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Editor’s Foreword

The neurosciences have produced remarkable advances in the past decade in our understanding of human consciousness and behavior, and the application of these sciences to the study of near-death experiences (NDEs) holds great promise. Sometimes, however, our quest for definitive answers outstrips our scientific advances. In the past year, neurologist Kevin Nelson and his colleagues have published two reports suggesting an association between NDEs and dysfunction of the brain's arousal system, as manifested by intrusion of rapid eye movement (REM) sleep phenomena into waking consciousness (Nelson, Mattingly, Lee, and Schmitt, 2006; Nelson, Mattingly, and Schmitt, 2007). Although Nelson and his colleagues were careful to state that their finding of high rates of “REM intrusion” phenomena among NDErs did not diminish the intense personal meaning of NDEs and concluded only that REM intrusion may “contribute” to NDE phenomenology, those disclaimers have been drowned out by reports in the popular media that NDEs have now been “explained away” as nothing more than artifacts of REM intrusion.

The lead article in this issue of the Journal is a summary of and response to the REM intrusion findings and their interpretation, by radiation oncologist Jeffrey Long and counseling educator Janice Miner Holden. They review methodological weaknesses in the studies by Nelson and his colleagues that raise questions about the validity of the association between REM intrusion and NDEs, provide alternative interpretations consistent with those studies' findings, and suggest further research to clarify these issues.

In an empirical article, psychologist Liz Dale describes the transition from fear and anger to love and understanding in the course of NDEs among gay and lesbian experiencers. Quoting from firsthand accounts, she reviews the impact of these experiences on the “coming out” process for these individuals.

This issue also includes two sociohistorical articles. First, Croatian social scientist Iva Rinčić-Lerga and family physician Amir Muzur discuss the views on death and dying of prominent Croatian poet Dobriša Cesarić and writer Miroslav Krleža, and the impact of these two influential authors on current attitudes toward death among
Croatian students. Next, psychologist Carlos Alvarado discusses a posthumously published and often neglected book by Italian psychical researcher Ernesto Bozzano on unexplained physical manifestations at the time of death.

We conclude this issue of the Journal with obituaries of two important contributors to near-death research. Psychiatrist Ian Stevenson, best known for his groundbreaking studies of children who claim to remember previous lives, was one of the pioneers of near-death studies, publishing insightful articles in mainstream medical journals from the 1970s up until last year. Information scientist Rhea White, spurred by her own NDE, systematized the collection of NDEs and other examples of what she termed “exceptional human experiences.” These two pioneers left an invaluable legacy of rigorous scholarship that we hope will continue to guide near-death research in the 21st century.

References


Bruce Greyson, M.D.
Does the Arousal System Contribute to Near-Death and Out-of-Body Experiences? A Summary and Response

Jeffrey Long, M.D.
Near-Death Experience Research Foundation (NDERF), Gallup, NM
Janice Miner Holden, Ed.D.
University of North Texas, Denton, TX

ABSTRACT: In April 2006, an important article appeared in a respected medical journal suggesting a relationship between near-death experiences (NDEs) and the body's arousal system, specifically the phenomenon of rapid eye movement (REM) intrusion. In March 2007, the same authors published another article in the same journal, expanding on the previous article's findings and suggesting a relationship between out-of-body experiences (OBEs) and the arousal system. These articles presented lines of evidence and a study to support the hypothesized relationship. In this paper, we acknowledge the viability and potential value of the hypothesis underlying both articles, but identify substantial weaknesses in both the presented lines of evidence and the studies. We conclude with recommendations for future research that would address the hypothesis and would promote a better overall understanding of NDEs and OBEs.
KEY WORDS: near-death experiences; neuroanatomy; REM sleep; sleep disorders; out-of-body experiences.

On April 11, 2006, the medical journal *Neurology* published an article entitled, “Does the Arousal System Contribute to Near-Death Experience?” written by Kevin Nelson, Michelle Mattingly, Sherman Lee, and Frederick Schmitt. On March 6, 2007, *Neurology* published a related article entitled, “Out-of-Body Experiences and Arousal,” by Nelson, Mattingly, and Schmitt. *Neurology* is one of the largest and most respected journals devoted to medical research on the human nervous system. Nelson, the first author of both articles, is a nationally known neurologist. The articles received a lot of media coverage, and despite the authors’ diligent efforts to present their study’s findings in a balanced manner, the media often inflated those findings beyond what Nelson, Mattingly, Lee, and Schmitt claimed, especially after publication of the first article. For these reasons, a clear understanding of the articles is important both to interested members of the public and to the scholarly field of near-death studies.

These articles and their findings were somewhat complex. To help explain them, we first provide some important background information, including a summary of the articles, and then provide our response to them.

The first article, by Nelson, Mattingly, Lee, and Schmitt, addressing a possible relationship between near-death experiences (NDEs) and rapid eye movement (REM) intrusion, was longer and more detailed, and its concepts underlay the conclusions of the second article. That extensive first article included some detailed discussions of neurological pathways, listing 91 references. We will not address the neurological pathway discussions. Instead, we will focus primarily on those points we consider most relevant to an understanding of the relationship between NDEs, out-of-body experiences (OBEs), and REM intrusion, a phenomenon we will explain below.

We want to say at the outset that we respect and appreciate the contribution Nelson, Mattingly, Lee, and Schmitt have made to the field of near-death studies. They raised a plausible hypothesis. Although we found much to criticize in their methods and findings, we do not want that criticism to be interpreted as lack of regard for them or their efforts. Our heartfelt goal is to encourage future excellent research on NDEs and to encourage open and respectful dialogue.
Background Information to the Articles

REM Intrusion

The major point of the article by Nelson, Mattingly, Lee, and Schmitt was to suggest a connection between NDEs and REM intrusion. Rapid eye movement or REM sleep is a normal phase of sleep that is usually associated with vivid, emotionally intense, bizarre, story-like dreams. During REM, the eyes move around rapidly under closed eyelids, breathing may become irregular, blood pressure may rise, and muscle tone typically is lost to the point of paralysis. Electroencephalogram (EEG) recordings of brain electrical activity during REM sleep are quite similar to EEG recordings during alert wakefulness.

Normally, REM occurs several times throughout the course of a night’s sleep. Typically, the first time begins about 90 minutes after a person has fallen asleep, and the last time is the hour or so just before waking up. Sometimes, REM occurs while an individual is awake, usually just as the person is falling asleep or waking up. This phenomenon is called “REM intrusion” into wakefulness. It occurs in two forms (American Psychiatric Association, 2000, p. 610).

One form of REM intrusion is sleep paralysis. In this condition, the person feels awake but cannot move or talk and may feel unable to breathe, although breathing does actually continue. Another form of REM intrusion is sleep-related hallucinations, including those that occur while the person is falling asleep (hypnagogic) and while waking up (hypnopompic). In these situations, the person feels awake but sees or hears things that seem real but that, generally, the person later determines actually were not real:

Most sleep-related hallucinations are visual and incorporate elements of the actual environment. For instance, individuals may describe objects appearing through cracks in the wall or describe objects moving in a picture on the wall. The hallucinations may also be auditory (e.g., hearing intruders in the home) or kinetic (e.g., sensation of flying). (American Psychiatric Association, 2000, p. 610)

These experiences last anywhere from a few seconds to a few minutes, and they end by themselves. They often are terrifying, especially if several elements of the experience occur together, such as feeling awake, hearing intruders in the house, and feeling unable to move or speak (p. 610).
REM intrusion is, as Nelson, Mattingly, Lee, and Schmitt wrote, "a frequent normal occurrence" (2006, p. 1004; American Psychiatric Association, 2000, p. 610). But if a person has one or both of these types of experience repeatedly, the person qualifies for a sleep disorder diagnosis of narcolepsy (American Psychiatric Association, 2000, p. 615). Another condition that qualifies for a narcolepsy diagnosis is cataplexy. Cataplexy occurs during the course of waking life. While a person feels wide awake and, usually, is feeling a strong emotion, the person experiences a sudden loss of muscle tone on both sides of the body. It feels like an attack of muscle weakness, and it can range from a sagging jaw to a total bodily collapse. As with REM intrusion, in a matter of a few seconds to minutes, the episode ends on its own, with muscle tone and strength restored. The American Psychiatric Association (2000) appeared to distinguish REM intrusion, that is, visual and auditory hallucinations and sleep paralysis, from cataplexy. However, Nelson, Mattingly, Lee, and Schmitt (2006) included cataplexy as a form of REM intrusion.

Because repeated REM intrusion is a symptom of a recognized disorder, some people mistake any occurrence of REM intrusion as a sign of pathology. In fact, a substantial minority of the general population has reported at least one experience of REM intrusion but has not experienced it frequently enough to qualify as a disorder; that is, the experiences do not greatly distress them or impair their ability to function in life (American Psychiatric Association, 2000, p. 610).

Summary of the First Article

In their introductory paragraph, Nelson, Mattingly, Lee, and Schmitt acknowledged the "powerful transformation of personal beliefs and values" (2006, p. 1003) following an NDE. The authors then stated the "[assumption that] even the most complex psychological process is dependent on brain function" (2006, p. 1003).

In the next section, they defined the near-death experience as "a response to danger" (2006, p. 1003) comprised of several elements from the NDE Scale that Bruce Greyson (1983) designed to distinguish NDEs from nonNDEs and to measure the depth of NDEs. The elements included vivid senses; feelings of peace, joy, and/or cosmic unity; a sense of being out of one's physical body; a sense of an "otherworldly" environment; seeing and/or feeling surrounded by light; a sense of deceased and/or religious spirits; and a sense of
a border or "point of no return" (Nelson, Mattingly, Lee, and Schmitt, 2006, p. 1004). Nelson, Mattingly, Lee, and Schmitt wrote that "each NDE is thought unique and contains [elements] in various combinations with no universal element" (2006, p. 1003). They asserted that individual, age, and cultural differences "[suggest] the content of NDE is modified by experience" (2006, p. 1003) and indicated that NDEs are not the automatic, unconscious, forgotten behavior that sometimes occurs in disorders like epilepsy, narcolepsy, and schizophrenia. They summarized how little is known about neurological processes during NDEs, and they discussed the incidence of NDEs.

In the following section, the authors said that the cause of NDEs is currently unknown. They went on to draw comparisons between some features of NDEs and the REM state, specifically the common element of extraordinary light and the occasional element of being "immobilized, alert to the surroundings, and 'aware of being dead'" (2006, p. 1004). They then described some features of REM intrusion and concluded with the speculation that "during crisis, the [loss of muscle tone to the point of paralysis] could reinforce a person's sense of being dead and convey the impression of death to others" (2006, p. 1004).

Nelson, Mattingly, Lee, and Schmitt then described nerve pathways in the brain that are associated with REM sleep. They asserted that "arguments favoring a contribution by REM intrusion to NDE follow five lines of evidence" (2006, p. 1004). First, REM intrusion occurs frequently among normal, healthy people. The authors cited prior research indicating that, in round figures, about 25 percent of people have reported experiencing hallucinations while falling asleep, 5 percent reported sleep paralysis, and 2 percent reported cataplexy. Second, the authors reviewed evidence that REM intrusion underlies other clinical conditions such as narcolepsy, Parkinson's disease, and delirium tremens, the symptoms of withdrawal from severe alcohol addiction. They included reference to an abnormality in a particular area of the brain associated with hallucinatory images that can include "tunnels with a 'golden gate' at one end, angels, and feelings of levitation" (2006, p. 1004). Their point in these first two "lines of evidence" is that because REM intrusion is common and occurs in a variety of clinical conditions, it might be involved in NDEs as well.

In their third "line of evidence," Nelson, Mattingly, Lee, and Schmitt asserted that "NDE elements can be explained by REM intrusion" (2006, p. 1005). Here, the authors compared and contrasted NDE with REM elements. They asserted that some aspects of NDEs, including
autoscopy, light, visual experience, pleasant feelings, and transcendent qualities, occur in NDEs but are not unique to them and can occur in other clinical conditions including some conditions with an established association with REM intrusion. They concluded that although NDEs and REM "fundamentally differ" (2006, p. 1005) in some ways, REM intrusion occurring at the time of a life-threatening event could account for many elements of NDEs.

Fourth, Nelson, Mattingly, Lee, and Schmitt claimed that danger "undoubtedly" (2006, p. 1005) provokes the arousal of certain nerve pathways that, when aroused, are known to generate REM-associated physiological responses. And, for their fifth "line of evidence," the authors stated that "under apparently similar [physical] conditions, a fraction of cardiac arrest survivors have an NDE" (2006, p. 1006), and they asked whether NDErs had a greater lifetime prevalence of REM intrusion, that is, whether they were more likely than other people to have experienced REM intrusion at some time in their lives.

To try to answer this question, Nelson, Mattingly, Lee, and Schmitt conducted a study involving a survey of an NDE group and a comparison group. For the NDE group, 446 North American adult self-reported NDErs, who had posted their NDEs at the Near-Death Experience Research Foundation (NDERF) web site, were invited by e-mail to participate in a study. Of the 64 who responded, the authors used structured interviews to survey 55 whose NDEs occurred during the authors' definition of a dangerous situation and qualified as NDEs on Greyson's NDE Scale. For the comparison group, they interviewed 55 people "recruited from medical center personnel or their contacts" (2006, p. 1006) who matched the NDER group by age and sex. In the interview, they asked four questions to assess (1) visual REM intrusion or hallucinations, (2) auditory REM intrusion or hallucinations, (3) atonic REM intrusion or sleep paralysis, and (4) atonic REM intrusion or cataplexy. Respectively, the questions were:

1. Just before falling asleep or just after awakening, have you ever seen things, objects or people that others cannot see?
2. Just before falling asleep or just after awakening, have you ever heard sounds, music or voices that other people cannot hear?
3. Have you ever awakened and found that you were unable to move or felt paralyzed?
4. Have you ever had sudden muscle weakness in your legs or knee buckling? (2006, p. 1007)
They also calculated “total REM intrusion” by how many survey participants said “yes” to one, two, three, and all four questions. Except for the cataplexy question, more NDErs said “yes” to each of the questions than did the comparison group members: (1) 42 percent versus 7 percent; (2) 36 percent versus 7 percent; and (3) 46 percent versus 13 percent (2006, p. 1007). The number of NDErs who said “yes” to a total of one or more questions also was greater: 60 percent versus 24 percent (2006, p. 1007). These differences were statistically significant. The authors concluded that “episodes of REM intrusion appear to be substantially more common in the lifetime of subjects with an NDE. These findings imply that persons with an NDE have an arousal system predisposing to REM intrusion” (2006, p. 1007). Nelson, Mattingly, Lee, and Schmitt ended the article by acknowledging some limitations of the study and identifying some challenges of further research on this topic.

Although they did not state it explicitly, Nelson, Mattingly, Lee, and Schmitt appeared to be hypothesizing a “diathesis-stress model” (Zubin and Spring, 1977) of NDEs. According to this model, some people have a “vulnerable” arousal system (the diathesis), as evidenced by their having experienced REM intrusion, a “glitch” in the sleep/arousal process, at some time in their lives. This model suggests that when such people encounter fear in response to a life-threatening event (the stress), they are more likely to experience an NDE, which shares some features with REM intrusion. The person need not have shown the symptoms of their vulnerable arousal system prior to the NDE. For example, in the case of posttraumatic stress disorder (PTSD), the symptoms of the person’s vulnerable nervous system often appear only after the person has encountered the trauma. However, research indicates that PTSD vulnerability often had a genetic basis that existed prior to the encounter with the trauma and predisposed the person to develop PTSD in response to the encounter (American Psychiatric Association, 2000, p. 466). It should be noted that although the example of PTSD involved a recognized psychological disorder, neither nor Nelson, Mattingly, Lee, and Schmitt either stated or implied that NDEs themselves indicate disorder. The point here is that the diathesis-stress model of NDEs appears to summarize the basis for Nelson, Mattingly, Lee, and Schmitt’s “lines of evidence,” their study, and their interpretation of the study findings.
Summary of the Second Article

In the second article, Nelson, Mattingly, and Schmitt wrote that "Although not considered REM intrusion, OBE and the REM state have an established relationship that is incompletely understood" (2007, p. 794). This article expanded on their previous survey of an NDE group and comparison group. The occurrence of OBEs during NDEs was determined by participants' responses to the NDE Scale questionnaire that they "clearly left the body and existed outside it." Using this criterion, 56 percent of the NDErs experienced OBEs during their NDEs. Nelson, Mattingly, and Schmitt considered respondents to have had sleep transition OBEs if they answered affirmatively to the survey question: "Just before falling asleep or just after awakening, have you ever had the sense that you are outside of your body and watching yourself?" (2007, p. 794).

Forty-two of the 55 NDErs responded affirmatively to one or both of the survey OBE questions, with 17 experiencing OBEs during their NDE only, 11 during sleep transition only, and 14 during both NDEs and sleep transition. Sleep transition OBEs occurred in 25 NDErs and in three participants in the comparison group; that difference in responses between the two groups was statistically significant. The authors also found that among NDErs, REM intrusion was statistically significantly more common among NDErs with OBEs. They also found that NDErs whose NDEs included OBEs were statistically more likely to have experienced visual and auditory REM intrusion than NDErs whose NDEs did not include OBEs.

Nelson, Mattingly, and Schmitt presented nerve pathways in the brain that may be associated with REM intrusion and/or NDEs. The authors concluded: "This investigation supports OBE as an expression of arousal in NDE and sleep transition. Persons with NDE appear to have an arousal system predisposed to both REM intrusion and OBE" (2007, p. 794).

Our Response to the Articles

These two articles by Nelson and his colleagues raised some very interesting points and questions regarding a possible relationship between NDEs, OBEs, and the arousal system/REM intrusion. The authors drew conclusions in both articles based on the single survey
methodology described in the more extensive first article, toward which we will direct most of our comments.

Nelson and his colleagues introduced the first article with accurate descriptions of the typical elements, incidence, and aftereffects of NDEs. However, we take issue with many of their subsequent points throughout both articles. Rather than addressing all these concerns point by point in the same order as the authors presented them in their articles, we will address only our most salient concerns, beginning with those we found most striking and important and proceeding to the more subtle or minor ones.

NDErs' Responses to REM Intrusion Questions

Our first response to the Nelson, Mattingly, Lee, and Schmitt article is to note that 40 percent of the NDErs said “no” to all four questions designed to assess REM intrusion. Let us assume for the moment that the questions actually assessed REM intrusion and that the NDErs in this study were representative of all NDErs. If 40 percent of NDErs deny ever having experienced a single episode of REM intrusion in their entire lives, the idea that REM intrusion “underlies” and “predisposes” a person to have an NDE when encountering a life-threatening event seems questionable at best.

In analyzing this first study more closely, we asked what other factors besides REM intrusion could explain the study findings and what other interpretations besides the diathesis-stress model of NDEs could explain the study findings. Our concerns about this study fell into two categories: validity of the questions and composition of the study groups.

Validity of the Questions

In this section, we will present our arguments for three points. First, when NDErs said “yes” to the survey questions about visual and auditory experiences while falling asleep and waking up, they may have been reporting experiences that did not actually fit the clinical definition of REM intrusion. Such “yes” responses would have artificially inflated the NDErs’ reported incidence of “REM intrusion.”

Second, when NDErs said “yes” to the survey questions, they may not have been revealing conditions that existed prior to the NDEs, but rather may have been revealing experiences that were aftereffects of
NDEs. Thus, rather than concluding that NDErs may have had arousal systems that predisposed them to their NDEs and OBEs, it is equally plausible to conclude that they experienced an increase in unusual falling-asleep and waking-up experiences and in OBEs as a result of their NDEs.

Third, when NDErs said “yes” more often to “REM intrusion” and “OBE” questions, they may have been revealing not that they have such experiences more often than others but that, since their NDEs, they have become sensitized to notice and remember unusual experiences, including REM intrusion experiences and OBEs, more often.

One of the most striking issues we found in the Nelson, Mattingly, Lee, and Schmitt study concerned the validity of the questions they used. Validity refers to whether a researcher is getting information on what one thinks one is getting information on. In this first study, for example, Nelson, Mattingly, Lee, and Schmitt defined a lifelong prevalence of visual REM intrusion as an answer of “yes” to the single question, “Just before falling asleep or just after awakening, have you ever seen things, objects or people that others cannot see?” Likewise, other aspects of REM intrusion were defined similarly by a “yes” response to a single survey question. Putting aside for the moment the matter of “lifelong,” is a “yes” answer necessarily an indication of REM intrusion? When respondents said “yes,” did they have in mind the kind of experience that truly fell into the category of REM intrusion hallucinations?

Kenneth Ring related a relevant case in his 1984 book, Heading Toward Omega. Toward the end of his interview with an elderly woman, she related this experience that had occurred some time after her NDE:

I was awakened one morning with a vision of a woman’s forearm holding a box, translucent. And, in the box, there was a beautiful white gardenia. And it wasn’t the type of gardenia that we see in this world; it was a spiritual flower. And I heard a voice just as clearly as my own saying, “Take this flower, take this to Mrs. Henry, my mother, and tell her I am always with her.”

Now, Dr. Ring, I didn’t know any Mrs. Henry, but I had the habit of going to the corner of the cafeteria [at work] every morning for a cup of coffee and I sat at the counter. And I was the only person there except for a woman that sat at the opposite end of the counter. There was no one else there but ourselves. And I hear the waiter say to her, “Would you like another cup of coffee, Mrs. Henry?” And I said [to myself], “Do I dare?” A perfect stranger. A perfect stranger!
I went up to her afterward and I said, “I beg your pardon. Your name is Mrs. Henry?”
“Yes.”
“May I tell you something?”
“Yes.”
And I told her what I had heard. She looked at me with stricken eyes, and she said: “A gardenia was my daughter's favorite flower and she has just been killed in an automobile accident.” (Ring, 1984, p. 165)

Although we cannot say for sure, it seems quite likely that if this woman had been one of the NDErs in Nelson, Mattingly, Lee, and Schmitt’s study, she would have said “yes” to both the visual and the auditory “REM intrusion” questions. But let us compare the content of her experience with the content of falling-asleep and waking-up hallucinations as described by the American Psychiatric Association (2000) and cited above.

First, whereas REM intrusion hallucinations usually “incorporate elements of the actual environment,” such as cracks in the wall or a picture on the wall, the NDEr’s experience involved elements not in her actual environment: a woman's forearm, a translucent box, a “spiritual” flower, and a woman’s voice making reference to someone the NDEr did not know.

Second, whereas REM intrusion hallucinations are bizarre and unrealistic, such as “objects appearing through [those] cracks in the wall or ... objects moving in [that] picture on the wall,” the NDEr’s experience contained a seemingly coherent and meaningful message, though she was initially mystified as to how to deliver it to the person for whom it apparently was intended.

Third, whereas people typically find REM intrusion experiences frightening, the NDEr neither reported nor implied that she felt frightened during the experience.

Fourth, once people experiencing REM intrusion awaken fully, they generally recognize that the hallucination did not reflect reality: no objects actually in the cracks; objects in the picture actually unmoved from their original positions. By contrast, when the NDEr awoke, she felt perplexed about how she could deliver a message to someone she did not know; her reaction indicated that she considered the message “real” or, at least, potentially real. Furthermore, her subsequent experience confirmed the reality-basis of the message.

It appears that Ring’s (1984) interviewee’s experience differed fundamentally from REM intrusion hallucinations. He found that
after their NDEs, experiencers evidenced a substantial increase in experiences like the one his interviewee described, a finding that numerous subsequent researchers have corroborated (Greyson, 2000b). Thus, the possibility exists that when NDErs said “yes” to the “REM intrusion” questions, they were responding at least sometimes on the basis of experiences that were not actually representative of REM intrusion experiences as the latter have been clinically defined. In other words, the researchers thought they were getting responses about REM intrusion when they actually were getting responses based on unusual falling-asleep and waking-up experiences that do not fit the profile of REM intrusion. Because the authors did not record NDErs’ narratives that may have accompanied their “yes” responses to the survey questions and might have clarified the actual nature of their experiences, the entire validity of the visual and auditory REM intrusion responses comes into serious doubt. The relatively high percentage of NDErs saying “yes” to these questions may not actually reflect REM intrusion at all.

Indeed, from the wording of the study questions, “Have you ever . . .,” it is impossible to tell whether the NDEr answering “yes” was referring to one or more experiences before their NDE, after it, or both. One of us (J. L.) determined that NDErs share their experiences at the NDERF web site an average of about 15 years after their NDEs, so responses could very well have reflected post-NDE REM intrusion experiences. The diathesis-stress model provides one plausible interpretation of the study results. However, the questions and their results do not rule out what we will call a “nondiathesis-stress” model, in which changes after an NDE do not reflect a predisposition.

For example, imagine a study in which two groups are asked, “Have you ever experienced a broken bone?” One group consists of people who have been in a car-crushing accident, and the comparison group consists of people who have never been in an accident. The people in the first group are almost certainly going to say “yes” in statistically significantly greater numbers. But it would not make sense to conclude only that the people in the first group had a preexisting proneness to bone breaks. Sometimes the stressor is so powerful that it, rather than any presumed predisposition, is the cause of the effect. By analogy, it is quite possible that, in the aftermath of their NDEs and triggered by their NDEs, people have an increase in unusual falling-asleep and waking-up experiences that may or may not represent REM intrusion. The wording of the study questions, along
with the entire design of the study, did not rule out the latter interpretation and did not provide specific support for the diathesis-stress model.

Along these same lines, the authors found that the higher an NDEr's score on Greyson's NDE Scale, indicating a deeper NDE, the more likely he or she was to say "yes" to the questions about visual and auditory hallucinations. They interpreted this finding as support for the relationship between REM intrusion and NDEs. But given the previous points, an equally plausible interpretation is that "deep" NDErs, whose NDEs were deeper for unknown reasons rather than because of a predisposition of some sort, were more likely to show the aftereffect of having, noticing, and reporting nonordinary visual and auditory experiences around falling asleep and waking up that do not reflect REM intrusion as it is clinically defined. Nelson, Mattingly, Lee, and Schmitt's research method did not rule out this very real possibility.

Given all the points above, Nelson, Mattingly, Lee, and Schmitt's interpretations that "episodes of REM intrusion appear to be substantially more common in the lifetime of subjects with an NDE" and that "these findings imply that persons with an NDE have an arousal system predisposing to REM intrusion" (2006, p. 1007) appear to be overstatements. It is important to note that in the conclusion of the article, the authors stated that REM intrusion may (emphasis added) underlie some of the subjective experiences of NDE and fainting. They acknowledged that their study was not conclusive, and they even avoided using the term "highly suggestive" with regard to the possibility that REM intrusion accounts for some aspects of NDEs. It is a basic tenet of science that retrospective studies, such as this one, are designed to generate hypotheses and cannot be conclusive. In their conclusion, Nelson, Mattingly, Lee, and Schmitt clearly honored this basic principle, though even the degree of their tentativeness may not have been strong enough, given the concerns we have noted.

Composition of Participant Groups

In conducting a comparison study, one of the cardinal principles of science is to "isolate the independent variable." This phrase means that, whenever possible, the two groups being compared should be exactly the same except for the one variable under investigation. In this study, that variable was a reported NDE.
The authors followed this cardinal principle by choosing comparison participants who were the same age and sex as the NDE participants. However, they deviated from the principle by choosing medical personnel and their contacts to comprise the comparison group. An ideal comparison group would have been made up of people who had been through life-threatening events comparable to the NDErs'; who matched the NDErs on age, sex, and other identifying aspects such as culture; and who were willing to report their experiences on a public web site, but who had not had an NDE. Consequently, any difference in responses between the two groups in the Nelson, Mattingly, Lee, and Schmitt study might be related to other factors besides an NDE. In this section, we will present our arguments for four points.

First, because of the composition of the comparison group, it is very possible that anyone who survived a life-threatening event, even without an NDE, might report a higher rate of unusual falling-asleep and waking-up experiences. Such findings would provide no evidence of a connection between REM intrusion and NDEs and, thus, no support for the hypothesis that REM intrusion underlies NDEs.

Second, the comparison group in the study, composed of medical personnel and their contacts, may have said “yes” to survey questions at an unusually low rate because they recognized pathological implications in the questions and wanted to avoid those implications. Such an unusually low rate would have artificially increased the difference between the NDEr and comparison group responses, indicating that the groups were more different regarding “REM intrusion” than they actually were.

Third, the NDEr group may have said “yes” to the survey questions more often because they are a particular subset of NDErs who are more inclined to be aware of, notice, and report publicly their unusual experiences. Such an unusually high rate would have artificially increased the difference between the NDEr and comparison group responses, indicating that the groups were more different regarding “REM intrusion” than they actually were.

Fourth, the researchers may have eliminated some potential participants from the study who might have reduced the difference between the responses of the NDE and comparison groups.

The medical personnel and contacts who participated in the study were less likely to have experienced a prior acute episode of danger comparable to what NDErs had experienced. Thus, the possibility remains that anyone who has been through such a life-threatening
situation, even without an NDE, would respond to the study survey questions as the NDErs did. If this were the case, the specific connection would have been with "REM intrusion" and survival of a life-threatening situation, not "REM intrusion" and NDEs. It is plausible that any such survival might affect the arousal system; indeed, one common aspect of PTSD is "persistent symptoms of increased arousal" (American Psychiatric Association, 2000, p. 463). Although REM intrusion is not specifically mentioned as one of those symptoms of arousal, it may be an actual but as-yet-unrecognized manifestation in PTSD. In fact, Allan Botkin, who has specialized for 20 years in the diagnosis and treatment of PTSD, has observed a much higher incidence of REM intrusion with PTSD (A. Botkin, personal communication, May 15, 2006). His observation was recently confirmed by researchers who found, among Cambodian refugees attending an American psychiatric clinic, a significantly higher incidence of sleep paralysis among those with PTSD compared to those without it (Hinton, Pich, Chhean, Pollack, and McNally, 2005). These patients' sleep paralysis experiences usually included the other feature of REM intrusion, visual falling-asleep and waking-up hallucinations. The point here is that without knowing how acutely endangered nonNDErs would respond to the study questions, any speculation about a specific connection between NDEs and the arousal system/"REM intrusion" must be tentative at best.

Another unfortunate possibility is that the profound differences between the NDE and comparison groups may have occurred, at least in part, because the researchers specifically used medical personnel or their contacts for the comparison group. Medical center personnel would undoubtedly be more likely than the general public to recognize the pathological implications of the interview questions, that saying "yes" might indicate a "disorder." Despite assurances of confidentiality, for a variety of reasons including to protect their reputations and employment, they may have been less willing to say "yes" to the survey questions even if they had had the experience that the question addressed.

This argument seems to be supported by the study survey results about visual and auditory "REM intrusion" experiences. Only 7 percent of the comparison group said "yes" to these two questions. The Nelson, Mattingly, Lee, and Schmitt article references indicated a prevalence of sleep-related hallucinations in 19 percent, and specifically falling-asleep hallucinations in 24 to 28 percent, of the
The general population, figures consistent with our review of other pertinent literature on these topics (Cheyne, Newby-Clark, and Rueffer, 1999; Fukuda, Ogilvie, Chlcott, Vendittelli, and Takeuchi, 1998). The American Psychiatric Association (2000, p. 610) indicated an overall prevalence of 10 to 15 percent. Thus, even compared to the most conservative estimate, the comparison group’s 7 percent response seems low, reinforcing our concern that those respondents may have been unwilling to respond affirmatively to the interview questions.

The evidence regarding sleep paralysis is weaker. Nelson, Mattingly, Lee, and Schmitt cited references indicating that about 6 percent of the general population have reported at least one experience of sleep paralysis. Recent surveys yield widely varying estimates ranging from 2.3 percent to 40 percent (Cheyne, 2005). The American Psychiatric Association (APA) stated that “40%–50% of normal sleepers report having had isolated episodes of sleep paralysis at least once during their lifetime” (2000, p. 610). In the Nelson, Mattingly, Lee, and Schmitt study, 46 percent of NDErs reported at least one experience of sleep paralysis, exactly within the norm stated by the APA and somewhat more than the highest range estimated from recent surveys. By contrast, only 13 percent of the comparison group indicated at least one lifelong experience of sleep paralysis. Although this incidence falls within the lowest estimates of recent surveys, it falls well below the norm stated by the APA and somewhat below the mid-range of the estimates from the most recent surveys. These findings are less clear than those on visual and auditory experiences. Nevertheless, they suggest at least the possibility that the extreme difference between the NDE and comparison groups may have been artificially inflated by an underreporting of sleep paralysis experiences by the comparison group.

The comparison group in this study may be considered a convenience sample, one that was presumably more easily available than a scientifically “better” group. Researchers often use convenience samples, but when they do, they should state how those samples deviate from the ideal and how they limit the validity of the findings. Nelson, Mattingly, Lee, and Schmitt did not address this limitation. We acknowledge that finding an ideal comparison group would have been more difficult than using the medical personnel and their contacts who were easily at hand. Unfortunately, because the researchers did not use a more ideal group, the comparison group’s
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Responses may mean something different from what Nelson, Mattingly, Lee, and Schmitt concluded.

Among NDErs, 42 percent said “yes” to the question about visual experiences and 36 percent to the question about auditory experiences, percentages that are higher than would be expected. One factor in this unusually high rate may be the composition of the NDEr group. When one considers that an estimated 4 percent of the adult population of the United States has experienced an NDE (Gallup, 1982); that out of these millions, less than 1,000 elected to share their NDE on the NDERF web site form; and that out of these, less than 100 volunteered to participate in the Nelson, Mattingly, Lee, and Schmitt study, it is plausible that the resulting 64 NDErs who volunteered to participate in the survey are not typical of the millions of NDErs. Specifically, they may have been predisposed to recall and report nonordinary experiences. This predisposition might result in a high rate of “yes” responses to the survey, a rate that does not represent how most NDErs would respond. This problem of the self-selection of respondents is inherent in retrospective research designs, like Nelson, Mattingly, Lee, and Schmitt’s, that dominate NDE research.

A final point involves Nelson, Mattingly, Lee, and Schmitt’s exclusion of some willing participants from their study. In identifying people to invite to participate in the Nelson, Mattingly, Lee, and Schmitt study, one of us (J. L.) had determined that all those who were invited had experienced a life-threatening event at the time of their NDEs. However, Nelson, Mattingly, Lee, and Schmitt noted that upon initial interviews, they excluded six participants whom they did not consider to have experienced imminent life-threatening events associated with their NDEs. The basis of this difference of opinion is unclear. Nelson, Mattingly, Lee, and Schmitt apparently made no effort to reconcile this difference of opinion, and they did not provide a separate analysis that included the six excluded participants with the other NDE respondents. Although the probability is low that including these six people in the study would have changed the results, that possibility still exists.

In their study, Nelson, Mattingly, Lee, and Schmitt used groups that did not rule out plausible alternative explanations for their findings and that may have provided erroneous support for their explanation of their findings. Considering both the issues of the validity of study questions and the composition of study groups, it seems most prudent to us to conclude from the study that, for
now, the diathesis-stress model of NDEs is possible but entirely hypothetical.

**Response to the Introductory Material and Lines of Evidence in the First Study**

In the first article, Nelson, Mattingly, Lee, and Schmitt (2006) presented introductory material and five lines of evidence to support a connection between NDEs and the arousal system/REM intrusion. In this section, we address three points that, we believe, cast at least question on, if not serious doubt about, the hypothesized connection. We again begin with the point we consider most salient.

**Circumstances of REM Intrusion and NDEs**

For REM intrusion to underlie NDEs, all NDEs would need to occur in circumstances in which REM intrusion was possible. In this section, we describe certain circumstances in which NDEs have been reported, and sometimes documented, in which REM intrusion was very likely or clearly absent: first, when the NDEr had no opportunity to experience fight-or-flight; second, when congenitally blind people, who had never experienced vision or rapid eye movements, had NDEs that included vision; third, when the NDE occurred while the experiencer was under the influence of a medication or drug known to suppress REM, including a documented case of REM suppression; and fourth, when the NDE occurred while the experiencer was documented to be in deep coma, without pulse or breathing, when REM was highly unlikely to have occurred.

In the section of the first article entitled “Cardiorespiratory afferents evoke REM intrusion,” Nelson, Mattingly, Lee, and Schmitt discussed “fight-or-flight,” a normal physiological response to a life-threatening event. This response involves the perception of serious danger followed by the emotional experience of intense fear, the physical response of faster heart rate and breathing, and the motivational response to freeze, fight, or flee. The authors described extensively the nerve pathways in the brain associated with the fight-or-flight response that also are associated with REM intrusion. Their point was to establish that a life-threatening event, such as that associated with an NDE, could trigger fear-related nerve pathways
associated with REM intrusion, which would support a possible association between NDEs and REM intrusion.

Our response is to note that NDEs may occur as the result of a life-threatening event that is sudden and unexpected, involving no opportunity to assess an imminent danger and react with fight-or-flight (Greyson, 2000b). Examples include an unanticipated blow to the head resulting in immediate unconsciousness as well as cases of illness and surgery in which the NDEr had not been aware that his or her body was in immediate, life-threatening danger. The common occurrence of NDEs in these circumstances argues against a necessary preexisting psychological state, such as fear, for the occurrence of an NDE; argues against a fight-or-flight psychological/physical reaction as necessarily preceding an NDE; and, thus, severely weakens this particular hypothetical link between NDEs and REM or REM intrusion.

Another source of doubt regarding the link between REM intrusion and NDEs comes from individuals born blind from birth who report that in waking life they have never seen anything, not even blackness, and that their dreams contain sensations of touch, sound, smell, and taste, but no sense of sight. Corresponding to these people's subjective absence of dream vision, research has shown that they have no actual rapid eye movement while they dream. Nevertheless, when such people have NDEs, their experiences contain the typical NDE elements, often including sight (Ring and Cooper, 1998, 1999). It is difficult to imagine how, under life-threatening circumstances, even a dysfunctioning arousal system could generate a subjective perception that the person had never experienced and that was, in fact, neurologically impossible. Such cases provide further strong evidence that REM intrusion does not “underlie” NDEs.

A final point involves the common occurrence of NDEs that experiencers reported while they were under the influence of medication known to suppress REM. For example, experiencers have reported that their NDEs occurred during deliberate or accidental barbiturate overdose.

Even more compelling evidence comes from NDEs that reportedly occurred during general anesthesia, a situation in which the brain functioning necessary for REM intrusion should not be possible. One documented case is that of Pam Reynolds who underwent extensive brain surgery to repair an aneurysm (Broome, 2002; Sabom, 1998). For the first hour and a half of her procedure, she was fully
anesthetized and prepared to the point of the surgeon cutting into her skull bone. The preparation included taping her eyes shut, inserting clicking devices into her ears that were designed to block out all other ambient noise, and making the incision to expose the bone, all the while continuously monitoring her EEG and two other indicators to ensure that her brain was functioning at only the most basic level. Under these circumstances, the EEG pattern shows extremely low activity, quite different than the awake-like pattern of REM. When the surgeon finally turned on the bone saw to cut into her skull, Reynolds's typical and extensive NDE began, during which she reported seeing and hearing events that were later confirmed to be accurate. Her medical records did not indicate any change in her EEG at this point, indicating that her NDE occurred in the absence of any seizure or REM activity and while her arousal system was suppressed by general anesthesia (M. Sabom, personal communication, May 1, 2006).

A final example of an NDE when REM was unlikely to have been occurring involved a man who arrived at hospital with no pulse or breathing. He was medically monitored to have been in deep coma throughout his resuscitation and for some time afterward. Yet when he later regained consciousness, he accurately reported how, during his resuscitation, a nurse had removed this patient's dentures and placed them in a drawer of the emergency room's metal "crash car" prior to intubating the patient (van Lommel, van Wees, Meyers, and Elfferich, 2001, p. 2041).

In summary, NDEs have been widely reported, and sometimes carefully documented, to have occurred when a person has not had the opportunity to experience the fight-or-flight response, when the person was under the influence of medication or drugs known to suppress REM, and/or when the person was deeply unconscious, neither falling asleep, waking up, nor in a REM state. These circumstances provide strong evidence that neither the fight-or-flight response, REM, REM intrusion, nor any phenomenon involving the arousal system are necessary for NDEs to occur, and, thus, cannot be thought to underlie NDEs.

Comparison of Elements of REM Intrusion and NDEs

Although Nelson, Mattingly, Lee, and Schmitt affirmed that NDEs and REM dreams are fundamentally different, they also supported a possible link between NDEs and REM intrusion by pointing out
certain elements that seemed to them to be similar. If NDEs were related to REM intrusion, it would be expected that many or most elements of the two phenomena would be very similar. However, in our comparison of the two types of experience, which we based on consultation with several sources (American Psychiatric Association, 2000; Greyson, 2000a, 2000b; Health-cares.net, n.d.; Ring, 1980, 1984; Parnia, Waller, Yeates, and Fenwick, 2001; Stanford University, 1999; Strauch and Meier, 1996; University of Waterloo, n.d.; van Lommel, van Wees, Meyers, and Elfferich; Wikipedia Foundation, Inc., 2006), we found very little similarity. In this section, we discuss our findings in this regard for the elements that Nelson, Mattingly, Lee, and Schmitt identified in the first article: "autoscopy," extraordinary light, a sense of "being dead," visual and auditory hallucinations, and other elements.

Autoscopy. We are concerned with Nelson, Mattingly, Lee, and Schmitt's use of the term "autoscopy" in the context of REM intrusion and NDEs. In an early NDE study, Michael Sabom (1982) used this term. However, shortly thereafter, psychiatrists Glen Gabbard and Stuart Twemlow (1984) clarified that autoscopy is the experience of viewing a visual double of one's body while remaining in the physical body. We found no such experience reported in either the REM intrusion or the NDE literature.

We did find REM intrusion and NDE accounts that included viewing one's physical body from a perspective outside the body, a phenomenon usually termed in the professional literature "out-of-body experience" (OBE). However, OBEs appeared to us to be common in NDEs and much less common in REM intrusion. In fact, in the vast majority of REM intrusion experiences, the person feels "in" one's body, often terrifyingly trapped in one's body while enduring paralysis and/or hallucinations. By contrast, an NDE usually involves the sense of being conscious but no longer associated with one's body, an experience almost always accompanied by feelings of profound peace and well-being. In our collective experience as NDE researchers, we have never encountered an NDE in which a person felt frantically trapped in one's body during the NDE itself. Furthermore, we found that the OBEs associated with REM intrusion were usually accompanied by a fearful loss of control, as compared with the vast majority of OBEs in NDEs being accompanied by peace, well-being, acceptance, and even benign interest. Nelson, Mattingly, and Schmitt concluded the second article, "This investigation supports OBE as an expression
The substantial differences between the content of OBEs during NDEs and sleep transition REM intrusion cast considerable doubt on this conclusion.

In light of these distinctions alone, we find that NDEs and REM intrusion as discussed in the first article are fundamentally different. Rather than concluding that REM intrusion underlies NDE, we think it equally, if not more, plausible to conclude that NDEs occur in a variety of circumstances, possibly occasionally in association with REM intrusion, but that the two experiences are fundamentally different.

On a related but perhaps less salient note, another of our concerns is that Nelson, Mattingly, Lee, and Schmitt (2006, p. 1005) used the article by Olaf Blanke, Stéphanie Ortigue, Theodor Landis, and Margitta Seeck (2002) to support their statement that “autoscopy is directly produced by” (2006, p. 1005) electrical stimulation of a particular area of the brain. We and Jason MacLurg have already published a paper, in response to the article by Blanke, Ortigue, Landis, and Seeck, explaining that such electrically induced OBEs are quite different from OBEs that occur in NDEs (Holden, Long, and MacLurg, 2006).

Other elements and features. Nelson, Mattingly, Lee, and Schmitt asserted in the first article that REM intrusion experiences and NDEs share the element of unusual light. However, in our review of light as described in REM intrusion and NDEs, we found two important differences: quality and frequency of reports. The light that NDErs report usually has a mystical quality, and reports of such light are extremely frequent in NDEs. By contrast, we did not see the mystical quality described or implied nearly as intensely or frequently in REM intrusion experiences. To us, the quality and frequency of light in these two experiences seems to be quite different. If REM intrusion were a significant contributor to NDEs, we would expect them to be more similar.

Regarding a sense of “being dead,” NDErs do, indeed, frequently report that their NDEs included not just a sense of being dead but a realization that they were dead or were in the first phase of death. They almost always report that this realization was accompanied by a sense of peace, even matter-of-fact acceptance, if not benign curiosity. By contrast, REM intrusion experiencers rarely report a sense of being dead but rather a fear they will die, usually in connection with the feeling of being paralyzed in the body and unable
to breathe. In the rare cases of REM intrusion in which experiencers see their physical bodies from an out-of-body perspective, they sometimes report thinking that they might or must be dead, but they almost never report the conviction of having been dead that is quite common among NDErs.

Regarding visual and auditory hallucinations, both REM intrusion experiencers and the experts who study their experiences agree that many, if not most, of their visual and auditory experiences, such as wall cracks that spawn objects, picture contents that move, or intruders in the house, were not reality-based, but that they were, in fact, hallucinations. By contrast, visual and auditory experiences during NDEs do not fit the profile of hallucinations (Greyson, 2000a). In fact, the literature contains numerous anecdotes (Ring and Lawrence, 1983) and at least two cases involving close monitoring in hospital (Sabom, 1998; van Lommel, van Wees, Meyers, and Elfferich, 2001) of NDEs that included realistic observations that were not knowable to the NDEr through normal sensory channels yet were later confirmed to be accurate.

Indeed, one of us (J. M. H.) has searched the professional near-death literature and contacted several near-death researchers in an explicit attempt to find cases of realistic observations during NDEs that were later confirmed to be inaccurate. Using all sources available to her that were published before Raymond Moody’s seminal 1975 book on NDEs and all systematic studies with more than one participant since 1975, she found 109 cases of allegedly realistic out-of-body perceptions during NDEs that should have been impossible, considering the condition and/or location of the experiencer’s physical body. Using the most stringent criterion that a case would be designated inaccurate if even one detail of the account was found not to correspond to consensus reality, she found that only 8 percent of cases involved any inaccuracy at all. Furthermore, 38 percent of the cases involving apparently completely accurate perception were corroborated as accurate by independent, objective sources (Holden, 2006).

Another of us (J. L.) has reviewed approximately 800 NDEs submitted to the NDERF web site, with many hundreds containing realistic observations of events in the immediate physical environment during the NDE while the NDErs apparently were unconscious. More than 98 percent of the realistic observations NDErs described were either completely plausible based on their descriptions, or were confirmed as accurate by the NDEr having later checked the accuracy
of their NDE observations. Thus, a substantial body of evidence addresses the reality of experiences during REM intrusion and NDEs. These data support the conclusion that most visual and auditory experiences during REM intrusion do fit the profile of hallucinations, whereas the vast majority of such experiences during NDEs do not.

We found several additional differences between the content of REM intrusion and that of NDEs. For example, in NDEs, experiencers often encounter deceased persons whom they can identify, whereas in sleep paralysis or visual and auditory hallucinations, this experience is uncommon. Furthermore, REM intrusion experiences almost never involve the frequent NDE features of a tunnel, a life review, or a decision to return to the body — the latter because, as previously stated, the vast majority of REM intrusion experiences do not include a sense of having left the body. Whereas people in sleep paralysis typically focus on fearful things happening to their bodies or in their physical environments, NDErs typically feel profound peace and well-being in the face of unusual things happening to them apart from their physical bodies or physical environments. Finally, REM intrusion experiences seem far more varied in their content than the previously noted consistency of NDE elements. What REM intrusion features are relatively consistently described, such as the sense of being unable to breathe, have not been described in NDEs.

In contrast to Nelson, Mattingly, Lee, and Schmitt, we assert that, despite a few superficial similarities, NDEs are not easily explained by REM intrusion. Our assertion is supported by NDErs' responses to a particular item on the NDERF web site survey: "Following the experience, have you had any other events in your life, medications or substances which reproduced any part of the experience?" Respondents respond "yes," "uncertain," or "no," followed by a "Please explain" text box for a narrative. This question was deliberately worded to encourage as many positive responses as possible. Of 397 respondents who shared their NDEs an average of 16 years after the experience — plenty of time to have subsequent experiences — only 22 percent said "yes." In actuality, the narrative responses frequently addressed experiences both prior to and following their NDEs. Very few suggested REM intrusion; most expanded on a "no" response, in which they described a subsequent NDE or described an experience during meditation or substance abuse. Except for a subsequent NDE during a life-threatening event, virtually no response indicated any life experience that substantially reproduced the entirety of the
originally reported NDE. Virtually no NDEr described an experience consistent with a REM intrusion associated OBE as reproducing any part of the NDE. The nearly complete absence of NDErs in the NDERF survey to list any REM intrusion experience as having reproduced any part of their NDE further suggests that NDEs and REM intrusion are different experiences.

To summarize, most REM intrusion experiencers have reported relatively brief, frightening paralysis and/or bizarre visual and auditory experiences while they experienced themselves as in the body, experiences that occurred during pre- or post-sleep consciousness or semiconsciousness and not in response to a life-threatening event. The mostly unrealistic visual and/or auditory experiences felt real at the time but were later acknowledged to be unreal. By contrast, NDErs have reported experiences ranging from brief to prolonged, involving elements that comprised a coherent narrative of events while they experienced themselves as out of the body during any of a variety of circumstances, usually life-threatening ones. In many cases, the reports included detailed, ordered, realistic accounts of events in the vicinity of their physical bodies, during which they reported fear only rarely, and after which, upon regaining consciousness, the NDErs were typically adamant that their experience was real, a claim bolstered frequently by subsequent corroboration of their observation of events in the immediate physical environment at the time of their NDEs.

For NDEs to be attributed to REM intrusion, we would expect the two subjective experiences to be substantially similar. We find that they are not. OBEs occurring during NDEs and during REM intrusion appear to be quite different experiences. We also find another striking dissimilarity: the profound aftereffects of NDEs contrasted with the virtual absence of reports of life-changing aftereffects from REM intrusion experiences. If REM intrusion underlay NDEs, we would expect at least somewhat similar aftermaths of the two experiences.

**NDE Content Comparison by Age and Culture**

In an early section of the article entitled “What is NDE?” Nelson, Mattingly, Lee, and Schmitt suggested that the content of NDEs is modified by age at the time of the NDE and cultural background of the NDEr. Although the Nelson, Mattingly, Lee, and Schmitt article comments were brief regarding these points, we consider them...
important to address. In this section, we will present our arguments that (1) like REM dreams, NDEs show surface differences based on experiencers' differing ages, cultures, and life experiences; and (2) unlike REM dreams, NDEs show basic consistency despite experiencers' differing ages and life experiences and may show basic consistency despite differing cultures.

Age. The possible influence of age on NDE content has not been well studied. To support their assertion, Nelson, Mattingly, Lee, and Schmitt cited one article by Melvin Morse, Paul Castillo, David Venecia, Jerrold Milstein, and Donald Tyler (1984). In that study, the researchers interviewed only 11 children ranging from 3 to 16 years old. Although the authors noted an absence of life review, time alteration, worldly detachment, or transcendent feelings in the childhood NDE accounts, they concluded that "the elements of NDEs reported are similar to those previously described in adults" (Morse, Castillo, Venecia, Milstein, and Tyler, 1984, p. 1110). Whereas those authors appropriately limited their conclusion to the "NDEs reported" in their study, Nelson, Mattingly, Lee, and Schmitt inappropriately drew a sweeping conclusion about the comparative content of children's and adults' NDEs. Curiously, Nelson, Mattingly, Lee, and Schmitt's conclusion contradicted the original conclusion by Morse, Castillo, Venecia, Milstein, and Tyler. In addition, subsequent case studies of children's NDEs have included life review and worldly detachment (Bonenfant, 2004).

We have found only one other published study that directly compared the elements of children's and adults' NDEs. Nancy Bush (1983) studied 17 pediatric NDEs and found adult and pediatric NDEs comparable. Again, contrary to Nelson, Mattingly, Lee, and Schmitt's conclusion, the results of this study supported more similarity than difference in the content of children's and adults' NDEs.

In a review of professional literature on children's NDEs, Pamela Kircher, Jan Holden, P. M. H. Atwater, Morse, and the IANDS Board of Directors concluded that "the same features reported by adult NDErs have been reported also by child NDErs" (2003, p. 2). However, they described a few differences. Children's NDEs tend to include fewer elements; to be more concrete and less complex; and to include more deceased pets or other animals, relatives whom the child does not recognize at the time (but might later recognize in old family photos the child had not previously seen), and, rarely, living people (2003, p. 2).
A way to understand the findings about comparisons of children's and adults' NDEs is to use the concept of deep and surface structures (Chomsky, 1969; Wilber, 2000). For example, the generic concept of "a face" is a deep structure: it includes certain facial structures in certain relative positions. But any specific face, while reflecting that deep structure, will also reflect surface structure, the expression of specific genetics, age, and culture: size, shape, skin color, and adornment of the particular facial features. Noam Chomsky originally developed the concept of deep and surface structures to explain both the superficial diversity and the underlying uniformity of grammar worldwide. The concept has been applied since to many other phenomena. We think it also is applicable to NDEs, which contain certain elements that tend to occur in a certain order, such as the features identified in the Greyson's NDE Scale, but that can vary in their specifics based on a variety of experiencer characteristics.

Most relevant to this article is the point that no deep structure has been hypothesized for REM dreams. Such dreams are not comprised of variations on certain elements tending to occur in a certain order; they do not follow a basic prototype like the one NDEs appear to follow. It seems to us counterintuitive to think that the basically unstructured phenomenon of REM dreams would constitute the foundation for the deeply structured phenomenon of NDEs. In Ken Wilber's terms, to think in such terms is to make a category error: REM dreams are predominantly the prerational workings of the prepersonal mind, whereas NDEs are the transrational workings of the transpersonal mind (Wilber, 2000). They are valuable but different sources of information, and to reduce a transrational phenomenon to a prerational one is to lose its essential quality.

Culture. Possible cultural influence on the content of NDEs has also not been well studied. The only reference in the Nelson, Mattingly, Lee, and Schmitt article regarding this subject was a study of 16 NDEs from India (Pasricha and Stevenson, 1986). In that study, the authors' primary purpose in visiting India was to study reincarnation. They said they learned about the NDE cases incidentally, mostly from onlookers to their work who would typically ask, "Are you people also interested in persons who die and recover?" Thus, it is quite possible the NDEs they studied did not represent Indian NDEs as a whole. The authors presented four narratives typical of the NDE accounts they encountered. These narratives were clearly quite different from typical Western NDEs, and the authors addressed the specifics of
these differences. However, it is important to note that of the 16 NDE accounts they collected, six were reported not by the NDEr personally but by others familiar with the account. These six secondhand accounts by nonNDErs may have involved inaccuracy or distortion, including a tendency to recall and share elements of the NDE that were consistent with their own prior cultural beliefs. In concluding the article, the authors caution against accepting this observation as adequate evidence that the cases derive only from culture-bound beliefs. Some differences may derive from the effects of a person's beliefs on what actually does happen after death, and some different features may, on closer examination, be found to be basically similar in nature if not in detail. (Pasricha and Stevenson, 1986, p. 165)

Despite this caution, Nelson, Mattingly, Lee, and Schmitt asserted that “cultural heterogeneity [of NDEs] suggests the content of NDE is modified by experience” (p. 1003) without addressing the possibility of some crossculturally consistent features.

Unfortunately, only a scant additional literature has addressed the possible relationship between cultural beliefs and NDE content. Of the few existing reports, many included only small numbers of nonWestern NDEs (usually less than five), used historical accounts rather than first-person interviews, and/or contained accounts without convincing documentation of a life-threatening event at the time of the experience.

However, researchers have conducted several reasonably well-documented studies of NDEs from nonWestern civilization. The largest of these involved 32 NDErs who survived a 1976 earthquake in China (Zhi-ying and Jian-xun, 1992). The authors compared the frequency of NDE elements between the Chinese NDErs and previously published data from American NDErs. They concluded that “these differences suggest that the components, sequences, and types of NDE might differ with race, religion, psychological and cultural background, and kind of near-death event” (Zhi-ying and Jian-xun, 1992, p. 39). A closer review of the data presented in that article reveals the typical spectrum of NDE elements but reported in a smaller percentage of Chinese NDEs compared to American NDEs. Unfortunately, the authors included no narratives of representative Chinese NDEs. We were unable to discern from this study whether possible differences between Chinese and American NDEs are major or minor in degree.
To further investigate a comparison of crosscultural NDE content, one of us (J. L.) perused 14 nonWestern NDEs submitted to the NDERF web site. He noted striking similarity of the basic elements of these nonWestern experiences with Western ones (details including Internet webpages on which these NDE accounts appear are available from the author).

The data on crosscultural NDEs are meager and mixed. However, we find that these data tend to indicate surface differences and underlying similarity of NDEs across cultures. Once again, the deep/surface structure model may be a useful one in understanding the relationship between culture and NDEs.

Life experience. Two studies have addressed the effect of experience on NDE content by examining how much NDErs might have known about NDEs at the time of their experience. Both studies compared NDE elements before and after 1975 when NDEs became widely known. The authors of one study (Athappilly, Greyson, and Stevenson, 2006) found that NDEs reported after 1975 were more likely to contain the element of the tunnel than those reported before 1975. However, the incidence of 14 other NDE elements did not differ before and after 1975. In the other study (Long and Long, 2003) the incidence did not differ for any of the elements the researchers examined. These findings indicate that knowledge of NDEs does not change the type or incidence of elements reported in NDEs.

The NDERF web site questionnaire for NDErs asks for various elements of the respondent's experience and gives 13 check-box options and an additional option of "None of the above." The 13 options include 12 that refer to the elements of the NDE and one indicating "Features consistent with your beliefs at the time." Out of 465 NDErs who completed the survey, 18 percent indicated the latter option, whereas 19 to 76 percent indicated each of the other 12 options. This finding indicates that a substantial majority of NDErs themselves do not perceive that their NDEs conformed to their preexisting beliefs.

Virtually all NDE investigators agree that the similarities between NDEs are far more impressive than their differences. In Wilber's (2000) terms, they affirm the "deep structure" of NDEs that is not lost in their surface structure variations across individual developmental level, culture, and life experience. We see more consistency in NDEs than in any other relatively common human experiences involving altered consciousness, such as REM dreams, hallucinations, post-traumatic nonNDE experiences, or psychotic experiences. We believe
that the seemingly relative consistency of NDEs supports the idea that they are qualitatively different than REM intrusion and cannot be explained by it.

**Summary and Conclusion**

Nelson, Mattingly, Lee, and Schmitt concluded their first article by stating that "REM intrusion may underlie some of the subjective experiences of NDE and [fainting]" (p. 1008). To summarize our points that cast doubt on even this tentative conclusion:

First, 40 percent of the NDErs said "no" to all of the alleged REM intrusion questions, a substantial minority that alone brings into question the authors' conclusion that REM intrusion may underlie NDEs.

Second, when NDErs said "yes" to visual and auditory experience questions, they may have been indicating experiences that do not actually represent REM intrusion, creating the impression of greater alleged REM intrusion where it may not actually have existed.

Third, the questions that Nelson, Mattingly, Lee, and Schmitt used did not differentiate when the alleged REM intrusion experiences occurred relative to when the NDEs occurred; without this differentiation, it is unknown whether alleged REM intrusion underlies and predisposes a person to an NDE or whether it is an aftereffect precipitated by an NDE.

Fourth, the comparison group members they used in their study were much less likely to have survived situations of acute danger comparable to what NDErs had experienced. NDErs' greater proportion of "yes" responses to survey questions may have been related to their having survived a life-threatening event, not their having had an NDE, which would have indicated no specific relationship between alleged REM intrusion and NDEs.

Fifth, the large difference in responses between the NDE and comparison groups may have been artificially increased by NDErs who were more prone to say "yes" to the survey questions, comparison group members who were less prone to say "yes," and the exclusion of some willing participants from the study whose answers might have reduced the difference.

Sixth, NDEs that occur in the absence of the fight-or-flight response that may activate REM, in persons with congenital blindness, and in person under the influence of drugs known to suppress REM, all discredit the argument that REM underlies NDEs.
Seventh, although the surface content of both REM dreams and NDEs vary with the experiencer's age, culture, and prior life experience, REM dreams apparently do not have a consistent deep structure, whereas NDEs apparently do — a fundamental difference that argues against a REM intrusion basis to NDEs.

Eighth, despite superficial similarities between some elements of REM and REM intrusion, on the one hand, and NDEs on the other, the differences between these experiences appear to outweigh substantially the similarities.

In their conclusion, the authors indicated that prospective study should be undertaken to investigate further the possible relationship between REM intrusion and NDEs. We agree wholeheartedly. Such a study might involve elements such as: (1) developing and then using an instrument and/or an interview protocol with established validity and reliability that assesses if, when, and how often in their lifetimes respondents have experienced REM intrusion and OBEs; (2) recording the narratives of the respondents' experiences associated with answering "yes" to REM intrusion and OBE questions; and (3) using a prospective research design that would yield appropriate comparison groups, such as assessing a large sample of participants experiencing a near-death event before it, immediately after it, and at some established follow-up point in the future.

As an ideal example, a study could take place in a few hospitals for a period of time, such as a year, in which all patients who had never experienced cardiac arrest would complete a valid and reliable REM-intrusion and OBE history survey upon entering the hospital, again upon discharge, and again after one year. For those patients who experienced cardiac arrest during the hospital stay, researchers could conduct an interview to determine the presence or absence of NDEs and, when present, administer the Greyson NDE Scale to confirm the NDE and measure its depth. This process would create three groups of former patients: those who had not experienced cardiac arrest, those who had but did not report an NDE, and those who had and also reported an NDE that met the NDE Scale criterion. Researchers could use participants from the two nonNDE groups matched to the NDE group on demographic characteristics to comprise the comparison groups. The researchers would then have quantitative data about the incidence and frequency of REM intrusion and out-of-body experiences before, immediately after, and at some more distant future time following cardiac arrests with NDEs, cardiac arrests without NDEs,
and nonarrests. The researchers could enrich their findings with qualitative data, interviews in which they solicited narratives regarding OBEs and REM intrusion or other unusual falling-asleep or waking-up experiences, from their participants. It would also be helpful for NDErs to compare and contrast elements of their NDE with any experiences of REM intrusion they may have had.

Nelson, Mattingly, Lee, and Schmitt’s assumption that “even the most complex psychological process is dependent on brain function” (p. 1003) is, indeed, as Peter Fenwick (2004) and Pim van Lommel (2004) have reminded us, an unproven assumption (Broome, 2002). Rather than the brain being the producer of consciousness, it may instead be a receiver and transmitter of consciousness that can function independent of the brain. From the latter perspective, even brain functions that are shown consistently to precede or coexist with certain experiences cannot be said to “cause” them, because the “cause” may be sources beyond the brain that the brain is merely able to mediate. In this sense, the most that can be said is that some brain functions correlate with some experiences. Specifically, REM intrusion might correlate with NDEs, but, in our opinion, Nelson, Mattingly, Lee, and Schmitt did not provide credible support for even this more conservative conceptualization.

Thus far, scholars have hypothesized more than 20 different biological and/or psychological causes of NDEs, yet not one of these explanations, nor any combination, has yet been widely accepted. Researching potential correlates of NDEs will continue to be challenging. In this article, we have named only a few methodological challenges. In addition to these challenges, researchers with expertise on possible physiological and psychological correlates of NDEs may have relatively little experience with NDEs. Conversely, researchers knowledgeable about NDEs may have relatively little expertise in the areas of physiological or psychological science necessary to understand proposed correlates of NDEs. In the future, it would be helpful for researchers with different fields of knowledge to collaborate on studies such as the one conducted by Nelson, Mattingly, Lee, and Schmitt. The pooling of knowledge in such a collaborative venture would almost certainly help greatly in advancing a collective understanding of NDEs.

Nelson, Mattingly, Lee, and Schmitt did conclude that, regardless of how NDEs arise, they may have intense personal meaning. Indeed, many NDErs have found their experiences to be profoundly meaning-
ful. Consequently, contrary to Nelson, Mattingly, Lee, and Schmitt’s assumption that NDEs have a “neurophysiological basis” (p. 1003) or “physiological basis” (p. 1004), most NDErs believe their experiences involved elements that were spiritual in origin and, thus, cannot be explained in purely physiological/medical terms. In Wilber’s (2000) terms, NDEs may be transpersonal experiences that cannot be reduced to exclusively biological or prepersonal causes.

We believe that a spiritual/transpersonal hypothesis of NDEs might be supported in a number of ways. One important example is research on veridical perception, the situations in which inexplicably accurate perceptions during NDEs have occurred at a time of unconsciousness, cardiopulmonary arrest, and even an absence of measurable brain activity (Holden and Joesten, 1990; Parnia, Waller, Yeates, and Fenwick, 2001; Ring and Lawrence, 1993). Another approach is more indirect: by identifying all reasonable alternative biological and medical explanations, carefully investigating them, and, where little or no support is found, dismissing them.

A final possibility for investigating a spiritual/transpersonal hypothesis of NDEs would be to follow up on previous research that examined consistencies among NDEs. That research began with the assumption of consistency and found it: an out-of-body experience, passing through a tunnel, seeing a light, feeling intense emotions, encountering deceased relatives, entry into an unworldly realm, a life review, a decision to return, and many other less well known elements. Researchers in a future study would begin with no assumption of consistency and formally study a large number of NDE spontaneous narratives, analyzing the degree of both consistency and inconsistency of all aspects of the content, including the spiritual/transpersonal content. If the consistency found in previous research were confirmed, this finding would strongly suggest that physiological and psychological processes alone are not the sole cause of NDEs, and would further validate NDEs as experiences of great significance and meaning regardless of their possible physiological or psychological correlates.

In this paper, we have provided some evidence that supports a spiritual/transpersonal understanding of NDEs, and additional evidence exists. The totality of that evidence is convincing to many critical thinkers. Much additional research and discussion will be necessary for the wider medical and scientific community and the world at large to reach consensus on the biological/medical or spiritual/transpersonal correlates of NDE. In our opinion, these two
studies by Nelson and his colleagues are important early steps in this difficult but necessary journey toward truly understanding NDEs.

References


From Fear to Love in Gay and Lesbian Near-Death Experiences and the Coming Out Process

Liz Dale, Ph.D
San Pablo, CA

ABSTRACT: This article illustrates the changes in thought and feeling states within gay, lesbian, bisexual, and transgender near-death experiences, and the implications for the coming out process for gay, lesbian, bisexual, and transgendered experiencers.

KEY WORDS: near-death experience; gay/lesbian/bisexual/transgender; spirituality; changes in thoughts and feelings; coming out.

In Crossing Over and Coming Home, I published a number of accounts of near-death experiences (NDEs) from within the gay/lesbian/bisexual/transgender community (Dale, 2001). In a recent article on the experience of light on gay/lesbian/bisexual/transgender NDEs (Dale, 2006), I illustrated the concept of divine light through references to various gay/lesbian/bisexual/transgender stories from that book, along with supportive material from various authors and scholars. I also used some of the descriptive statistics that I gathered from research questionnaires and personal NDE accounts.

In this paper, I will show how various thoughts and feeling states, both positive and negative, play an important role in gay/lesbian/bisexual/transgender NDEs, and their implications for the coming out process. Of interest is how an otherworldly event such as an NDE or out-of-body experience (OBE) can cause profound realizations and transformations for the experiencer.
Before going into specific examples from the book, I would like to examine briefly the life changes within a near-death experiencer. In my particular study, 94 percent of the respondents reported that their NDE affected life in a positive way. And yet both published and unpublished accounts contain numerous examples of such negative emotional states as turbulence, fear, apprehension, depression, frustration, and powerlessness.

In reviewing these stories for thought processes, I analyzed capacity for thinking, meditation, concept formation, and ability to reflect, to conceive ideas, to concentrate, and to use imagination. In reviewing feeling states, I analyzed subjective reactions, experiences of sensing, and experiences perceived through the senses and awareness (Dale, 2001, pp. xviii–xxi).

The stories related experiences that pointed out a simple yet profound concept: in order for life changes to come about, we need to change the way we think and feel. We can see such life-altering stories in the individual accounts of gay/lesbian/bisexual/transgender NDEs. Over and over again, these NDErs faced major obstacles before change occurred. For example, one experiencer described an NDE that occurred while he was an inpatient in a major medical center in San Francisco. Just days after a shoulder surgery to remove an infected prosthesis, he desperately tried to distract himself while a nurse attempted to insert a catheter into his arm. She made three attempts before she was able to insert the catheter correctly. Suddenly, on the following day, while still in the hospital, he reported:

My mind began racing. My heart rate accelerated. I began to sweat and then to feel chilly. My blood pressure fluctuated. I began to see flashes of various periods in my life. I began to hear sounds and smell old aromas. The flashes of past experiences continued and became more vivid. Now I was actually experiencing scenes from earlier life—not just the sight of them but the sounds, the smells, the tactile impressions, the heat and the cold, and even the emotions that were associated with each one. I thought to myself, “I must be dying,” and wondered exactly how I should face my own death. (Dale, 2001, p. 69)

It is important to go over each of these detailed accounts to see the shifting of thoughts and feelings. In the midst of this medical emergency, this individual experienced such a shift:

At first, I felt anger at the hospital ... and I thought of calling my friend Robert ... and make sure he sued the hospital, so that at least some heirs would get some money out of this thing. But this thought
of vengeance quickly dissolved as the barrage of sense impressions ... continued to cascade through my brain. (Dale, 2001, p. 70)

In the following series of events, some related to the immediate external environment (the nurse and intravenous line) and some to do with visions and sensory perceptions, this experiencer came to an amazing realization:

I thought that if I were really to die, I needed to call [Edel] to tell him how much I cared about him. I needed to leave this life with words of love on my lips and in my ear.... This is what it all narrows down to when everything else is stripped away. And what was that tiny strand, which was all that was left when the sensations and emotions have all been purged through my brain? It was love or God or compassion. That night, I called it love. (Dale, 2001, p. 71)

We rarely realize just what importance lies in our everyday activities, but often get caught up in the simple complacencies of life that actually have deep meanings, if only we would listen. As Paul Ferrini put it:

Love takes no hostages. It makes no bargains. It is not compromised by fear. Indeed, where love is present, fear with all its myriad conditions cannot be. (1994, p. 52)

Another NDEr addressed the negative emotions he felt when he was told during his experience that he would have to return to his physical body:

I remember feeling angry and fearful about going back – after being in all of this light – to have to go back to the darkness. And then I felt the presence of Jesus Christ all around me. The feeling of love was completely overwhelming. I felt as though I was swimming in an ocean of ecstasy. And I asked him, “Do I really have to go back?” And his answer was that I was part of God’s divine plan, as is every person, and that my ultimate purpose is to love and serve God and all sentient beings. And I could tell that he understood all of my fear and doubt. (Dale, 2001, p. 102)

Again, Ferrini explained:

... the experience of real love ends your experience of the conditional world. When you experience It, you no longer feel separate from others. You lose every aspect of identity that pushes others away. You open up to a larger reality that you create with others through mutual trust.... The only way your ego knows to end the dream is to die.... What dies is not you. What dies is everything that you thought you were. Every judgement you ever made about yourself or anyone else.
That is what dies. And what is born again is full of light and clarity. (2003, p. 53)

I experienced this kind of shift in my own NDE at age 19, when I was stung by a bee and was going into anaphylactic shock:

Although my boyfriend had never been to my rented room, suddenly he arrived and lifted me out of the tub. He threw a towel over me and carried me to the university emergency room directly behind the campus housing. I was incredibly frightened, fighting for my life. I began to realize that my breathing was also being affected. I had no idea what anyone was doing as far as my treatment. Nor did I hear anyone talking to me. I did feel this incredible fear that I was about to die. I began to realize, despite the most intense attempts at breathing, I was not getting air into my lungs. I was in a state of total panic. Some kind of relief flooded over me when I heard a voice say, “You are dead! It’s OK!” Instantly, I was transported to a new place, leaving my body behind on the ER table. It took me many years to fully process this event. I did not share my experience with anyone for fear they would think I was strange. I guess I felt this otherworldly experience was a one-of-a-kind event. Over the years, I have been more and more impressed at my total lack of fear of death. I realize that someone or something (I call God or Goddess) has a special understanding of each of us, and has plans for each of us that we need to carry out to be fully realized. (Dale, 2001, pp. 18–20)

John McNeill, an ordained priest and psychotherapist, wrote a book specifically addressing “spiritual liberation for gays, lesbians and their lovers, families and friends.” In the epilogue, he wrote:

In the “Rules for the Discernment of Spirits,” of his Spiritual Exercises, Ignatius Loyola claimed that God is in continuous personal dialogue with those who are seeking the divine presence and that God speaks to us principally not through our minds, but through our feelings. (1996, pp. 200–201)

The Dalai Lama addressed the issue of what he referred to as “problematic emotions” in asking:

Is it possible to get rid of problematic emotions completely, or is it possible only to suppress them? According to a basic Buddhist insight, the mind is essentially luminous and knowing. Therefore, emotional problems do not reside in the mind’s essence; such counterproductive attitudes are temporary and superficial and can be removed. (2005, p. 15)

He went on to discuss the numerous ways feeling states can be altered along with ways to ensure compassion. As far as altering the mind, he wisely reminded us:
We cannot feel desire and hatred at exactly the same time towards the very same object ... which shows these two attitudes function in contradiction to each other. When one of them increases in strength, the other decreases. (2005, p. 21)

The next dilemma is: What can be done to reformulate our thoughts? The Dalai Lama went on to write:

Valid cognition supports love and compassion. Their production needs no assistance from the ignorance that misconceives objects as existing inherently or in and of themselves. (2005, pp. 21–22)

He summarized this theme as follows:

The cultivation of love requires understanding that all beings want happiness, and all beings are beset by suffering.... Our minds and bodies do not operate completely under our own control but under the influence of karma (tendencies created by previous actions) and emotions.... In ordinary life we are born from and into the pervasive influence of karma and afflictive emotions. Even when we do not think we are feeling anything, we are under the influence of causes and conditions beyond our control – stuck in a cycle that is prone to suffering. When you realize how this cycle makes you susceptible to all sorts of unwanted events, you want to get rid of it as much as you would want to remove a speck of dust from your eye. (2005, pp. 87–89)

I would like to conclude this section of the paper with Ferrini’s summary of the meaningful analysis of one’s thoughts and feelings:

Can you imagine a world in which each person understood that his only responsibility was to give and receive love? That world, my friend, is at your fingertips. Whenever there is lack in your life, there is need to bring love. Whenever you think you are not getting enough, there is some aspect of love and support you are withholding from another. Don’t withhold your love and support. Give it freely that you may receive abundance of love that is your birthright. (2003, pp. 130–131)

The Coming Out Process

An important concept noted in many of the gay/lesbian/bisexual/transgendered NDE narratives is the concept of coming out. Before I present examples to illustrate the coming out process, we need to define coming out. McNeil (1996) wrote about coming out and the issue of accepting gayness. He spent much of his life working with gay and lesbian people within his ministry and psychotherapy practice. Over
the years, he has also led various workshops and retreats for gay and lesbian people. He has also reflected on “my own lifelong struggle to accept my gayness with gratitude as a gift from God” (McNeil, 1996, p. xii). McNeil offered the following definition of coming out:

Most gays and lesbians become consciously aware of their sexual orientation during puberty.... Once one has become aware of same-sex feelings, a period of time usually elapses before one is able to label them as such.... The process of coming out – telling others than one is lesbian or gay – is identical with the process of self-acceptance. (1996, p. 68)

“Coming out of the closet,” as it is sometimes referred to, is an important way many gay/lesbian/bisexual/transgendered persons address the issue of self-acceptance. Historically, many books and articles directly addressed the gay/lesbian/bisexual/transgendered and societal processes, stereotypes as well as the self-hatred that comes with internalized homophobia. Self-acceptance becomes a lifelong challenge with numerous painful stumbling blocks along the way. Many gay/lesbian/bisexual/transgendered people would be more than pleased to live within a culture of openness, living to their full potential without fear of societal rejection.

Worldwide, many gay/lesbian/bisexual/transgendered people cannot openly live their truth. Byrne Fone clarified that “Homophobia is the last acceptable prejudice in an age when racial and ethnic bigotry are viewed with distaste” (2000, back cover). Fone listed a number of derogatory and stereotypical slurs that gay/lesbian/bisexual/transgendered people might be called, not confined to any specific locale or culture, including “vermin,” “perverts,” “inferior,” “cowards,” “unconstrained,” “socially worthless,” and “dangerous” (2000, p. 406). Over many years, then, gay/lesbian/bisexual/transgendered individuals face societal alienation within the various cultures here in America and throughout the world. Fone revealed a historical backdrop to coming out versus staying in the closet:

During the 1960s, when 82 percent of American men and 58 percent of the women surveyed believed that only Communists and atheists were more dangerous than homosexuals, many homosexuals felt that the closet was the safest place to be. (2000, p. 406)

Homophobia is commonplace in American culture and throughout the world. In America, many people have been at least as unaccepting of bisexual and transgendered people as they have been for gay and lesbian individuals. Even within the gay/lesbian/bisexual/transgen-
dered community itself, there are various factions and divisiveness that take away the possibility of cohesion. It is not surprising, then, given all of this background, that coming out is seen as one of the more challenging issues and one of the prominent themes in gay/lesbian/bisexual/transgendered NDEs.

My review of the accounts of the gay/lesbian/bisexual/transgendered NDEs and NDE-like experiences revealed many fascinating accounts of the coming out process. Amazingly, it was through NDEs and NDE-like experiences that overt self-doubt and the self-loathing of internalized homophobia dissipated for many of these experiencers, allowing self-acceptance to surface and societal fears to subside. In place of negative emotions and various distorted perceptions among these NDErs, divinely inspired accounts of self-acceptance were realized. One experiencer related the following account:

Once again we began to review my life.... I could see all the self-doubt that I had in my life centered around the question of my being of worth to God being that I was a gay man. It was then that I mustered up the courage to ask these beings something I could sense they were waiting for me to ask. I asked, "Is it OK to be gay?" and they laughed and said, "Who do you think made gay people?" ... I felt like I fit in for the first time in my entire life ... completely fit it. (Dale, 2001, pp. 35–36)

Another gay/lesbian/bisexual/transgendered NDEr reported having had two NDEs five years apart. The second NDE followed an ingestion of numerous sleeping pills and alcohol after the experiencer was told of a friend's unexpected death. During the ensuing NDE, his recently deceased friend Richard appeared to him:

Richard's spirit seemed all-pervasive and completely powerful.... Our communication was telepathic and overlapping.... Richard seemed acutely aware of my estrangement from my family and friends as well as my self-loathing and self destruction – which came largely from my negative feelings about my sexuality and sensitivity. He indicated most emphatically that I should openly celebrate and honor my sexuality as a precious gift from God. This was a startling revelation for me especially after a lifetime of secrecy, fear and guilt. (Dale, 2001, pp. 110–113)

**Conclusion**

The purpose of this article is to illustrate shifts from fear and anger to love and understanding in gay/lesbian/bisexual/transgendered
NDEs and their impact on the concept and complex nature of the coming out process. Historically, most societies tend to look less than favorably on the gay/lesbian/bisexual/transgendered population. Over the years and up to the present time, people who do not fit into the norms that have been set up by our society are typically either ignored, ridiculed, mistreated, or physically endangered. It is really not surprising that many people in the gay/lesbian/bisexual/transgendered communities prefer to remain as invisible as is humanly possible. As noted above, homophobia or heterosexism is not confined to America alone. Relevant to this topic, Keep Not Silent, a recent film by Ilil Alexander (2004) that won the Israeli Oscar for Best Documentary followed the lives of three women who identified as lesbians. Each of these women explained the reasons they had not been able to come to terms with their Jewish orthodox community and their own sexuality. In the words of Shai Ginsburg, who reviewed this powerful film:

All three of Alexander's women remain unable to openly realize their sexuality without fear of devastating communal sanctions.... The hetero-normative parameters of ultra-orthodox life remains in force. (2006, p. 76)

In this paper, I shared the NDEs and NDE-like experiences of anonymous gay/lesbian/bisexual/transgendered people. Each of these individuals found the otherworldly experience one in which he or she felt fully accepted and loved. Over and over, they described a loving, powerful, accepting divinity that is open to accepting the gay/lesbian/bisexual/transgendered experience. It should not surprise anyone reading these accounts that, after returning to "normal" life, or, rather, life after the NDE, experiencers finds reintegration rather challenging. And it should not be surprising that a number of experiencers fall into states of sadness and depression while the experience is being absorbed. My hope in publishing this material is that some individuals will benefit from a deeper understanding of the gay/lesbian/bisexual/transgendered NDE and the coming out process. It is essential that more research be conducted into the NDE and the gay/lesbian/bisexual/transgendered community and that this powerful material be shared with interested audiences in all cultures throughout the world. As the NDE community has come to realize experientially, so much can be learned from reading and sharing these near-death accounts.
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Death and Dying in the Works of Two Croatian Writers

Iva Rinčić-Lerga, M.A.pol.
Amir Muzur, M.D., Ph.D.

Rijeka University School of Medicine, Rijeka, Croatia

ABSTRACT: The present paper elucidates the views upon death and dying expressed in the works of two Croatian writers, Dobriša Cesarić and Miroslav Krleža. Both authors' concepts are materialistic, Cesarić's being more romantic and Krleža's more expressively cruel. Neither of the two mentions any religious element or fear. The paper concludes with a suggestion of an inquiry into the influence of the works by Cesarić and Krleža upon the ideas of modern elementary school and high school generations on death and dying.

KEY WORDS: death; dying; bioethics; medicine and literature; Croatia.

Despite the aggressive advancement of other communication media more appropriate to modern life style and tempo, literature has remained an important factor in human education. It is not usual to intermingle literature, and particularly fiction, with scientifically explored topics. However, in those rare areas where science still cannot offer any answer, as in thanatology, we must search for such answers and compile them from alternative sources, such as religion, philosophy, and literature.

We believe that, when it comes to death and dying, literature can provide very interesting although sometimes opposing views that...
might have great influence upon the formation of individual ethical stands. In order to test that hypothesis, we selected two prominent Croatian writers: the poet Dobriša Cesarić and the writer Miroslav Krleža.

Cesarić and Krleža were contemporaries and both characterized the Croatian literary 20th century. They both are strongly present in all elementary school and high school programs and textbooks of literature history. Nevertheless, while Cesarić was known as an introverted romantic, detached from politics, Krleža was an extroverted, arrogant public polemicist. The ideas of the two writers, as might therefore be expected, differ significantly.

Cesarić was born in Slavonska Požega in 1902 and died in Zagreb in 1980. He started to publish poetry when he was 14 years old. Working all his life as a clerk, he contributed to several literary magazines. Although all his poems can be collected in a few booklets, the force of their formal rhymed simplicity and immediateness brought Cesarić an impressive series of prizes and inclusion in numerous important international anthologies. Translated into more than 20 languages, Cesarić might be considered the most popular Croatian poet of all times (Franges, 1987).

Krleža is one of the rare Croatian writers whose popularity and influence have surpassed the frames of national literature. Born in 1893 in Zagreb, where he also died in 1981, he left behind an imposing legacy in almost all literary genres, including poetry, drama, short stories, novels, critic, essay, and polemics; but it is hard to believe that Krleža would have earned the epithet of one of the most important personalities not only in Croatian literature but history as well, had he stayed within the realm of art only.

Early military experiences in the Austro-Hungarian army, a sojourn on the frontline in the Carpathians in 1915, a tendency toward politics that included service as a representative in Parliament, a sensibility for recognizing injustice, and his unsparing attitude toward human stupidity, criticism, and consistence in thinking and acting led to Krleža being attacked by the public or by the authorities in the turbulent periods of Croatian history. On the other hand, his active cultural and artistic life and the excellence and versatility of his literary work have secured his high position among numerous admirers, attested by the fact that Krleža has an encyclopedia of his own, the Krležijana (Viscovic, 1993–1999), while his work still provokes speculations (Lasic, 1989–1993).
Texts and Analysis

Death in Cesarić's Poetry

Poems by Cesarić speaking about death and dying are not rare at all. Most of them are entirely devoted to that particular topic, while others consider it marginally. All the quotations below are from *Slap [Waterfall]* (Cesarić, 1984). The first is from his poem “When I'll be Grass”:

> Maybe it will be better  
> When one day I’ll move  
> Into worms and earth clumps.

> I will swing in merry grasses,  
> Poured upon with moonlight and sunshine,  
> Fragmented and well hidden.

> Nothing will remain of my mind,  
> Not one thought of the dead spirit;  
> I will have neither ear nor hearing  
> To listen to the silence of my rustle.

> If one day they start mowing me,  
> The scythe will not hurt me –  
> Dew will be the only load I will carry  
> In my new life.

The second quote is from his poem “A Song on Death”:

> Like winter, the summer will end completely;  
> And empty years will be flowing in that way,  
> And the sun will never smile on you –  
> You won’t say a word to that.

The third quote is from his poem “The Dead Man”:

> Roses smell around him.  
> He is lying appeased, as if holy.  
> He does not feel them. Their smell  
> Does not reach his world.

The fourth quote is from his poem “A Dead Poet’s Song”:

> In front of death, I hid myself (as much as I could)  
> Into the verses. I forged them in ardour.  
> But if you close your heart for them,  
> They are just shadow and dead letters.  
> Open it, and I will pass over into you  
> Like a copious river into a new bed.
(...)

All my life now is in your hands.
Wake me up! We both will live
All my hours held back by verses,
All the dreams preserved from the old times.

Death in Krleža's Works

Death and dying appear as a recognizable topic of the major part of Krleža’s work, disclosing the author’s intensive, essential, almost instinctive revelation and description of the most hidden thoughts and fears of the human being. Such examples can be found even in the titles of Krleža’s short stories, such as “The Death of Rikard Harlekin,” “The Death of the Harlot Mary,” “The Death of Francis the Carcase,” “The Death of Florian Kranjce,” “Thousand and One Deaths,” and “The Death of Tomas Bakran.” Death as a topic is recognizable also in his short story collection Croatian God Mars, his drama trilogy The Glembajs Gentlefolks, his novel The Return of Phillip Latinovicz, and his collection of poetry in the Kajkavian dialect The Ballads of Petrica Kerempuh. We cannot list here all the works in which Krleža deals with death, but provide only a very limited selection of quotes that are interesting for our analysis. All quotations here are taken from his Panorama of Views, Phenomena, and Notions (Krleža, 1975).

Death itself, finally, is a simple mechanical phenomenon. The last contraction of a certain musculum, after an entire series of contractions of the same musculum following a profound law, and also: the arrest of moving, pacification. Yes! This is mechanics! A pendulum also swings and stops after a certain while. All that is mechanics and, as a matter of fact, it is more simple than it appears at a first sight. And all that happens after one deep invisible law, logically and very simply and wisely. Yes! That is death! Normal death, the arrest of a certain moving, the mechanical problem of the last pendulum....

O, how terrible the numerousness of our fellow-citizens would be, had not death, in its social sense, lost its immediateness. Death has bureaucratized itself, it has become a clerk act, a quotidian news, and when an obituary were what it really is – a tragedy, the man would loose his mind from that latent tragedy. The deadly theater performance lasts like in the Chinese theater: 24 hours a day, 365 performances a year....

Things decompose in death like sugar in the coffee. Actually, death is very profound: one enters it like into a well in the summer. Outside
remain the cloudlessness, the smell of grass, while in death, it is humid and dark like on the bottom of a well. The icy breath of grave stinks from the dead mouth. And then, after all, a grotesque remains: a black house dress on the summer canvas.

**Discussion**

Obviously, Cesaric was not persecuted by death and did not express any fear in facing it. On the contrary, his poems on death and dying sound quite optimistic, imagining death as a state deprived of any mystic elements. For Cesaric, death was similar to dreaming, especially for its lack of the sensory input from the outside world. Interestingly, although romantic, Cesaric's concept of death was strictly materialistic, stressing the inevitability and irreversibility of dying, but also sending a message that the afterlife of a writer depends on the life of his or her work.

In the first quotation above, Krleža quite persistently denied the spiritual dimension of death and reduced death to an exclusively mechanical phenomenon. The background of that explicit reductionism could not be explained solely by the author's positivism; even the picturesque mechanistic notions and schemes of death were subdued, according to Krleža, to some "profound law." On the contrary, by "mechanizing" death, Krleža stressed its simplicity, regularity, logic, and normality, at the same time eliminating the unnecessary mystic constructions that humans, fearing the unknown, so frequently advocate.

With his thoughts on the "bureaucratization" of death, Krleža seemed almost to trace modern bioethical ideas (Grandstand, 1995; Vincent, 1980). Similar rethinking of death and dying can be found in a paper by the sociologist Ivan Cifrić, who considered how the traditional ethos included the solidarity toward the older, the sick, and the handicapped; one lived and died in a community with more or less expressed abstinence from joy in the case of death not only of a family member, but of a member of a broader community. The institutionalization, profanization, legislative regulation (death is recognized only when it is socially manifested, written, marked, and statistically described), and professionalization of death created a situation in which modern people die alone, far from their families and friends, disposed in mortuaries during the working hours and waiting for the last symbolic funerary act (Viskovic, 1993–1999). However, unlike
modern bioethical discourse that arose as a reaction to scientific and technological progress (Lasic, 1989–1993), Krleža questioned human fears and the eternal flight from the tragedy of death.

We also found interesting also the way Krleža depicted death through a series of sensations: the almost metaphysical vanishing of sugar in the coffee; the spatial dimension of profoundness, cold, and ice; humidity, darkness, depth, and the stinking of the death well, opposed to the brightness, smell, and light of life.

There are many similarities in the views upon death and dying expressed in the works of Cesarić and Krleža. Both concepts were materialistic, Cesarić’s being more romantic and Krleža’s more expressively cruel. Neither concept mentioned any religious element or fear. Perhaps relevant is the fact that neither Cesarić nor Krleža had children: they both demonstrated contempt with regard to biological reproduction, and tended to overestimate their ideas and writings.

For the last several decades, Cesarić and Krleža have been heavily represented in both elementary school and high school programs in Croatia and throughout the former Yugoslavia. It would be very interesting to study in an appropriate pupil sample how much the ideas of the two classics have influenced the ideas of modern generations on death and dying. Although Cesarić and Krleža today belong to an “older” generation of writers, we believe their impressions on death and dying remain present in the ideas of younger generations. The fact that results of such a research would also be significant for the consideration of recent sociopolitical events in Croatia and of the changes in former dominant traditional attitudes and values makes further research in this field encouraging (Ilisin and Radin, 2002).

References


Remarks on Ernesto Bozzano's La Psiche Domina la Materia

Carlos S. Alvarado, Ph.D.
University of Virginia

ABSTRACT: Modern discussions of physical phenomena around the time of someone's death have not mentioned Italian psychical researcher Ernesto Bozzano's last study on the subject, La Psiche Domina la Materia (1948). Posthumously published, the book included an analysis of cases of falling pictures, disturbances of clocks, and a variety of other effects such as bell ringings, breakage and movement of objects, all connected by experiencers to death. In addition to reminding us that such reports of physical manifestations exist, Bozzano inspires us with ideas for further research. His book, however, suffered from several problems, among them a dogmatic approach to the interpretation of the cases, and the use of cases lacking relevant information.

KEY WORDS: Ernesto Bozzano; death-related physical phenomena; falling pictures; stopping clocks; movement of objects.

While several writers have discussed physical phenomena coinciding with death (Alvarado, 2006b; Rhine, 1963; Roll, 1986; Wright, 2002) and the work of Italian psychical researcher Ernesto Bozzano (1862–1943) on this subject (Alvarado, 2005; Ravaldini, 1993), Bozzano's last publication on the topic has been neglected by modern researchers. I am referring to La Psiche Domina la Materia: Dei Fenomeni di Telekinesia in Rapporto con Eventi di Morte [The Psyche Rules Matter: The Phenomena of Telekinesis in Relation to Death]
Events], published in 1948. In this brief note I will summarize the contents of this work with the intent to familiarize contemporary students of near-death phenomena with this forgotten work.

**Summary of the Book**

The book was a revision of previous publications (Bozzano, 1921–1922, 1923). During World War II, Bozzano revised his original writings on death-related telekinesis, as well as some of his monographs on other topics, adding many new cases. The monograph was published posthumously by Gastone De Boni (1908–1986), who considered himself Bozzano’s disciple and who inherited Bozzano’s books, unpublished manuscripts, and surviving correspondence (Ravaldini, 2006). After Bozzano’s death in 1943, De Boni brought the unpublished revised editions of the monographs to print.

*La Psiche Domina la Materia* had 119 pages of text and included a list of the cases and researchers cited in the monograph that De Boni prepared (pp. 121–123). In addition to an introduction and a conclusion, the book had three chapters about physical phenomena presumably related to the death of an individual known to the perceiver. The chapters covered falling pictures, clocks that stopped or were affected in other ways, ringing bells, breaking and movement of objects, and various other physical manifestations.

The book included 114 numbered cases taken mainly from the spiritualist and psychical research literatures. However, only 56 were presented in detail. The rest appeared in a list that identified the effect observed and the bibliographical source in two or three lines. The cases came from publications in different languages. For example, the chapter about clocks included 13 detailed cases, eight published in English, four in French, and one in German.

While most cases coincided with death, there were a few that anticipated or followed death. An example of the latter was taken from the *Proceedings of the Society for Psychical Research*. It was reported by W. E. Ward, who was having a conversation with a doctor, Anna Lukens, at her office. They were talking about their common friend, referred to as “Professor Cope,” who had died some time before. While neither Ward nor Lukens thought the case was impressive, Bozzano clearly thought so. As Ward wrote in the original report:
I was referring to Cope's interest in psychical matters, and saying how satisfactory it would be if we could get some reliable report from him of his impressions of the real life he has so lately entered into. And immediately the Doctor's large musical box commenced playing, and continued to play for over five minutes, to our great and almost bewildering astonishment, and ceased playing only when I commenced trying to account for such an unexpected entertainment through ordinary natural methods. Just as soon as I remarked how it might be accounted for, it stopped as abruptly as it began.

The instrument had not been wound up in over three months, and when last used, if there had remained unused any tension of the spring, it might have been released long before by the jarring it had been subject to through the occasional shifting of the furniture in the room....

A curious part of the experience ... was the response I received to a mental question I asked some ten or fifteen minutes after the playing ceased. The question was addressed to Professor Cope in about this form, “Edward, are we indebted to you for the music we have just heard?” and immediately a response of three loud raps came on the floor apparently quite near me, but this was after Dr. Lukens had left the room, so is unsupported by another witness (Johnson, 1899, p. 233).

Other cases cited were from secondhand testimony. The following is an example that I took from the English translation of a French work cited by Bozzano. The case was sent to French astronomer Camille Flammarion (1842–1925) by a woman living in Naples and involved an experience of her aunt referring to the aunt’s husband who was at war:

The morning of February 12th my aunt went into her room, about half-past ten, to look for something. At the exact moment when she stepped over the threshold of the door the portrait of her husband ... detached itself from the wall, fell, and slid over the floor to her feet. When the nail and the cord which had held up the frame were examined, they were found to be intact .... Toward the beginning of March she learned that my uncle ... had died ... from a bullet that struck him in the head, the morning of February 12th, about half-past ten. (Flammarion, 1921/1922, p. 305)

Bozzano argued that the most frequently reported effects were falling pictures, followed by clock manifestations and bell ringings. But he also pointed out that there were a great variety of effects, such as breakage and movement of objects. Many cases involved great distances between the dying persons and the witnesses of the physical phenomena. Distant telekinesis, he argued, showed the “existence of a directing will” (p. 10).
Using his inimitable style to argue a point, Bozzano presented his views as evident conclusions that could not be doubted. For example, he declared his complete conviction that the falling of pictures could not be explained by such normal causes as the breaking of the strings holding them, a certainty most critical readers may not share. He also believed that coincidence was “definitively eliminated” (p. 117) due to the accumulation of many cases. Although the accumulation of cases may convince many that a real phenomenon exists, it is no assurance that other explanations can be confidently rejected.

Bozzano felt discarnate agency explained the physical effects in most cases. At the end of the book he referred to the “incontestable validity of the spiritualist interpretation of the phenomena of ‘telekinesis in relation to death events’” (p. 117). While Bozzano believed that the great majority of cases indicated a physical effect, that is, a real movement or breakage of objects, he believed some were subjective, representing a symbolic telepathic effect. This was illustrated with a case in which three persons heard what they believed was the glass on a portrait hanging in another room breaking, a sound they heard three times in succession. However, the portrait did not in fact fall and the glass was intact. The person depicted in the portrait died about three weeks later (pp. 44–45).

Bozzano thought that a dynamic force projected from the body of the dying person could not account for the cases. He believed that such a hypothesis could not explain how specific objects were selected from among many others. This idea seemed to him incapable of scientific support due to the fact that such “vibration’ is subordinated to the physical law of the inverse square of distance ... the vibrations in question cannot cross the ocean without loosing their efficacy” (p. 118). Furthermore, Bozzano pointed out that a few cases took place after a death. These were cases in which the physical effects were perceived around the time the experiencers first heard of the death, which he believed went against the dynamic hypothesis and supported instead the “logically irresistible presupposition” (p. 118) of the presence of the deceased person in the place where the effect occurred, which Bozzano felt indicated the impact of the deceased’s intention to communicate. The argument, he continued, also applied to cases in which telekinesis took place when someone thought about a deceased individual, and in those 14 cases in which the physical phenomena followed the promise of the deceased to communicate after death. Bozzano did not give credence to the idea that the witnesses
produced the phenomena through their own telekinesis, although he admitted the possibility that the phenomena could take place more rarely when the person did not die or was not close to death.

While Bozzano rejected explanations that focused on forces from the body of the dying, he did speculate about alternate concepts of force. For example, Bozzano considered the possibility that the "etheric body," the envelope of the spirit, which just left the physical organism, remains saturated for some time with the vital fluid that allows it to be capable of acting on matter" (pp. 16–17; the topic was also discussed in Bozzano, 1934/1937). He also speculated that deceased individuals could cause physical phenomena by "taking out force and fluid from living persons" (p. 82) in the surroundings. This process, Bozzano postulated, was similar to physical mediumship in which the "mediumistic personality takes force and fluid from all the experimenters" (p. 82). Such ideas of bodily forces and subtle bodies were of course not new with Bozzano, having a long history preceding the book we are discussing (Alvarado, 2005, 2006a).

**Concluding Remarks**

Like other forgotten classics dealing with psychic phenomena and death, *La Psiche Domina la Materia* deserves to be better known by modern students of the subject. Bozzano's compilation of cases complemented more recent discussions of death-related physical phenomena (Piccinini and Rinaldi, 1990; Wright, 2002).

Nonetheless, Bozzano's approach was problematic for contemporary scientific researchers. By today research standards he was much too dogmatic about his own conclusions. Many of his interpretations were not necessarily evident from the facts, and they remain today, as in Bozzano's days, as interpretations of the evidence. Furthermore, reliance on published cases, characteristic of the case collection approach, presented several methodological problems (Alvarado, 1992). Some of the cases, such as those included in Flammarion's (1921/1922) collection, depended on the testimony of a single individual and were not very detailed. While bringing together cases collected by others can be helpful, we need to remember that because the cases have been collected by different individuals and with different purposes in mind, they often lack important information. The missing information was not limited to evidential details, but it also extended to phenomenological features and other general contextual
information, such as the witnesses' history of psychic experiences and their beliefs.

On the positive side, Bozzano’s book illustrated the variety and complexity of the phenomena and suggested directions for further research. For example, Bozzano’s emphasis on the importance of death, or closeness to death, could be studied with new cases. We may ask if reports of physical phenomena are more frequent or phenomenologically different in death-related cases, as opposed to cases where death was not a feature. Are there differences between cases of sudden and gradual death? More generally, are there differences in the features of cases grouped on the basis of the physical effects, that is, falling pictures, clock disturbances, or movement of objects? Other variables such as distance and relationship between dying persons and witnesses could be considered, such as was done in the work of Sybo Schouten (1979; see also Piccinini and Rinaldi, 1990).

Future research could attempt to combine Bozzano’s descriptive approach with contemporary quantitative analyses that explore detailed interaction of variables. In this way we may be able to combine the best of our past and current approaches to near-death phenomena.

References


Obituary: Ian Stevenson, M.D.

Ian Stevenson (1918–2007), pioneering survival researcher and founder of the University of Virginia’s Division of Perceptual Studies, died at home of pneumonia on February 8, 2007, after many years of coping with a chronic lung infection. Dr. Stevenson attended St. Andrews University in Scotland and graduated with both a B.A. and an M.D. from McGill University in Montreal, where he was first in his class in medicine. Trained initially in internal medicine at Tulane University, he became disenchanted with the reductionist biomedical focus and switched to psychiatry.

Finding the prevailing Freudian paradigm of the time equally unsatisfactory, he turned to psychosomatic research at Cornell University, producing groundbreaking studies of the impact of emotional factors on heart irregularities. From Cornell he returned to Tulane University, from which he was recruited at the young age of 38 to Chair the Department of Psychiatry at the University of Virginia.

Following extensive reading in the literature of paranormal experiences, his professional interests shifted to questions associated with survival after death. Over the next five decades, he traveled six continents, accumulating more than 2,500 cases of young children who recounted details of previous lives, which he meticulously verified with witnesses, hospital records, autopsy reports, death certificates, and photographs. His research was published in more than 300 publications and 14 books, including his 2,268-page Reincarnation and Biology in 1997. His many publications on near-death experiences (NDEs) focused on their veridical features and their implications for our understanding of mind/brain interactions and the possibility of survival of bodily death.

With an endowment from Chester Carlson, the inventor of the Xerox process, Dr. Stevenson established at the University of Virginia what became the Division of Perceptual Studies, the only academic unit in the world dedicated to the study of the question of postmortem
survival, including near-death experiences (NDEs) as well as deathbed visions, memories of previous lives, apparitions, and mediumship, and related phenomena.

Despite the empirical rigor for which his research was hailed, Dr. Stevenson was modest in interpreting his research findings. Ever the embodiment of academic rectitude, he regarded the evidence as permitting but not compelling a belief in postmortem survival. He was a founding member of the Society for Scientific Exploration and the Journal of Scientific Exploration, was elected President of both the British and American Societies for Psychical Research, and was the recipient of numerous other awards.

Dr. Stevenson had no biological children but left numerous younger colleagues whom he inspired, trained, and nurtured in their own careers.
Obituary: Rhea White, M.L.S.

Rhea White (1931–2007), founder and director of the Exceptional Human Experience Network, died at home on February 24, 2007, after a long illness. Ms. White had planned to become a professional golfer, but a profound near-death experience (NDE) during an automobile accident in college changed the course of her life. She devoted the rest of her life to trying to understand “where” she was when she floated above the accident scene, bathed in peace, unity, and incredible “aliveness.” She became a Research Fellow in J. B. Rhine’s Parapsychology Laboratory at Duke University to pursue a scientific explanation for her NDE, and then served as Research and Editorial Associate at the American Society for Psychical Research under Gardner Murphy. She then earned a Master’s degree in Library Science from the Pratt Institute and worked as a reference librarian for the next three decades, compiling a definitive reference collection on parapsychology.

Ms. White founded the Parapsychology Sources of Information Center and began publishing Parapsychology Abstracts International, a comprehensive index of the parapsychological literature with abstracts and reviews. She also edited the Journal of the American Society for Psychical Research for decades, and was elected President of the Parapsychological Association in 1984 and received their Outstanding Lifetime Research Award in 1992.

Ms. White eventually concluded that NDEs could be understood only in the greater context of other mystical and transcendental experiences, and in 1990 began the ambitious Exceptional Human Experience Network to codify and study the varieties of nonordinary experiences. In 2006 she was awarded an honorary doctorate from the Institute of Transpersonal Psychology.
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