Knowledge scores ranged from 3 to 14, with a mean of 8.9 ($SD = 2.3$); attitude scores ranged from 17 to 75, with a mean of 43.1 ($SD = 15.4$). Both knowledge and attitude scores were relatively normally distributed; knowledge scores had a slight negative skew, while attitude scores were slightly skewed in the positive direction.

Knowledge and attitudes were highly correlated ($r = .583$, $p < .001$), and regression analysis revealed that knowledge was significantly predictive of attitudes ($F = 25.04$, $df = 1, 48$; $p < .001$); thus, as knowledge about NDEs increased, attitudes were more positive. This relationship accounted for 34.3 percent of the shared variance between knowledge

and attitudes. Analysis of the demographic variables revealed no significant effects for age, gender, race, religious preference, marital status, or being acquainted with an NDEr.

Discussion

This study was the first to establish that knowledge and attitude scores are relatively normally distributed. Though no normative scores were available against which to compare, these results at least provide a starting point for future comparisons. Our data support results of previous studies that found no significant association between common demographic variables and knowledge of or attitudes towards NDEs (Gallup and Proctor, 1982; Ring, 1980, 1984). It remains possible, however, that the sample was too small to identify small effect sizes for these factors.

These results are meaningful in that they offer evidence that knowledge about the near-death experience, in and of itself, is significantly related to the attitudes people hold. The fact that knowledge and attitudes share 34 percent common variance is noteworthy, particularly in social science research where correlations, even when significant, are generally rather small. As a largely correlational study, the data cannot identify causation. Though it remains possible that increased knowledge leads to more positive attitudes, it is equally possible that more positive attitudes lead to increased interest in NDEs and a seeking out of more knowledge about them.

It should also be noted that a subject sample composed entirely of college students may well differ from the general population in important respects, most obviously in age and education. Although the students' mean age of 32 is more similar to the general population than to traditional students populations of 18 to 22 years of age, the educational difference remains a concern for generalizability to non-student populations. Interpretation of these results should, therefore, be limited to the college student population, though for both traditional and non-traditionally aged students.

The etiology of this correlation between knowledge and attitudes could have important ramifications for those interested in attitude change. If the relationship is simple and direct, increasing knowledge by whatever means could lead to improvements. However, if knowledge is a mediating variable between attitudes and *interest*, then attitude change efforts would most profitably be aimed at piquing public interest in the subject.

References

- Flynn, C. P. (1982). Meanings and implications of near-death experienter transformations: Some preliminary findings and implications. *Anabiosis: The Journal of Near-Death Studies*, 2, 3-14.
- Flynn, C. P. (1986). *After the beyond: Human transformation and the near-death experience*. Englewood Cliffs, NJ: Prentice-Hall.
- Gallup, G., and Proctor, W. (1982). *Adventures in immortality: A look beyond the threshold of death*. New York, NY: McGraw-Hill.
- Grey, M. (1985). *Return from death: An exploration of the near-death experience*. London, England: Arkana.
- Greyson, B. (1985). A typology of near-death experiences. *American Journal of Psychiatry*, 142, 967-969.
- Greyson, B., and Bush, N. E. (1992). Distressing near-death experiences. *Psychiatry*, 55, 95-110.
- Kellehear, A., and Heaven, P. (1989). Community attitudes towards near-death experiences: An Australian study. *Journal of Near-Death Studies*, 7, 165-177.
- Moody, R. A. (1975). *Life after life*. Covington, GA: Mockingbird Books.
- Moore, L. H. (1994). An assessment of physicians' knowledge of and attitudes toward the near-death experience. *Journal of Near-Death Studies*, 13, 91-102.
- Orne, R. M. (1986). Nurses' view of NDEs. *American Journal of Nursing*, 86, 417-420.
- Ring, K. (1980). *Life at death: A scientific investigation of the near-death experience*. New York, NY: Coward, McCann, and Geoghegan.
- Ring, K. (1984). *Heading toward omega: In search of the meaning of the near-death experience*. New York: William Morrow.
- Ring, K. (1992). *The Omega Project: Near-death experiences, UFO encounters, and mind at large*. New York: William Morrow.
- Ring, K. (1995). The impact of near-death experiences on persons who have not had them: A report of a preliminary study and two replications. *Journal of Near-Death Studies*, 13, 223-235.
- Ring, K., and Rosing, C. J. (1990). The Omega Project: An empirical study of the NDE-prone personality. *Journal of Near-Death Studies*, 8, 211-239.
- Roberts, G., and Owen, J. (1988). The near-death experience. *British Journal of Psychiatry*, 153, 607-617.
- Royse, D. (1985). The near-death experience: A survey of clergy's attitudes and knowledge. *Journal of Pastoral Care*, 39, 31-42.
- Sabom, M. B. (1982). *Recollections of Death: A medical investigation*. New York, NY: Harper and Row.
- Thornburg, N. (1988). Development of the Near-Death Phenomena Knowledge and Attitudes Questionnaire. *Journal of Near-Death Studies*, 6, 223-238.
- Walker, B. A., and Russell, R. D. (1989). Assessing psychologists' knowledge and attitudes toward near-death phenomena. *Journal of Near-Death Studies*, 8, 103-110.
- Walker, B. A., and Serdahely, W. J. (1990). Historical perspectives on near-death phenomena. *Journal of Near-Death Studies*, 9, 105-121.

Prophetic Revelations in Near-Death Experiences

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ABSTRACT: Prophetic revelations in near-death experiences (NDEs) are a fourth type of flashforwards. Prophetic revelations are similar to another type of flashforward called the prophetic vision, which was identified in 1982 by Kenneth Ring. Like prophetic visions, prophetic revelations are a phenomenon in which NDErs are given a knowledge of the earth's future; they have a global or world focus. Prophetic revelations differ from prophetic visions in that events in the earth's future are told or revealed to the NDEr by a deceased relative or some otherworld person during their NDE, rather than in a visual display, and they are less detailed. Four categories of flashforwards have now been identified. In addition to the prophetic revelation and the prophetic vision are the other flashforwards, the personal flashforward and the otherworld personal future revelation (OPFR). The major features that distinguish these different flashforwards are their focus (global or personal), method of delivery, and detail. All flashforward types occur in a small number of cases and during deep NDEs.

KEY WORDS: near-death experience; precognition; prophecy; revelation.

In 1980, Kenneth Ring labeled the preview of an individual's future life on earth during the life review portion of his or her near-death experience (NDE) a "flashforward." George Gallup's nationwide survey of Americans on the afterlife (Gallup and Proctor, 1982) found a similar phenomenon in approximately a half million adult Americans, out of eight million who had had an NDE: these NDErs also experienced a premonition about some event or events that would happen in the future. For example, some of the people in the Gallup study reported "that during near-death encounters or other related experiences, they

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learned of events that were in the process of happening at some distance or would happen in the future" (Gallup and Proctor, 1982, p. 54).

Ring (1982) later labeled one type of flashforward he investigated the "prophetic vision." Ring's prophetic vision differed from both the personal flashforwards he identified in 1980, and another type of flashforward that was identified as the otherworld personal future revelation (OPFR) by Craig Lundahl in 1993, in that it had a world or global focus and pertained to a picture of the earth's future, rather than focusing solely on the personal future of an individual. It was also a vision that was highly consistent from person to person.

Prophetic vision cases have also been reported by Margot Grey (1985). First-person accounts of prophetic visions have been reported by George Ritchie (1991) and Dannion Brinkley (Brinkley and Perry, 1994). We now know that prophetic visions are usually reported to occur during an NDE, that they involve deep NDEs, and that there are apparently a relatively small number of cases.

A Composite Model and Elements of the Prophetic Vision

An idealized version that broadly conforms to the elements that comprise the prophetic vision, based on information from 16 NDErs, was formulated by Ring as follows:

There is, first, a sense of having total knowledge, but specifically one is aware of seeing the entirety of the earth's evolution and history, from the beginning to the end of time. The future scenario, however, is usually of short duration, seldom extending much beyond the beginning of the twenty-first century. The individual reports that in this decade [the 1980s] there will be an increasing incidence of earthquakes, volcanic activity and generally massive geophysical changes. There will be resultant disturbances in weather patterns and food supplies. The world economic system will collapse, and the possibility of nuclear war or accident is very great (respondents are not agreed on whether a nuclear catastrophe will occur). All of these events are transitional rather than ultimate, however, and they will be followed by a new era in human history, marked by human brotherhood, universal love and world peace. Though many will die, the earth will live. While agreeing that the dates for these events are not fixed, most individuals feel that they are likely to take place during the 1980s. (1984, p. 197)

Ring outlined five specific features or elements of the prophetic vision scenario for the future of the earth: geophysical changes, meteorological changes, supply and economic breakdowns, nuclear war, and a new era of human history characterized by universal love and world peace.

The purpose of this article is to present an initial description of a fourth type of flashforward in the near-death experience that is very similar to the prophetic vision described by Ring. This type of flashforward I have labeled the "prophetic revelation." The article will also describe the features of the four categories of flashforwards and differentiate between them.

Prophetic Revelations

Another type of flashforward, the "prophetic revelation," has yet to be added to the literature of near-death studies. Even though this fourth type of flashforward may be even more rare than the prophetic vision, there is evidence that suggests it exists.

The prophetic revelation resembles the prophetic vision in that it has a world or global focus and pertains to a knowledge of the earth's future. Two features seem to distinguish the prophetic revelation from the prophetic vision. First, unlike the prophetic vision, in which NDErs are shown a vision of events in the earth's future by a guide or a being of light, in the prophetic revelation events in the earth's future are told or revealed to NDErs by a deceased relative or some person in the otherworld. Second, the prophetic revelation has a less detailed description of future events on the earth, compared to the descriptions found in prophetic visions. Rather, it appears that the future event or events are named without any further elaboration of the details in prophetic revelations.

As is the case with most prophetic visions, prophetic revelations appear to occur during an NDE, to involve deep NDEs, and to involve a relatively small number of cases.

Two Cases of Prophetic Revelations in Near-Death Experiences

To illustrate prophetic revelations, I will cite two cases. The first case is that of the NDEr Angie Fenimore, who had a near-death experience on January 8, 1991. She gave the following account:

I could feel the urgency in the spirits who were scurrying about to do the work of God. I was then told that we are in the final moments before the Savior will return to the earth. . . . I was not told when it would happen, but I understood that the earth is being prepared for the Second Coming of Christ. (Fenimore, 1995, pp. 145-146)

Another NDE that contains a prophetic revelation was that of Christine Monsen, a case cited by Lundahl and Harold Widdison:

During Christine Monsen's NDE in 1987 she saw the earth enveloped in layers of dark haze which was growing more thick as she watched. Her deceased husband who was present explained that it was evil that darkens the earth and it will continue to spread until the whole earth is covered and that terrible turmoil is ahead. (1997, p. 73)

These two illustrations reveal a few features that might be described as follows: A person who is near death finds him- or herself in another world and encounters others who foretell a future event or events that are to occur on the earth. In these illustrations, Fenimore was told of one event to occur in the earth's future, that of a Savior returning to the earth; and Monsen was told that evil will continue to spread until it covers the whole earth in the future and that terrible turmoil is to occur in the earth's future. No additional information was provided beyond the naming of these future events.

Types of Flashforwards in Near-Death Studies

Since 1980, four types of flashforwards have been identified. Ring (1980) initially labeled the apparent preview of an individual's future during the life review portion of his or her near-death experience as a "personal flashforward." He described another type of precognitive near-death vision as the "prophetic vision" (1982). The first type of flashforward pertains solely to the personal future of the individual experiencer, while the second type pertains to a picture of the earth's future. In 1993, I identified the "otherworld personal future revelation" (OPFR) as a preview of an individual's future, as told to the NDEr by deceased relatives or friends or by an escort in the otherworld. In this article I identify the "prophetic revelation," a fourth type of flashforward. Table 1 is constructed to assist in understanding the similarities and differences between these types of flashforwards. The table shows that for all flashforward types there are a small number of cases and that they occur during a deep NDE. They also occur at any time during the near-death experience except for the personal flashforward, which usually occurs only during the life review portion of the NDE. However, in the personal flashforward and the prophetic vision, a visual display for the NDErs reveals events that will occur in their personal life and on earth, respectively, while in the OPFR and the prophetic revelation, the NDErs are told by a person in the otherworld either of events that

Table 1
 Four Types of Flashforwards in Near-Death Experiences

	<i>Personal Flashforward</i>	<i>Otherworld Personal Future Revelation</i>	<i>Prophetic Vision</i>	<i>Prophetic Revelation</i>
Number of cases	Small	Small	Small	Small
Depth of NDE	Deep	Deep	Deep	Deep
Focus of flashforward	Personal	Personal	World	World
Method of delivery	Vision in life review	Told by someone	Vision in life review	Told by someone
Detail of description	More detailed	More detailed	More detailed	Less detailed
Consistency of observed events	Varied	Varied	Agreement	Undetermined

will occur in their own future on the earth or of events that will occur in the future of the earth, respectively. Of course, the consistency of the events observed in personal flashforwards and OPFRs varies according to the individual NDErs, because they see or are told of future events that are specific to them. Prophetic visions are highly consistent because they have a common scenario of future earth events from person to person. There is yet an insignificant number of prophetic revelations in the literature to evaluate their consistency. All the flashforward types except the prophetic revelation have considerable detail in them. The few recorded prophetic revelations seem to name events but provide little detail about those events. Finally, the personal flashforwards and OPFRs focus on events in the NDEr's future life, whereas the prophetic visions and prophetic revelations focus on events in the earth's future.

Conclusion

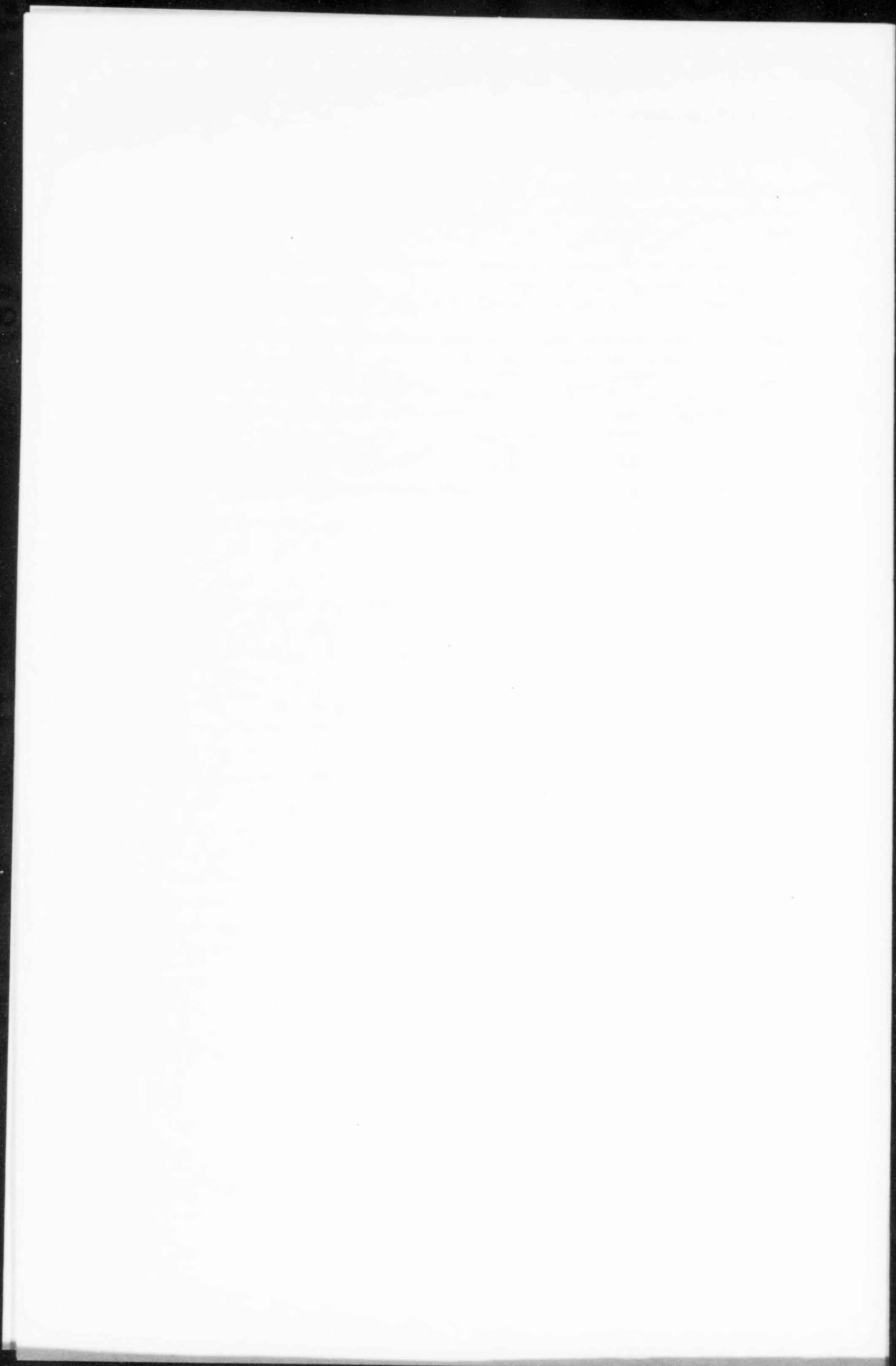
Flashforwards are a fascinating aspect of the near-death experience because they project the future of individual lives and the earth. Personal flashforwards and OPFRs have particular meaning for the lives of individual NDErs and certain individuals who are intimately associated with them. However, prophetic visions and prophetic revelations have particular meaning not only for the lives of individual NDErs, but for all other people in the world as well, because they may be affected by these prophetic visions and revelations whether they are cognizant of them or not. The consistency found in these prophecies and their predictions for the earth give ample reason for their careful investigation and consideration by near-death researchers and the world. Such scrutiny is warranted by the fact that future events in all NDE flashforwards reported in the literature have been occurring and others may follow (Alschuler, 1996).

Further collection and study of cases of flashforwards will contribute to our further classifying and understanding them and utilizing them for the prediction of future events, one of the ideals of science. Such knowledge can also be utilized in preparing for these events and in making informed choices in the affairs of humanity.

References

- Alschuler, A. S. (1996). Near-death prophecies of disaster and the New Age: Are they true? *Journal of Near-Death Studies*, 14, 159-177.

- Brinkley, D. and Perry, P. (1994). *Saved by the light: The true story of a man who died twice and the profound revelations he received*. New York, NY: Villard.
- Fenimore, A. (1995). *Beyond the darkness: My near-death journey to the edge of hell and back*. New York: Bantam Books.
- Gallup, G., and Proctor, W. (1982). *Adventures in immortality: A look beyond the threshold of death*. New York, NY: McGraw-Hill.
- Grey, M. (1985). *Return from death: An exploration of the near-death experience*. London, England: Arkana.
- Lundahl, C. R. (1993). Otherworld personal future revelations in near-death experiences. *Journal of Near-Death Studies*, 11, 171-179.
- Lundahl, C. R. and Widdison, H. A. (1997). *The eternal journey: How near-death experiences illuminate our earthly lives*. New York, NY: Warner.
- Ring, K. (1980). *Life at death: A scientific investigation of the near-death experience*. New York, NY: Coward, McCann and Geoghegan.
- Ring, K. (1982). Precognitive and prophetic visions in near-death experiences. *Anabiosis: The Journal of Near-Death Studies*, 2, 47-74.
- Ring, K. (1984). *Heading toward omega: In search of the meaning of the near-death experience*. New York, NY: Morrow.
- Ritchie, G. G. (1991). *My life after dying: becoming alive to universal love*. Norfolk, VA: Hampton Roads.



BOOK REVIEW

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The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead, by Frank J. Tipler. New York, NY: Macmillan, 1994, \$39.95 hb; New York, NY: Anchor/Doubleday, 1995, 528 pp + xxvi, \$14.95 pb.

If you want to know what a real "new paradigm" scientific worldview might look like, as contrasted to the old-hat pseudoscientific worldviews that often sail under the "new paradigm" flag, read this book by Frank Tipler, a Professor of Physics at Tulane University. I do not mean read it as something to be believed; nothing scientific ever asks that. Only time and experiment can show whether or not Tipler's specific ideas are viable, as he himself repeatedly insists. Toward that end, this book includes a 120-page Appendix for Scientists, with the equations to be examined and tested.

I mean rather read this book to have your horizons expanded and some age-old prejudices blown apart, particularly prejudices about the supposedly necessary oppositions between materialism and spirit, technology and "small is beautiful," economic rationality and social altruism, progress and the here-and-now, and perhaps most important of all, reductionism and holism. Whereas most contemporary spiritual, ecological, and New Age thinkers start out by deploring scientific reductionism and end up calling for loyalty to Planet Earth, Tipler takes the reductionist bull by the horns and rides it all the way to the heaven of eternal life, in which infinite love has "put all things under Its feet."

He makes this intention clear right from his very first paragraph, which should win some kind of prize for audacity, even if he does not get

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the Nobel Prize, as he well might, for his coauthorship with John Barrow of the so-called Strong Anthropic Principle in relativistic cosmology. Tipler begins daringly:

This book is a description of the Omega Point Theory, which is a testable physical theory for an omnipresent, omniscient, omnipotent God who will . . . resurrect every single one of us to live forever in an abode which is in all essentials the Judeo-Christian Heaven. . . . I shall make no appeal, anywhere, to revelation. I shall appeal instead to the solid results of modern physical science. . . . I shall show exactly how physics will permit the resurrection to eternal life of everyone who has ever lived, is living, or will live. I shall show exactly why this power to resurrect which modern physics allows . . . will in fact be used. (p. 1)

Tipler is completely serious about all these claims, and gives detailed calculations to back them up. Yet he is not trying to square science with any prior Christian belief, for he himself is not a Christian. He gives cogent reasons towards the end of the book why he cannot personally accept formal Christianity, boiling down to the fact that Christianity is too exclusive to encompass the sheer generosity, power, and wonder of the Omega Point Theory. Rather, he draws on top scholarly authorities on African and Native American shamanism, Hinduism, Taoism, Buddhism, Judaism, Christianity, and Islam to argue that all these religions are humanity's prescientific intuitions of a potential in the *physical* universe that science is at long last beginning to recognize: namely, the potential for eternal conscious life; that is, conscious life not subject to "the thousand natural shocks the flesh is heir to" in organic life as it has evolved so far on Planet Earth. He takes his term "Omega Point" from Pierre Teilhard de Chardin, but considers Teilhard's attempts to reconcile Christianity with evolutionary science flawed by the fact that Teilhard's mid-20th-century science was a very primitive affair in the light of subsequent advances.

And here, speaking as a former scientist and, since my near-death experience in 1983, a born-again mystic, I would say that both the weakness and the strength of Tipler's book are that he takes no account of the fact, and indeed seems largely unaware, that mystics through the ages, including Teilhard, have actually experienced a timeless "dimension" of aliveness in and through the transience of organic human life, and have thereby been able to experience that transience without suffering. But I think the strength outweighs the weakness as far as the book's value is concerned, because my own extensive studies since being reborn into eternity-consciousness have led me to the conclusion that almost all of what is taught about mysticism is pie-in-the-sky fantasy,

which does more injustice than justice to what mystical consciousness is really about.

Why is that? Because the whole structure of the human mind is "incarnational," that is, oriented to expressing eternity in finite or space-time terms. So unless we are by some "act of grace" already experiencing eternity-consciousness, our ideas about it are likely to be more false than true. Probably the only way to get any remotely realistic imagination, as distinct from escapist fantasy, of eternity-consciousness is to start by thinking seriously what the universe would look like if finite consciousness could survive *physically* without being subject to the organic limitations of decay and death. This, as Tipler points out, was what the ancient religious ideas of "spiritual bodies" were trying to do, but they were only vague imaginings, because humanity's notions of the real potentialities of matter were then so limited.

For the same reason, purely philosophical arguments purporting to show that consciousness includes matter, rather than the reverse, from Plato and Nagarjuna to Georg Hegel, Aurobindo, and Teilhard, never really carry existential conviction, and therefore never really convince skeptics, because in our daily practical experience matter is so much bigger and more powerful than consciousness as we experience it. The strength of Tipler's book is that it shows how modern science brings these ideas down from the realm of vague imagination to possibilities of practical realization; so even if Tipler is wrong in his specifics, he takes a major step forward in giving "a local habitation and a name" to what otherwise risk being "airy nothings."

Well, perhaps the habitation is not local in the ordinary sense, nor in the sense in which our contemporary ecologists want to recover a sense of locality in Planet Earth. Yes, we are children of the earth along the lines of time past, and technologies that render the planet unfit for human habitation must surely be curbed; yet there is something in the human soul that knows it is not just "of the earth, earthy," and philosophies that deny that impulse do so at a psychological and spiritual peril every bit as great as the dangers of fouling our current ecological nest. And this is where Tipler, the self-styled unrepentant reductionist, speaks like a true mystic who knows there is more to matter than evolution has yet uncovered; but true to his scientific brief, he makes no appeal to magic or the supernatural. He appeals to what science and technology are already uncovering right here in our present earthly backyard about the potential for matter to support intelligence in nonorganic forms, in machines such as the one on which I am writing this review right now.

Flesh and blood, said St. Paul, cannot inherit the kingdom of God, and it is pretty unlikely, even with the greatest possible advances in space travel, that they will ever inherit much beyond our own solar system. But Tipler, who goes well beyond doctoral level in computer complexity theory, gives ground for thinking that well before the end of the next century we shall have been able to transfer our whole minds *with the full sensuous enjoyment-capacity and feeling-capacity of our biological inheritance* inside self-replicating nanotechnological computers weighing no more than 100 grams each. And since they need experience no time-lapse while traveling, it will be a piece of cake to colonize the entire galaxy with them, or, more accurately, *as* them. With that much ecological space to play with, to say nothing of the fact that energy requirements of individual personal existence in that form are minimal, there is no question of scarcity. And scarcity, Tipler argues, again drawing on some pretty formidable authorities, is the root of all so-called evil impulses. So these science-fiction fantasies about technologically advanced civilizations breeding inhuman creatures or carrying on interstellar soap operas are just that: fantasies based on our still limited experience of finite consciousness.

Colonizing the rest of the universe will take a little longer, on the order of several million million years; but Tipler argues that because the most basic of all life-drives at the root of consciousness is survival, colonization will surely happen, well before the point at which the expansion of the universe goes into reverse towards the "big crunch." And at that stage, the vastly expanded collective intelligence of the colonized universe, the Omega consciousness, will have at Its disposal the unimaginable energy of gravity-shear, which will give It the power to stop the contraction and create a stable cosmic paradise of truly eternal finite life. I was reminded at this point of the science fiction notion of a day in some undefined future when a vast number of planetary supercomputers are linked up across the galaxy; and when the resultant supersupercomputer is asked humanity's age-old question, "Is there a God?" the reply comes back: "Yes, there is . . . now!"

In that story, this answer was clearly meant to have ambiguous and sinister overtones, but Tipler argues that these too reflect only our present limited view of consciousness. He establishes, by appeal to game theory, that Omega consciousness must of Its very nature be utterly generous towards every sentient life-form that has contributed to Its own vast evolutionary struggle; so It will have both the power *and the imperative* to resurrect all who have ever lived, good and bad alike, into Its own blissful time-transcendence. And in that condition,

there will be absolutely no problems of overcrowding or denial of space for individuality, nor any pressure of time for doing whatever each one wants to do, and therefore neither constraints on freedom nor boredom.

Moreover, if any readers feel that these events squillions of millennia in the future are too far off to be real, Tipler argues that that attitude also is simply lack of imagination based on our present limited experience; for we shall not have been "hanging around" in any limbo during the interim. When Tipler writes of resurrection, he *means* resurrection, and not immortality, which once again conforms completely to my own mystical experience. When I experienced the stoppage of time in my near-death experience, I most emphatically had no experience of an immaterial soul existing apart from my body, but rather of a literal rebirth or resurrection; that is, of "Omega's" John Wren-Lewis starting up entirely afresh, with all its former memories, when the body was resuscitated before brain decay set in. For the ultimate resurrection, Tipler argues in great detail that personal identity can be reconstructed exactly by "unpacking" of memory data progressively through history, using advanced versions of techniques already known in computer theory for "fleshing out" imperfectly recalled data, a deliberate employment of the processes that already happen when genes produce bodies and brains produce the memories that make up "experience."

In the book's concluding chapters, Tipler actually shows how his theory might be compatible with mysticism, although I do not think that was his intention. At several points he remarks how in modern physical cosmology, the Omega state validly can be said to "reach back through time" to influence events leading up to its own evolution. Although Tipler does not use the term, I was reminded of the "strange attractor" idea in Chaos Theory. This could indeed be one way to understanding the "beyond that is within" or *everpresent* Omega experienced by mystics.

At first sight, it is something of a puzzle that this book has not gone off like a bomb in spiritual and religious circles, considering the popularity of other books linking modern science with spiritual issues. It is true that Tipler sometimes overestimates the general reader's capacity for grasping relativistic cosmology; even I, who earned a degree in that subject, am still quite unable to say whether or not his assertions about the Bekenstein Bound or the Higgs Boson make sense. But that kind of difficulty applied equally to other popular books that have a far more negative conclusion than Tipler's and yet became bestsellers. So why is *The Physics of Immortality* still known only to a few?

I think Tipler himself put his finger on the answer in the very last sentence of his main text: "Religion is now part of science" (p. 339). This is implied by his whole argument, and I think he does not realize that the psychological effect is to leave the great majority of people feeling left out, because it means that there is no *significant* contribution they can make to humanity's "salvation." Since being born again as a mystic, I have come to recognize that the urge for personal significance is as fundamental to human consciousness as the urge for survival, and not to be dismissed as mere "ego." So I can see that it is not just clergy who might be less than wildly enthusiastic about Tipler's book because it could make them redundant. He may not intend his Omega Point to seem too distant from our lives to matter, but that is how it comes across if the evolution leading to it from here is mainly a matter of high science and technology.

But do read this book all the same, for even if his peers eventually declare his conclusions doubtful or invalid, it is still very important indeed in showing how even the most reductionistic science today implies the spiritual perspective. And it should force us all to think again about whether current "green" attempts to curb scientific and technological advances in the name of love for Planet Earth may not be in fact theologically shortsighted underestimates of humanity's spiritual destiny. According to both Tipler and St. Paul, that destiny may be the only means whereby our undeniably spectacular home planet, necessarily perishable in the long term, could be resurrected to share God's eternity. Amidst the current timely outbreak of ecoprophecy, Tipler has given us an equally timely reminder of another and surely more basic aspect of the religious story, a statement that conservative religionists are just not equipped to make.

BOOK REVIEW

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Children of the New Millennium: Children's Near-Death Experiences and the Evolution of Humankind, by P. M. H. Atwater. New York, NY: Three Rivers Press, 1999, 288 pp, \$14.00 pb.

Subtext for Children of the New Millennium, by P. M. H. Atwater. Charlottesville, VA: P. M. H. Atwater. Available from the author at P.O. Box 7691, Charlottesville, VA 22906-7691 or at <www.cinemind.com/atwater>.

In *Children of the New Millennium*, P. M. H. Atwater continues to analyze her extended research into near-death experiences (NDEs). However, this book is particularly concerned with children's NDEs. The reader should always keep in mind that Atwater is herself an experiencer, having had three near-death episodes in 1977. As Kenneth Ring (1984, 1992) aptly pointed out, ineffability is one of the characteristic features of NDEs, which are not easily comprehended and evaluated by nonexperiencers. Thus, a person who is him- or herself an experiencer is much better suited than the nonNDEr to understand the message of the NDE. Another background of Atwater's research is her extended experience with more than 3,000 adult experiencers whom she interviewed following their episodes.

For this book, Atwater investigated 277 people who had undergone NDEs while they were children and discloses the similarities and differences between children's and adults' NDEs. The causes of the childhood NDEs Atwater studied included, in order of frequency, drowning, major surgery, minor surgery such as tonsillectomies, child abuse, trauma, and lightning. Unlike many other authors, she accentuates both the positive and not-so-positive effects of NDEs, in this book even more

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deeply than in her previous writings (1988, 1994, 1996). In a most analytical way, she first presents her results, based on interviews of these 277 childhood experiencers, 52 of whom filled out extended questionnaires, and then develops her conclusions drawn from the results, step by step. As usual in her work, she offers very provocative ideas and implications. Throughout the book, Atwater presents many case reports, often with original drawings, to underline the development of her ideas, which she then discusses comprehensively with the findings and viewpoints of other authors from the extended literature on the subject.

Children of the New Millennium is divided into 11 chapters and an extended section of footnotes, commentaries, and additional ideas. Atwater further provides a subtext for this book, available by mail or from her website, since the publisher was unable to carry the whole contents of the original version of the book because of space limitations. The subtext contains this "missing material" and comprises three appendices, with recommendations for working with children, research methodology, and resources and bibliography. Thus a complete understanding of this work comprises both the book and its subtext. The reader should not expect a smooth and comprehensive presentation of childhood NDEs, but rather, as usual in Atwater's works, a very challenging and often provocative evaluation of her well-rounded research findings, sometimes contradicting what other authors in the field have found.

Children's NDEs are far more common than generally imagined. Atwater writes that "*the vast majority of children who face death experience a near-death scenario. And these children contend with the same aftereffects, both psychological and physiological, as do adults . . . but in a different manner*" (p. 4, original italics). This is the central statement of the book. Afterwards, these children exhibit a noticeable brain enhancement, often combined with a sharp rise in intelligence, which Atwater calls a transformation of consciousness or a "brain shift/spirit shift," by which she means nothing less than a chemical and functional change in the brain that could cast light on the mechanisms of human evolution: "The 'engine' of evolution . . . is normally so gradual that centuries must pass before we can even glimpse the changes it fosters. Brain shifts/spirit shifts jump-start that process. . . ." (p. 18). These claims might look risky to some people, but Atwater gives good reasons for her statements in view of the effects found in children.

According to Atwater, brain shifts/spirit shifts represent expansions of consciousness and faculties into the next plane of growth and

learning. In children, the brain shift/spirit shift provides for a "jump-start" of learning, emoting, multiple sensing, clustered thinking, and parallel processing, a repositioning of brain/mind structures from conventional modes to more expansive possibilities, as a refinement of the intellect that enables the individual to function comfortably in multiple dimensions of reality.

NDEs seem to cluster around distinct ages, which may be explained by an expansion of distinct phases of brain development. Children have no natural sense of time and space; future does not appear as future, but as another aspect of "now" until they establish the validity of continuous scenery. Future memories, a phenomenon Atwater described in a previous book (1996), show up often in the reports of childhood NDEs. Three- to 5-year-olds commonly have paranormal and psychic occurrences. The imaginal adventures of childhood are necessary for the development of healthy minds. NDEs during this time appear to accelerate mental growth in child NDErs. Prayer and meditation take on dynamic proportions immediately afterwards. But those individuals who had been steeped in certain religious dogmas before their NDE often find that the call to access and express the spiritual runs cross-current to their earlier indoctrination. Child experiencers seldom remain alienated from God, but their feelings about church attendance do change. As with adult experiencers, one-third stay with their church and two-thirds leave, but children tend to cut ties permanently.

More than 70 percent of the children reported angelic visitations, as Melvin Morse also reported (Morse and Perry, 1990, 1992), but they also frequently described meeting deceased relatives and friends, and deceased pets and other animals. These children saw religious figures variably, consistent with their religious backgrounds; and they experienced God as ultimate and always male, never female or devoid of gender, or among children of school age, as a sphere of light.

In children, the NDE strongly manifests in the subsequent enhanced aptitudes and proficiencies in certain areas. The majority showed highly creative and inventive minds and had a significant enhancement of intellect; half tested at genius level; almost all were highly proficient in mathematics, science, and history, and many were gifted with languages. More found school easier after the experience than harder, but many rejected school discipline. In 75 percent of child NDErs, after-effects increased over the years.

Atwater describes the aftereffects of childhood NDEs at length. Children who experience an NDE contend with the same aftereffects as adults. How they do so differs, however. The full impact of the aftereffects

seldom hits the children until they reach maturity. These aftereffects include an ability to desensitize themselves from physical sensations, an ability to communicate through nonverbal means, a partial loss of the ability to communicate verbally, problems reintegrating the ethereal self back into the physical self, and problems interacting socially. Atwater found that child NDErs have stabler relationships later in life than adult NDErs: most find satisfaction in their jobs, and are homeowners, which may indicate their attachment to a home as a direct result of losing their "home" as a youngster.

The children who have undergone NDEs are instilled with a sense of mission and they are powerfully obsessed with a desire to change things. However, child NDErs seldom do anything about a "mission" until they are older, even if they know what that "mission" is. Physiologically, child NDErs tended to have lower blood pressure, increased light and sound sensitivity, and lower tolerance to pharmaceuticals. As Atwater points out: "The child you get back after a near-death episode is a remodeled, rewired, reconfigured, refined version of the original" (p. 121).

Atwater notes that a child's learning ability is enhanced after an NDE and often reverses, in that instead of going from concrete details to abstract concepts, child NDErs go from abstract to concrete. However, the enhancement of abilities may be a mixed blessing: bias against creative thought in the adult world is the reason why most childhood NDErs seldom reach or maintain their full potential.

Aside from the transformation, children can often be confused, disoriented, angered, and/or traumatized by their NDEs. Whereas adult NDErs almost unanimously say they have been uplifted by their NDEs, and this is true for many children, other child NDErs suffer extreme pain and confusion and personality changes for the worse. Children sometimes feel abandoned, not by their parents, but by the "bright ones." Having found their "home," they could not stay. As a result, child NDErs later become alcoholics and attempt suicide more often than do adult NDErs. Many childhood NDEs are followed by serious bouts of depression, again in sharp contrast to adult NDEs, which are, for the most part, suicide deterrents. Difficulty handling the aftermath of "coming back" seems to be more common when the experience happened to school-aged children, but seldom if the episodes occurred to infants or toddlers. How children deal with their aftereffects is tightly connected to their interactions with their parents, from whom they require great acceptance.

The above features caused Atwater to replace the originally described classic elements of NDEs (Morse and Perry, 1990, 1992; Ring, 1984,

1992) by another classification, which she found to hold up consistently, regardless of age, education, gender, culture, or religion. Because most people who undergo NDEs do not experience all elements of the classical model and are therefore sometimes embarrassed by the fact that they are not "complete NDErs," Atwater developed this new model, which comprises the following four basic types of NDE.

The initial experience involves elements such as loving nothingness, the living dark, a friendly voice, or a brief out-of-body episode. This type is usually experienced by those who seem to need the least amount of evidence for survival, or who need the least amount of shaking up in their lives at that point in time. *The unpleasant and/or hell-like experience* includes a threatening scenario or hellish purgatory, or scenes of a startling and unexpected indifference. This type is usually experienced by those who seem to have deeply suppressed guilts, fears, and angers, and/or those who expect some kind of punishment or discomfort after death.

The pleasant and/or heaven-like experience involves heaven-like scenarios of loving family reunions with those who have died previously, reassuring religious figures or light beings, validation that life counts, and affirmative and inspiring dialogue. This type is usually experienced by those who most need to know how loved they are and how important life is, and how every effort has a purpose in the overall scheme of things. Finally, *the transcendent experience* involves exposure to otherworldly dimensions and scenes beyond the individual's frame of reference, and sometimes include revelations of greater truths, seldom personal in content. This type is usually experienced by those who are ready for a "mind-stretching" challenge and/or individuals who are more apt to utilize the truths that are revealed to them.

Atwater found three-fourths of child NDErs to have the initial experience, versus only 20 percent of adult NDErs. A characteristic feature of this type of NDE in children, rare in adults, is the "warm and friendly dark," the "darkness that knows," which is a warm, protective cradle, totally surrounding and embracing the child. The second most common type was pleasant/heaven-like experiences, while unpleasant/hell-like experiences and transcendent experiences were relatively uncommon among children. Mixed types of experience occur, as do repeated NDEs. Unlike adult NDEs, imagery and light are not necessarily prime components of children's NDEs.

Children who have undergone NDEs frequently describe vivid pre-birth memories that often can be verified, although they may fade if the child is ridiculed or silenced for relating them: "Most of what they

report . . . is not only accurate but startlingly mature, *as if they, as souls, were comfortable with leaving and reentering a life continuum existent beyond that of the earth plane*" (p. 163, original italics). As Atwater points out, life may be a journey of eternal proportions, a life continuum that neither birth nor death can encompass or delineate. The plan of the soul seems to encompass multiple dimensions of existence, as well as overlapping countless lifetimes. Atwater regards these prebirth memories as the working out of a "soul plan." Prebirth memories usually begin around the sixth or seventh month of pregnancy, some even earlier; so according to Atwater, the third-trimester fetus already has a developed consciousness.

Indeed, new lines of inquiry show evidence of pre- and perinatal awareness and a life continuum, expressed by near-death experiences, near-death awareness, after-death communications, and pre-birth experiences. Atwater writes:

[T]he idea of a life continuum is no longer relegated to the dustbin of sloppy interviews or dismissed as wish-fulfillment. . . . What we are discovering is what we've previously overlooked—that other dimensions of life, other realities have always existed. We just didn't have the right tools before to properly identify them. (p. 184)

Children often recall "multidimensional" memories. Fewer child NDErs than adults report encounters with beings from another planet; renditions of alien existences from child experiencers rarely match accounts from adults and children seldom recount extraterrestrials or spinning spheres. However, 39 percent of child NDErs describe beings from another *dimension*. For most of them, the special lights they see are guides who accompany them through the stages of learning. Thus, in children, claimed contacts with other beings are not so much from other worlds as from other dimensions.

Children are six times as likely as adults to "tuck away" their experience, but sooner or later the power of the NDE tends to assert itself. Recall may be spontaneous or triggered by some sort of scenario. It is possible, however, for someone who came close to death, nearly died, or was revived from clinical death to exhibit NDE aftereffects without knowing that he or she has had such an experience. It is likely that episodes involving youngsters are grossly underestimated and underreported. Atwater emphasizes that the NDE may be recognizable more by the pattern of aftereffects than by memory of the episode. The aftereffects validate the phenomenon, and unrecalled NDEs should

be suspected whenever a person exhibited marked behavioral changes after a serious illness or an accident, a cascade of aftereffects with increased intelligence, psychic abilities, and an almost obsessive drive to fulfill certain tasks and projects.

Bearing in mind the frequency of NDEs when a person comes close to death, it should come as no surprise that there are a number of historical cases in which an NDE was extremely likely. Atwater describes a number of historical persons in whom this could well have been the case, suggesting that the NDE itself may have been a primary factor stimulating the growth of culture throughout the ages. Advanced technology today is returning increasing numbers of patients from death's door; Atwater sees therein evolution itself at work.

Not only are babies becoming more alert and smarter each year, but many of those born during the last three decades rival, in the characteristics they display, child experiencers of near-death states. So a new vanguard of children has been entering the earthplane in large numbers. The signs are evident that a new race is emerging in our midst now. There are major evolutionary leaps in consciousness and a vast process of "quickenings" and refinement of humankind. The emerging subculture is more holistic in attitude, has exceeded expectations, and is "culturally creative." Atwater estimates that roughly 25 percent of the American people fit this category. She sees this in a larger context of an "integral culture" that merges modernism with traditionalism, East with West, to create a renaissance mindset. Nothing less than the evolution of society is thus at hand, the subculture becoming the dominant culture, an advanced "Age of Globality" with advanced technology.

The brain shift/spirit shift that happens in such large numbers to today's youngsters offers the most compelling evidence yet that mind itself is also changing. It is therefore possible to reconsider the four types of NDEs described above in the following manner: the initial experience is a stimulus, an introduction for the individual to other ways of perceiving reality; the unpleasant or hell-like experience is a healing, a confrontation with distortions in one's own attitudes and beliefs; the pleasant or heaven-like experience is a validation, a realization of how important life is and how every effort that one makes counts; and the transcendent experience is enlightenment, an encounter with oneness and the collective whole of humankind. Thus these four kinds of near-death experiences can be considered stages of awakening rather than difference types of NDEs. *Children of the New Millennium* ends with the final statement that the immense talents and creative skills

of both the childhood NDErs and evolution's newest children permit a truly optimistic outlook: the future is in good hands.

In Atwater's opinion, however, the self-published subtext for this book, available directly from her or from her website but not included in the printed version, is equally as important for a complete understanding of the findings and conclusions of her research. Appendix 1 deals with tips for counseling child NDErs and "being in spirit." She emphasizes that the vast majority of children who face death have NDEs, experience aftereffects, and exhibit complex dynamics that defy ready explanation. Parents are usually unprepared for the fact that children experience NDEs and aftereffects; their acceptance is of utmost importance and benefit for all, not only the child experiencers, whereas denial or ignorance of these experiences will lead to alienation and behavior problems. As far as counseling is concerned, benefits or lack thereof are intimately related to the sensitivity and training of the professional counselor or therapist. In Atwater's opinion, therapists who are trained in transpersonal psychology are best suited for this purpose, and, since research on children's NDEs and their unique response to the aftereffects is difficult, no psychologist or counselor can have specific training in how to handle child NDErs without having had an NDE him- or herself.

In Appendix 2, Atwater describes her research methodology. Based on her interviews with adult and childhood experiencers, she emphasizes the importance of examining the near-death phenomenon from 360 degrees, combining interviews and observation, with questionnaires regarded as auxiliary. Appendix 3 comprises an extended resource and bibliographical section.

Summing up, I believe that Atwater goes to the very frontiers of contemporary near-death research with this book. Atwater has always been a critical person, not easily conforming to mainstream NDE research. Readers familiar with her previous writings will recognize that she has continued to develop her ideas and implications, but they will find themselves confronted with challenges and interpretations that reach far beyond common concepts, which is exactly the intention of this book. In *Children of the New Millennium*, she discloses the unique characteristics of childhood NDEs, throws light on both positive and negative aspects of childhood experiences, and comes, finally, because she also went from hell to heaven, to a very optimistic outlook toward our future. This outstanding work of near-death research is an absolute must for every person interested in the subject.

References

- Atwater, P. M. H. (1988). *Coming back to life: The after-effects of the near-death experience*. New York, NY: Dodd, Mead.
- Atwater, P. M. H. (1994). *Beyond the light: What isn't being said about the near-death experience*. New York, NY: Birch Lane Press.
- Atwater, P. M. H. (1996). *Future memory: How those who "see the future" shed new light on the workings of the human mind*. New York, NY: Birch Lane Press.
- Morse, M. L., and Perry, P. (1990). *Closer to the light: Learning from the near-death experiences of children*. New York, NY: Villard.
- Morse, M. L., and Perry, P. (1992). *Transformed by the light: The powerful effects of near-death experiences on people's lives*. New York, NY: Villard.
- Ring, K. (1984). *Heading toward omega: In search of the meaning of the near-death experience*. New York, NY: William Morrow.
- Ring, K. (1992). *The Omega Project: Near-death experiences, UFO encounters, and mind at large*. New York, NY: William Morrow.



BOOK REVIEW

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Children of the New Millennium: Children's Near-Death Experiences and the Evolution of Humankind, by P. M. H. Atwater. New York, NY: Three Rivers Press, 1999, 288 pp, \$14.00 pb.

Subtext for Children of the New Millennium, by P. M. H. Atwater. Charlottesville, VA: P. M. H. Atwater. Available from the author at P.O. Box 7691, Charlottesville, VA 22906-7691 or at <www.cinemind.com/atwater>.

P. M. H. Atwater is one of the earlier researchers of the near-death phenomenon no doubt motivated to a large extent by herself having had such an experience. Atwater has authored six books on the subject and had numerous articles appear in *Vital Signs*, the newsletter of the International Association for Near-Death Studies (IANDS). In presentations at a number of IANDS conferences, Atwater reported that she feels that of all her books, *Children of the New Millennium* is her most important work to date. Her excitement for the book and its potential to affect mankind is reflected by a quotation from the back cover of the book:

Atwater believes these millennial children—who possess heightened sensory and empathic abilities acquired at birth or as a result of the near-death experience—herald the presence of a new race of people on Earth. This groundbreaking book explores how these special children will dramatically impact the human condition by helping humankind rediscover the spiritual truths needed to survive in our radically changing world.

Also on the back cover is glowing praise for the book by four highly respected writers in the field.

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I have read all of Atwater's earlier books relating to near-death experiences (NDEs) and found them interesting and informative. This book, however, she claimed was different than the others because it was based on empirical research and statistical analysis and was not limited to the reporting of anecdotal accounts of the type which tend to typify NDE books.

I am a professional researcher and therefore anticipated some solid facts and figures into which I could sink my teeth. I have taught research methods and statistical analysis at both the undergraduate and graduate levels in departments of sociology and economics, and for five years was employed by the United States Atomic Energy Commission—now the Department of Energy—as a program evaluator, where I came to appreciate well-designed research. I know that it is difficult to do quality research in areas where the subject matter cannot be observed directly. Near-death research is certainly such an area. I was therefore especially interested in Atwater's research instrument, which was a lengthy questionnaire, and the statistical tool she used to analyze her data, which turned out to be limited to the percentages of individuals who responded in particular ways.

Atwater begins her book by stating:

Children of the new millennium are different from those of any other generation of record. They are unusually smart, even gifted; identify with "alien" existences whether past life-oriented, extraterrestrial, or multidimensional; and they are natural creative intuitives. (p. 1)

Atwater then refers to a number of other researchers to support her conclusion that significant changes in children's intelligence, among other things, are occurring. The other researchers do not state why or how this might be happening, but Atwater believes that she knows why:

Life utilizes random unpredictability to guarantee continuous change and advancement.

Evolution operates the same way in the human family.

Always, sudden changes, quantum leaps in physiology and consciousness, have catapulted the growth and development of humankind beyond that which can be explained. As "missing links" are still standard fare in trying to understand the evolution of our bodies, so, too, are there missing connectors in any attempt to rationalize the evolution of consciousness.

Until now. (p. 7)

Atwater goes on to argue that the missing link is the near-death experience.

In her earlier books, *Coming Back To Life* (1988) and *Beyond the Light* (1994), Atwater wrote about how adults who have had an NDE are transformed by that experience. From this she extrapolates that if adults are changed, then children who have NDEs must also be changed significantly:

This suspicion of mine is based on the interviews *and* observations I have conducted with over 3,000 adult near-death experiences (not counting the significant others I also spoke with), as well as nearly the same number of people who had undergone transformations of consciousness through other means; this research base was expanded by work with 277 child experiencers (about half still youngsters, the rest having reached their teen or adult years). (p. 8)

She suggests how having an NDE impacts children:

... the brain is affected to a greater degree in children than in adults, propelling them into abstractions and learning enhancements as creative expression soars. This marks them as different from their age-mates and at variance with family and social structures. (p. 19)

This is how Atwater describes her research philosophy and strategy:

The protocol I use is that of a police investigator, a skill I learned from my police-officer father (that's why some people call me the gumshoe of near-death). I specialize in interviews *and* observations, cross-checking everything I notice a minimum of four times with different people in different sections of the country, as a way to ensure that any bias I may have as a near-death experiencer will not cloud my perception and that my work is not completely dependent on anecdote. Questionnaires for me are auxiliary, used only to further examine certain aspects of near-death states. (p. 8)

In 1994, I devised a lengthy questionnaire to probe the memories of those who had had a near-death episode as a child. My goal was not only to test recall, but to track the aftereffects throughout various life stages. (p. 10)

When she describes her research population of children who had had a near-death experience, there seems to be a contradiction. On pages 8, 74, and 187 Atwater reports that her study involved 277 children. But on page 10 she writes:

Of the fifty-two people who participated, forty-four had experienced the near-death phenomenon by their fifteenth birthday. The youngest to fill out the questionnaire was twelve, the oldest a seventy-two-year-old who had been pronounced clinically dead at four and a half.

Being a bit confused, I went through her book and counted the number of children whom she identifies by name, date of the experience, nature

of the death, and hometown. I listed each child's name and ages at the time of his or her NDE, and came up with 63 children plus one for whom no age was given. I also noted that several of these children had not had NDEs but NDE-like experiences, which would reduce the sample size of child NDErs even further. Although Atwater clearly writes that she used an in-depth questionnaire as the basis for her analysis, she spends all of page 9 informing the reader how she interviews children. So it is not clear what the basis is for many of the conclusions she makes: the questionnaire, her interviews, or research conducted earlier and reported in her other books. It seemed to me as I read the book that the questionnaire supplied but a small portion of the data in the book, but was used by Atwater to give her conclusions an aura of objectivity and empirical substance.

In Chapter Three, "A New View of Near-Death States," Atwater writes:

Since the brain can be permanently damaged in three to five minutes without sufficient oxygen, it is important to note that one of the striking features of the near-death phenomenon is that *no matter how long the person is dead, there is usually no brain damage once he or she is revived; rather, there is a noticeable brain enhancement.* (p. 52)

This is a remarkable statement, given there is no way that this can be determined by an interview or a questionnaire. Atwater does not supply any evidence for this remarkable claim, such as brain scans or other tests. Is this her own intuitive feeling or is this based on empirical research? Several of my colleagues and I have interviewed a number of people who came back from their NDEs with significant brain damage. It was not the NDE that caused the damage so much as it was the situation that precipitated the "death," which in turn led to the subsequent NDE. Their experiences were viewed as wonderful events, but their health, mental functioning, and cognitive abilities were frequently severely reduced. Also in Chapter Three Atwater makes this observation (pp. 68–69):

A fascinating aspect of this is that as a child's mind begins to shift, his or her intelligence increases. Using questionnaire responses, let's take a look at what I'm implying.

Faculties enhanced, altered, or experienced in multiples	77%
Mind works differently—highly creative and inventive	84%
Significant enhancement of intellect	68%
Drawn to and highly proficient in math/science/history	93%

Professionally employed in math/science/history careers	25%
Unusually gifted with languages	35%
School	
easier after experience	34%
harder afterward or blocked from memory	66%

How any of the above percentages (which is a partial list) document that having an NDE produces an increase in intelligence is not clear.

But now let us consider her method of statistical analysis. Atwater takes percentages derived from her questionnaire and compares them with other groups, such as adults. If she discovers differences between adults and what the children reported, she does much more than just draw inferences; she states unequivocally that the differences reveal something significant.

The type of data a researcher collects limits the type of statistical analyses that can be made. In her case what she has done is to count the numbers of individuals who respond in a specific way, then divide that number by the total number of individuals in the group, which results in a percentage. A percentage is a descriptive statistic. It can help a researcher to identify the characteristics of a specific group, such as the percentage that are women or who are over a specific age. It can also help to contrast two or more groups. But it cannot go much beyond that. Percentages will not tell or even imply what a particular difference means. A different set of statistical tools is needed if a researcher wishes to draw inferences, discover the meaning of differences, or find out if the differences are in any way significant.

In addition, any time a researcher uses percentages, it is desirable to show the number of individuals on which the percentages are based. While Atwater uses the figure 277 in many places, the number of children who actually completed the questionnaire is 44, a fairly small sample size, given that Atwater is referring to the *evolution of humankind* and *helping humankind rediscover the spiritual truths needed to survive*. But even with a small sample, if it is scientifically drawn and is shown to represent all children who have had NDEs and that the only difference between these children and all children is the fact that they had had NDEs while others had not, generalizations drawn could be conceptually useful though inadequate. But I could not find any mention in the book of how these 44 people became the sample. Is it possible that these 44 children are in some critical way(s) different from those

who are not in the sample and that these unique differences are what motivated them to participate in the study? If this is true, then it would be completely inappropriate to make any generalizations beyond her sample of 44.

At the 1999 IANDS conference in Salt Lake City, Atwater made the observation in her presentation on *Children of the New Millennium* that people were becoming less and less willing to participate in studies and share their near-death experiences. This surprised me, as I have not personally found this to be the case. I asked other researchers if they were also seeing a decline in NDErs' willingness to share their experiences and they said that for them it was just the reverse. Puzzled by her observation, I wondered as I read the book if this might not be a significant factor affecting Atwater's research findings. During her presentation, she reported that it took her respondents hours to complete her questionnaire. It is my experience that few people are willing to spend hours filling out a complicated lengthy questionnaire, regardless of the topic, and this might just be why she had trouble getting people to cooperate.

The big problem with the percentages cited above and many others throughout the book is that they were used as evidence that having an NDE changes children in significant ways. For this to be valid, Atwater would have had to know what the children were like before their NDEs to determine if changes had occurred and to what degree. Nowhere in her book could I find any indication that she had a measure of the children's intelligence, physical and emotional well-being, aptitudes, or talents before their NDEs. Further, on examining the reported ages of the children at the time of their NDEs, I discovered that 11 had their NDEs before age 1, 18 before age 2, 30 before age 5, 35 before age 6, 43 before age 8, and 54 before age 12. Only nine were teenagers at the time of their experience. (These are accumulated numbers based on the 63 individuals identified in her book by name, age, manner of death, and hometown.) This being the case, most of her respondents would have been unable to report what they were like before the experience.

Referring back to the percentages cited earlier relating to performance in school—34% reporting that school was easier after experience and 66% that school was harder afterward—more than half her sample was not even old enough to be enrolled in school at the time of their NDE, so they could not have responded to this question. On page 105, Atwater writes, "What follows are more questionnaire results to give

us a deeper look at how these aftereffects impact a child's life." Then she gives the following figures (partial list):

Significant increase in allergies	45%
Became vegetarian	18%
Unusual sensitivity to light	
decreased tolerance	59%
increased tolerance	20%
Electrical sensitivity	52%
Psychic enhancements	
more intuitive	64%
more precognitive	73%
more knowing	48%
more of an active/vivid dream life	66%
Relationship with parents/siblings after	
better	30%
alienated	57%
Immediate response to episode following	
positive	34%
negative	61%

Remember that most of these questionnaires were filled out by individuals who had their NDEs when they were children. However, at the time they filled out the questionnaire they were mature adults. I could find no supportive information in her book such as parents being consulted, or teachers, physicians, or anyone else who might have known the child before the NDE.

It would be impossible for most of the respondents to be able to address these questions and I would suspect that the vast majority did not even try to do so. So, if perhaps half did not complete this segment of the questionnaire, then a statistic of 20% for increased tolerance to light would refer to only two people, from which we could hardly generalize to the whole of society. The book is replete with statistics such as these, which raises serious questions about the validity and reliability of the author's conclusions.

In addition, Atwater asked her respondents to recall an event that occurred, in some cases, many years earlier. There is excellent research documenting that the type of research instrument used to collect data, such as questionnaires or structured interview schedules, can and does have a significant impact on what respondents report. A researcher, if

not extremely careful, can unwittingly influence what is said or recorded. Because Atwater's questionnaire is very lengthy, complex, and comprehensive, it has great potential for influencing in multiple ways what her respondents report.

Not included in her book, but available from Atwater's website, is a "Subtext" that includes a 23-page document entitled "Appendix II: Research Methodology." In this appendix she includes her questionnaire and a lengthy description of her interviewing technique and research philosophy. For example she describes how she encourages her subjects, through subtle body language, to say more. But even the subtlest motions can also encourage respondents to give the researcher what they think he or she wants to hear. This may or may not reflect what happened. Right after the questionnaire she includes a segment titled "Additional Thoughts About Research." She writes:

I do not use the standard double-blind/control group method most professionals do in my research of near-death states, because I don't trust it. [Reviewer's note: I cannot imagine how any NDE researcher *could* use a double-blind technique, which would require that the subject not know whether he or she had had an NDE.] Initial screening based on this standard style, whether in person or by mail, is dependent upon questions that use the terms in advance of the experiencer's response and "lead" in the sense of how certain questions tend to inspire certain answers. (p. 16)

In legal terms, this is known as "leading the witness." To avoid this, researchers do not ask respondents if they saw, felt, or did something. Instead, the researcher lets the respondents tell the researcher what they saw, felt, or did. Some respondents, trying to be helpful, will give the answers they think you are looking for. In addition, some respondents will give answers to questions that do not apply to them. In political polls, for example, researchers have inserted in questionnaires the name of a fictitious candidate. When asked if the respondent has ever heard of the candidate and various questions about the candidate, a considerable number of respondents will reply that they have not only heard of the fictitious candidate, but they are definitely going to vote for him or her. On pages 2 and 3 of Atwater's "Appendix II: Research Methodology," referring again to police work as an example, she writes:

In [an investigation of] a car accident, you cannot mention "car" until the witness does. Hence, when interviewing near-death survivors, I would never say "light" or "dark" or anything else unless they first used the term.

Upon examining Atwater's questionnaire, it is clear that she violates these principle she says are important in her interviewing. Apparently Atwater does not believe that questionnaires pose the same problems for bias as do interviews. This assumption is very dangerous, as it has been documented repeatedly that how questions are worded in a questionnaire can introduce significant bias. A few examples of questions from her questionnaire (pp. 14-15 of Appendix II) illustrate their significant potential to bias respondents' answers:

- Did your mind work differently afterward? Explain if yes.
- Was there any difference in your faculties? Explain if yes.
- Did your intelligence level change? Explain if yes.
- Did the affect [sic] of light change afterwards? Sunshine? Explain if yes.
- Did the affect [sic] of sound change afterwards? Music? Explain if yes.
- Did your energy affect electricity or electronic equipment? Explain.
- Was there any difference in your physical body and how it functions, or in your appearance, afterwards? Explain if yes.
- Did your experience in school and with your teachers/coaches change afterward? Explain if yes.
- What was your health like afterward and in the years that followed?
- What was your spiritual/religious experience like afterward?
- How do you handle stress, conflicts, negativity?

While these are the most blatant, each and every item in the questionnaire is leading and suggestive. Given that most of the respondents were under six at the time they had their experience, and that they were relying on memory, it is possible that the questionnaire could elicit responses that were a mixture of NDE-related effects, subsequent events, and suggestion. In the questionnaire section titled "Aftereffects," the respondent is asked (p. 13 of Appendix II):

- Did manifestations from or because of your experience continue to occur afterwards (like sudden or continued "visitations," unusual lights, voices, haunting, vivid replays of the event, etc.)?

This leading question with its list of suggested answers could stimulate diverse reactions in respondents. For example, "sudden" to one individual might not mean the same thing as it does to someone else. Of individuals who have had similar experiences, one might respond affirmatively while another would move to the next question. It would be very difficult to answer this question and screen out the influence of the questionnaire itself.

It is also clear that the respondents' age (85 percent younger than 13), education, social experience, and cultural backgrounds cannot help but

have significant implications for what they thought the questions were asking. Nowhere could I find any mention of why these questions were selected or whether they were tested for validity or reliability. Other than stating that she sent out a questionnaire that took an "inordinate length of time to complete," Atwater did not discuss how the data were analyzed for meaning and relevance.

Atwater writes, "Empirical research can be conducted utilizing a number of different approaches, and I count mine as one of them." She then goes on to state, "If we are ever to understand the near-death phenomenon, we must examine it from three hundred and sixty degrees. Anything less is unacceptable" (Appendix II, p. 18). I agree with her completely. There are many research strategies, techniques, and approaches. Each of them could reveal a piece of the NDE puzzle. But we must make sure we are not forcing pieces into the puzzle where they do not fit. Empirical research—by which I assume she means collecting multiple cases, counting numbers, and analyzing statistically—is just one research strategy, which is no more valid than other techniques. Even given that the research instrument used to collect data has been proven to be reliable and valid, to be able to generalize from the sample from which the data had been gathered to a larger population, one must establish that the sample is representative of the target population. If it is not, then all you can speak about is the sample itself.

Atwater's discussion of where her research population came from suggests that serious problems with bias could have occurred. She states that many of her subjects were attendees at her talks, or they sought her out, or they responded to her advertisements in national publications. It is possible that those individuals who sought her out could be systematically different from those who did not. To eliminate this possibility, she would have needed to demonstrate that her sample of 44 was not different from the general population in any significant way(s). From what was described in her book and subtext, I could find no place where she attempted to do this. Therefore, any generalizations made beyond the sample of 44 are not justified.

In Atwater's latest book, *The Complete Idiot's Guide to Near-Death Experiences* (Atwater and Morgan, 2000), she writes that adults tend to remember their NDEs but children tend to forget them:

Children are six times more likely than adults to ignore, block, forget, or tuck away their near-death episodes. Many never have recall, even though they currently display the full profile of aftereffects and have throughout their lives. (p. 127)

If this is, in fact, true, then those who completed her questionnaire could not be representative of child NDErs in general, in that Atwater's subjects appear to recall how their experience affected them in considerable detail. If most child NDErs do not recall their NDEs, how would they know about their aftereffects? There appears to be a serious question here.

It is not clear to me from Atwater's book why an NDE-initiated evolution of humanity waited until the turn of the 21st century to make an impact. Why would these super children be showing up only now? If the NDE has significantly transforming implications for children, this evolution has been going on as long as humanity has existed and children have been having NDEs. Being an avid researcher on NDEs, I have read numerous accounts of children's near-death experiences, which took place over the past 100 years. It is not a new phenomenon. Is the title of Atwater's book just a catchy phrase to cash in on the new millennial craze or is there actually a significant NDE-induced evolution occurring? Only a well-designed, long-term, longitudinal study could address this question.

Another problem with Atwater's book is that she rarely makes qualifying comments such as "I think . . .," "It is possible . . .," or "The data suggest . . ." In her writings and speaking engagements she makes definite statements that leave no room for differing opinions or differing interpretations of the data. There is clearly no question in her mind that NDEs cause major transformations in children—and she could be right. But to assume that these relatively rare transformations can have a definite effect on the evolution of the whole of humanity is a considerable leap.

Whether or not Atwater's claims are valid, the methodology she used to collect and analyze her data are too flawed to be used as evidence for several reasons. First, the data reported in her book are taken from self-reports of child experiencers, the majority of whom were younger than 6 years old at the time of their experience, too young to be able to provide much of the data she requested and reports. Second, in order to determine if having an NDE impacts the experiencer, the researcher would have to have some data on what the experiencer was like prior to the experience. This information was not available, and therefore there are no data that can support the conclusion that changes occurred. Third, there are no independent observations verifying that changes did occur. Fourth, no evidence was provided that her research instrument was valid or reliable. Fifth, the basis for all her statistics was not shown.

Sixth, the statistical methods used were inappropriate. Seventh, the sample size was very small, diverse, and inadequate.

In summary, *Children of the New Millennium* makes major claims that have no empirical support, at least from the research as reported in the book. What Atwater has is a series of intriguing but untested hypotheses. The book's only contributions to the field of near-death studies are some anecdotal experiences that have not appeared in Atwater's other books and the provocative issues it raises that could be the basis for further research.

There is no question that Atwater is extremely excited by the implications of the near-death experience for the individual, for humanity in general, and particularly for children. But it appears that her enthusiasm, personal beliefs, and expectations formed the basis for this book rather than good, solid research.

References

- Atwater, P. M. H. (1988). *Coming back to life: The after-effects of the near-death experience*. New York, NY: Dodd, Mead.
- Atwater, P. M. H. (1994). *Beyond the light: What isn't being said about the near-death experience*. New York, NY: Birch Lane Press.
- Atwater, P. M. H., and Morgan, D. H. (2000). *The complete idiot's guide to near-death experiences*. Indianapolis, IN: Alpha Books.

Letters to the Editor

A Philosopher's View of Near-Death Research

To the Editor:

There is a great deal in Carl Becker's article in the Fall 1995 issue of the *Journal* on a philosopher's view of near-death research with which I agree. But I am afraid I cannot but comment on two observations he made. Becker wrote that a resolution of the debate over monism and dualism has no immediate relevance to the question of postmortem survival. I submit that it has. For, if the universe is found to be monistic, then it would follow that any aspect of ourselves that may survive after our death is of the same order of reality, or stuff, as that of the body, and therefore it must, like the body, be amenable to empirical study. I have elsewhere sought to show that there is no need to postulate two orders of reality to explain any phenomenon known to us (Krishnan, 1996).

The other statement of Becker's that I wish to comment upon relates to the out-of-body experience (OBE). According to Becker, it is "philosophically incidental" to what he considers to be the "core experience," because it can occur in situations that do not hold a threat to life, such as meditation, and can be induced deliberately. But, since he means by "core experience" an experience "directly affecting the individual's feeling about death and the afterlife" (p. 21), it is unclear why he excluded the OBE from this category. Many out-of-body experiencers have indeed said that they were convinced that the experience represented separation of the soul from the body, and that therefore it was evidence for postmortem survival. However, it should not be forgotten that there are other experiencers who look upon the OBE as only a pleasant or novel experience with no implications for the afterlife issue.

The important point to note here is that all near-death experiencers (NDErs) do not feel the same way about their experiences, because of differences in their belief systems, cultural backgrounds, critical faculties, social pressures, and so on. I therefore do not think it advisable to

classify NDEs on the basis of what the experiencers feel about them. That does not, of course, mean that we need not pay attention to NDErs' interpretations of their experiences. By all means, let us examine them and try to account for the differences. At the same time, let us also try to understand—to put the matter in very general terms—the body-based mechanisms underlying the experience, with a view to finding out, among other things, whether knowledge about them can be put to practical use.

Let me cite some examples. Persons who have spontaneous and unexpected OBEs have said that they were insensitive to painful stimuli during their experience. Does this have any implications for pain management free of side effects? There are several accounts of accurate out-of-body perception. Do they not make a case for investigating whether we are capable of "eyeless sight" in situations when normal vision is in abeyance (Krishnan, 1985, 1988, 1993)? If we are found to have this ability in a latent form and if we could discover the underlying process, would it not help in attempts to devise a means of giving sight to those handicapped in this respect? Some NDE accounts contain a hint that some of the "transcendental" elements, such as visions of peaceful surroundings and the like, may perhaps have had curative or palliative effects on the NDErs who were ill at the time of their experience (Krishnan, 1995). If future research confirms this hint, can we not find out the process involved and use it as an adjunctive treatment of at least some kinds of disease? In my view, there is a great deal of practical and theoretical value to be learned from NDEs if only we ask the proper questions.

I hope I have made a reasonable case for not restricting near-death research or this Journal to any particular aspect of the NDE.

References

- Becker, C. B. (1995). A philosopher's view of near-death research. *Journal of Near-Death Studies*, 14, 17-27.
- Krishnan, V. (1985). Near-death experiences: Evidence for survival? *Anabiosis: The Journal of Near-Death Studies*, 5(1), 21-38.
- Krishnan, V. (1988). OBEs in the blind [Letter]. *Journal of Near-Death Studies*, 7, 134-139.
- Krishnan, V. (1993). The physical basis of out-of-body vision [Letter]. *Journal of Near-Death Studies*, 11, 257-260.
- Krishnan, V. (1995). Near-death experiences and healing [Letter]. *Journal of Near-Death Studies*, 13, 278-281.

Krishnan, V. (1996). Misidentified flying objects [Letter]. *Journal of Near-Death Studies*, 14, 287-290.

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Marian Visionaries of Medjugorje

To the Editor:

Craig Lundahl's article "A Comparison of Other World Perceptions by Near-Death Experiencers and by the Marian Visionaries of Medjugorje" in the Fall 2000 issue of the *Journal* contained a geographical mistake. The author located Medjugorje in Croatia, which is not the case. Medjugorje is in the former Yugoslav republic of Bosnia and Herzegovina. This former Yugoslav republic is now, after a bloody civil war, an independent state with the same name. Bosnia and Herzegovina was and is a multi-ethnic state. Medjugorje is located in the part of Bosnia and Herzegovina called West Herzegovina. However, the majority of the population in Medjugorje are Croats.

Reference

Lundahl, C. R. (2000). A comparison of other world perceptions by near-death experiencers and by the Marian visionaries of Medjugorje. *Journal of Near-Death Studies*, 19, 45-52.

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