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NEAR-DEATH EXPERIENCES WITH REPORTS OF MEETING DECEASED PEOPLE

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Few scientists have taken seriously the interpretation of near-death experiences (NDEs) as evidence for survival after death, even though most people having such an experience have become convinced that they will survive death and several features of NDEs are at least suggestive of survival. This article compares survival and some nonsurvival interpretations of NDEs in light of one feature suggestive of survival, that of reports of having seen deceased persons during the NDE. Several features of 74 NDEs involving such reports were compared with those of 200 NDEs not involving such reports. Although some of the findings could support either a survival or a nonsurvival interpretation, several other findings may weaken the primary nonsurvival hypothesis, that of expectation. Additionally, the convergence of several features suggesting survival and the convergence of features that require multiple kinds of alternative explanations, in individual cases as well as in large groups of cases, warrant our considering the survival hypothesis of NDEs more seriously than most scientists currently do.

The past two decades have brought a slowly increasing awareness, among medical personnel as well as the general public, of the unusual experiences that people sometimes have when they are

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seriously ill or even close to death. These experiences have come to be known as near-death experiences (NDEs), and they often include such features as seeming to leave the physical body, seeing an unusual, bright light, and feeling extreme emotions of joy, peace, and love (e.g., Basford, 1990; Blackmore, 1993; Fenwick & Fenwick, 1995; Greyson & Flynn, 1984; Morse, 1994; Ring, 1980; Roberts & Owen, 1988; Sabom, 1982; Zaleski, 1987). For over three decades researchers in the Division of Personality Studies at the University of Virginia have investigated more than 550 cases of NDEs. One of the most striking observations that we have made is that the vast majority of people reporting these experiences to us say that they have lost all fear of death and have become convinced by the experience that they will survive physical death. Furthermore, even a cursory examination of the popular literature or media coverage about this subject indicates that for most of the general public the primary interest of these experiences is the light they may shed on the question of whether human consciousness survives the death of the physical body.

In contrast, most scientific investigators of NDEs have virtually ignored this question, concentrating instead on less controversial activities such as describing the aftereffects of NDEs or speculating about the physiological mechanisms that might underlie them. Their avoidance of this question seems to stem from the widely prevailing assumption that a scientific view of mind–brain relations makes the hypothesis of survival after death nonsensical, and the associated assumption that NDEs are hallucinations resulting from physiological or psychological processes associated with dying (e.g., Blacher, 1979; Blackmore, 1993; Nuland, 1994; Rodin, 1980). Correlations of mental and biological processes do not necessarily imply that the former derive from, and are entirely dependent on, the latter, as the vast majority of modern scientists and philosophers believe. Moreover, researchers who have studied NDEs closely have pointed out the inadequacies of physiological and psychological explanations proposed so far (e.g., Fenwick & Fenwick, 1995; Ring, 1980; Sabom, 1982, 1998). Nevertheless, few scientists have taken seriously the interpretation of NDEs as evidence for survival, nor have they shown much interest in comparing the strengths and weaknesses of this interpretation with those of other, nonsurvival explanations.

In the absence of any adequate explanatory framework for NDEs, it may be useful—in terms of generating both new research and new theoretical ideas—to remain open to all interpretations, particularly the one that is compelling to nearly all persons who have experienced an NDE. For those who have not experienced an NDE, however, the survival hypothesis will seem plausible only if that hypothesis accounts for the phenomena observed better than other hypotheses do. There seems little reason at present to argue that the phenomenon of NDEs per se is supportive of the possibility of survival of consciousness after death. In the first place, because persons reporting NDEs did not in fact die, the most that can be said is that their experiences occurred during the process leading to death. Such premortem experiences, however, do not necessarily imply the existence or nature of any postmortem experiences. Secondly, contrary to the popular assumption that all NDEs occur when a person is near death or even "clinically dead," NDEs occur in a wide variety of physiological conditions including some when the person was only moderately or not at all ill (Owens, Cook, & Stevenson, 1990; Stevenson, Cook, & McClean-Rice, 1989–1990). These latter experiences would seem to undermine the argument that NDEs are a precursor to death and a harbinger of what follows death.

There may, however, be other reasons for remaining open to the survival hypothesis. In two recent papers, Greyson, Stevenson, and I discussed three features of NDEs that seem to warrant taking the survival hypothesis seriously (Cook, Greyson, & Stevenson, 1998; Kelly, Greyson, & Stevenson, 2000). These three features are (a) an out-of-body experience (i.e., the experience of seeming to leave the physical body and view it and events going on in its immediate vicinity as if from another position in space); (b) enhanced cognition (i.e., experiencing normal or even enhanced mental and sensory functioning at a time when, because of the person's seriously impaired physiological functioning, we would ordinarily expect these processes to be diminishing, impaired, or altogether absent); and (c) paranormal cognition (i.e., becoming aware of verifiable events that are inaccessible to one's physical senses and also not likely to be inferable). Each of these three features, when taken alone, has possible explanations other than the survival of consciousness after death; but when they are considered together,

and particularly when they all occur in the same experience, none of the other explanations seems adequate to account for all three features.

A fourth feature of NDEs is likewise suggestive of survival and provides additional opportunities for comparing competing explanations of NDEs in general. In a substantial number of instances, people have reported seeing, hearing, or sensing the presence of one or more recognized deceased people, usually loved ones, during the NDE. For example, one person who suffered cardiac complications during routine surgery said: "I was in the brightest place I have ever seen . . . . I actually saw my friend Bill . . . coming towards me with his arms outstretched—he looked so healthy and smiling (not the way he looked before he died)." Another person—a utility lineman who was electrocuted—described his experience briefly as follows:

> I could see myself laying [sic] on the ground, very plainly. It was a feeling as though I was floating in a tunnel with a couple of white doves flying along. The further down the tunnel I went, it became lighter, and when I got closer to the end I could see a human figure, which was my [deceased] mother, motioning for me to go back—not to come any further. After she motioned me back, I came to, with the paramedics working over me.

Similar experiences—of seeming to see, hear, or otherwise be in the presence of a deceased loved one—are not uncommon among waking, apparently healthy persons (see, e.g., Datson & Marwit, 1997; Gurney, Myers, & Podmore, 1886; Haraldsson, 1988; Rees, 1971; Sidgwick et al., 1894) and among dying patients who actually go on to die shortly after the apparitional experience (e.g., Barrett, 1926; Osis & Haraldsson, 1977/1997). Most people who have such an experience during an NDE are convinced that they have been in the presence of a deceased loved one whose consciousness has apparently survived physical death in some form capable of being experienced or perceived by a still-living person. As one of our participants said: "Seeing my dad made me truly believe that when a person dies a love[d] one will appear to ease the transition to the other side . . . . I knew I was dying and that he had come to get me." As with the phenomenon of NDEs in general, however, many other people have a different view of this feature. A strong alternative interpretation is that, when a person is faced with the

prospect of dying—whether suddenly or gradually, realistically or mistakenly—the person's hopes or expectations of being reunited with deceased loved ones (perhaps coupled with drugs, fever, or other mind-altering conditions) will produce hallucinations of deceased people. In an attempt to evaluate the strengths and weaknesses of these two interpretations, I examined some major features of deceased-person cases[1] and compared them with those of a group of cases not involving deceased persons.

Method

Investigation of the Cases

There are presently 553 NDE cases (from the United States, Canada, and Australia) in our collection. These cases were nearly all self-reported by people who had read or otherwise heard about our research. For most cases, we first obtained an account of the experience in the person's own words, and we then followed up this report by sending the person one or more questionnaires asking for further details. In some cases, we have interviewed the participant in person about his or her experience.

Selection of Cases to Be Examined

Among the 553 NDE cases in our collection, 74 (13%) involved deceased persons. This figure of 13% falls between that of 8% reported by Ring (1980, p. 67) and that of 39% reported by the Fenwicks (Fenwick & Fenwick, 1995, p. 163).

One of the primary features to be examined in this analysis was the medical condition associated with NDEs involving deceased persons. For more than a decade we have been obtaining relevant medical records in our cases whenever possible. On the basis of an

[1] Here and elsewhere in this paper, I use wording such as "cases involving deceased persons," "deceased-person cases," or "encountering deceased persons" rather than more cumbersome wording such as "cases involving purported meetings with deceased persons." The wording used is not intended to imply that surviving deceased persons were necessarily encountered, but only that visions of recognized deceased persons figured as a feature of the cases, whether as perceptions of actually surviving deceased persons or as hallucinations.

analysis of these records, we have determined that 45% of patients who reported NDEs were judged to have had serious, life-threatening illness or injuries, whereas 55% were not (Stevenson et al., 1989–1990). Also, persons who really had been close to death were more likely to report an enhanced perception of light and enhanced cognitive powers than were persons who had not been close to death (Owens et al., 1990). We have obtained medical records in 237 of our 553 cases (43%), including 37 (50%) of the deceased-person cases. (In the remaining cases, either the person was not hospitalized or the records are now unobtainable.) For the analyses of this article, the 74 deceased-person cases were compared with the 200 non-deceased-person cases for which we have medical records.

Evaluation of Medical Records

For all 237 of our medical records cases, at least two people independently evaluated the records and rated them on a 4-point scale, with 1 meaning that the person was not seriously ill and 4 meaning that the person had been close enough to death to have suffered cardiac arrest or some other loss of vital signs. Six of the seven people evaluating these records over the years have been either physicians or registered nurses (the sole exception being myself). Most records have been evaluated by people who were blind to the specific features of the associated NDE.

Features Examined

Several features seemed particularly important for an initial consideration of whether the experiences can best be explained by the survival hypothesis or by the hypothesis that they are hallucinations resulting solely from the patient's physiological or psychological condition.

Medical Condition of the Participants

One of the first and most important questions to ask is whether NDEs involving deceased persons are in any way associated with particular medical conditions. Are people who encounter deceased

persons closer to death than those who do not? Do different kinds of medical conditions precipitate an NDE involving deceased persons, as compared with those not involving a deceased person? Do people encounter deceased persons more often when the medical condition comes on suddenly and unexpectedly, or gradually, allowing the person more time to fear or expect death? I examined these questions using the medical records and evaluations described above.

Age of Participant

The age of the participant is another important feature that might have some bearing on the question of whether psychological hypotheses, such as expectation, can best explain deceased-person cases. Older persons usually have more deceased friends and relatives with whom they might expect or hope to be reunited, and, as they age, the fear or expectation of dying themselves probably also becomes more prominent. Age is not necessarily a predictor in any individual case either of loss, fear of death, or the hope or expectation of reunion with a deceased person. Nevertheless, it seems reasonable to think that expectation might generally play a bigger role among older people than among younger people.

Who Was Seen?

The number of deceased persons seen, and especially their relationship to the participant, was examined. Identified deceased persons, however, are not the only figures encountered in NDEs. Many participants—both those who report seeing deceased persons and those who do not—say that they saw, heard, or felt the presence of other, usually unrecognized, people or beings. I examined the descriptions of these other figures and the medical condition of persons who reported encountering these figures, in an attempt to identify any differences in the precipitating conditions of experiences involving deceased persons and those involving other figures.

Interval between Deceased Person's Date of Death and Occurrence of NDE

The length of time that the deceased person had been dead might also have some bearing on the interpretation of these cases.

Clearly, neither grief nor the expectation and hope of reunion are factors on which one can put time limits. Nevertheless, we might expect that people would be more likely to hallucinate recently deceased people than more remotely deceased ones, because they would be more likely to be frequently thinking about and grieving for recently deceased persons.

Other Features

In an attempt to learn whether deceased-person cases are different in kind from non-deceased-person cases, I examined three other features frequently reported in NDEs: the experience of seeing an unusual, bright light apparently not physically present; the experience of seeing one's own physical body or physical surroundings as if from another position in space (OBE); and the experience of seeing a dark void or tunnel.

Statistical Analysis

Factors potentially predictive of an encounter with deceased persons were evaluated by constructing contingency tables from the available data and applying the standard chi-square tests of statistical association (corrected for continuity as needed).

Results

Medical Condition of the Participants

Closeness to Death

Among 37 deceased-person cases for which we have medical records, 28 (76%) were close to death (rated 3 or 4 on our rating scale) and 9 (24%) were not (rated 1 or 2 on our scale). Among the 200 non-deceased-person cases, 102 (51%) were near death and 98 (49%) were not (Table 1). Looked at another way, among 130 people who were close to death, 28 (22%) encountered a deceased person, whereas among 107 people who were not close to death, only 9 (8%) encountered a deceased person. This associ-

TABLE 1 Closeness to Death of Participants Seeing Deceased Persons versus Those Not Seeing Deceased Persons

Closeness to death	Deceased-person cases ($n = 37$)	Non-deceased-person cases ($n = 200$)
Near death	28	102
Not near death	9	98

Note $\chi^2 = 6.69$, $p < .01$.

ation between proximity to death and encountering a deceased person is significant ($p < .01$).

Type of Medical Condition

Among the 274 cases examined for this study, the medical conditions precipitating the NDE fell into five major categories: (a) those associated with accidents (including motor vehicle accidents, falls and near-drownings, and gunshot or stabbing wounds); (b) those occurring at the time of a cardiac arrest or other serious cardiac problem; (c) those occurring in association with a non-cardiac illness or post-surgical complication; (d) those occurring during surgery; and (e) those occurring during labor or childbirth or shortly afterwards. A few additional cases also occurred in connection with suicide attempts (usually with drugs), anaphylactic reactions to insect bites, allergic reactions to drugs, asthma attacks, or intense grief or anxiety. There was a higher percentage of accidents and cardiac cases among the deceased-person cases, and also a lower percentage of cases occurring during childbirth or surgery not involving cardiac arrest, as compared with the non-deceased-person cases (Table 2). These differences were significant ($p < .025$).

Age of the Participant

There was no difference in age between the two groups. The median age for the 74 deceased-person cases was 36–37 (range 11–81); the median age for the 200 non-deceased-person cases was 35 (range 3–80).

TABLE 2 Types of Precipitating Conditions

Condition	Deceased-person cases (n = 74)	Non-deceased-person cases (n = 200)
Accidents	23 (31%)	36 (18%)
Cardiac	17 (23%)	31 (15.5%)
Illness	13 (18%)	40 (20%)
Surgery	6 (8%)	35 (17.5%)
Childbirth	6 (8%)	37 (18.5%)
Other	9 (12%)	21 (10.5%)

Note $\chi^2_5 = 13.02$, $p < .025$.

Who Was Seen? Identity of the Deceased Persons

Number of Persons Seen

Among the 74 deceased-person cases, 61 participants (83%) reported seeing only 1 or 2 recognized deceased people: 39 (53%) saw 1 person and 22 (30%) saw 2. The remaining 13 saw from 3 to 9 people: 8 (11%) saw 3 people, 3 (4%) saw 4 people, 1 (1%) saw 5 people, and 1 (1%) saw 9 people. A few participants claimed to see, in addition to the identified deceased people, an unspecified number of other deceased relatives or friends; but they did not further identify these to us.

Relationship of Persons Seen to Participant

A total of 129 identified deceased people were reported as having been encountered during these NDEs. Of these, 68 (53%) were male and 61 (47%) were female. Most were relatives; only 6 (5%) were friends or acquaintances. Not surprisingly, given the relatively young average age of the participants (36–37-years), most of the deceased people seen during the NDE were of a previous generation: 105 (81%) were of a previous generation, including parents or related parental figures (43, or 33%), grandparents (40, or 31%), uncles or aunts (13, or 10%), great- or great-great-grandparents (7, or 5%), and friends or acquaintances (2, or 2%). Twenty-one (16%) were of the participant's own generation, including cousins (8, or 6%), siblings (6, or 5%), friends or acquaintances (4, or 3%), and spouses (3, or 2%). Three (2%) were of the next generation, including 1 daughter and 2 nephews.

Emotional Relationship

Perhaps more important than blood relationship was the emotional relationship between the deceased person and the participant. We have information on this feature from only 33 of the 74 participants, with regard to 61 of the 129 deceased people; but, of these, two thirds of the 61 relationships were regarded by the participants as very close (39%) or close (28%). On the other hand, 8 (13%) relationships were described as "friendly, but not close" or "neutral," and 2 (3%) were described as "poor." In 10 instances (16%), the participants had never met the deceased person: 9 were relatives who had died before the participant's birth, and 1 was a future father-in-law who had died a few months before the participant met his future wife and whom he later recognized in a photograph.

Interval Between Death of Person Seen and NDE

The median interval between the time the deceased person died and the NDE was 10 years (the range was 4 days to more than 67 years).

Other Figures Seen

Among the 274 cases examined in this study, 189 persons (69%) reported seeing or sensing the presence of someone, whether recognized or unrecognized (Table 3): 28 people saw only a recognized deceased person, 46 saw other figures in addition to a recognized deceased person, 115 saw only other figures, and 85 saw no one at all. Among the 161 people who saw other figures, 18 (11%) identified one of them as a religious figure, usually Jesus. Eleven (7%)

TABLE 3 Participants Who Saw or Sensed the Presence of Figures Other than Recognized Deceased Persons

Sighting of figures	Deceased-person cases (n = 74)	Non-deceased-person cases (n = 200)
Saw other figures	46 (62%)	115 (58%)
Did not see any other figures	28 (38%)	85 (43%)

Note χ^2 = .2, *n.s.*

reported seeing living persons whom they recognized, but very few reported seeing fanciful or unrealistic figures. Only two saw animals (both were deceased pets). Many saw a Being of Light, whom they strongly identified with God. For the most part, however, the other figures remained unrecognized and unidentified.

Relationship Between Medical Condition and Seeing Other Figures

Unlike the tendency for people near death to see deceased people more often than those not near death do, there was no relationship in the non-deceased-person group between medical condition and seeing (or sensing the presence of) other figures (Table 4). Among the 102 people near death, 60 (59%) saw someone; among 98 people not near death, 55 (56%) saw someone. Again, looked at another way, among the 115 who saw only other figures, 60 (52%) were near death; among the 85 people who saw no one at all, 42 (49%) were also near death.

There was also no relationship between medical condition and seeing any figure, deceased or other, when the two groups were combined (Table 5). Among 130 people near death, 88 (68%) saw someone; among 107 people not near death, 64 (60%) also saw someone. Among all persons who saw someone, 88 (58%) were near death; among all those who saw no one, 42 (49%) were also near death.

Other Features Reported

The incidences of seeing a light, of experiencing a tunnel or dark space, and of experiencing all three features (a light, a tunnel or

TABLE 4 Relationship Between Medical Condition and Perception of Other Figures Among Non-Deceased-Person Cases ($n = 200$)

Sighting of figures	Near death ($n = 102$)	Not near death ($n = 98$)
Saw other figures	60	55
Did not see other figures	42	43

Note $\chi^2 = .06$, *n.s.*

TABLE 5 Relationship Between Medical Condition and Seeing Any Figure (Deceased or Other) ($n = 237$)

Sighting of figures	Near death ($n = 130$)	Not near death ($n = 107$)
Saw any figure (deceased or other)	88	64
Saw no figure	42	43

Note $\chi^2_1 = 1.25$, *n.s.*

dark space, and an out-of-body experience) together were significantly greater among the deceased-person cases than among the non-deceased-person cases ($p < .005$, $p < .025$, and $p < .05$, respectively). There was no significant difference in the incidence of out-of-body experiences reported by the two groups (Table 6).

Discussion

An important means of evaluating competing hypotheses in any area of science is to make differential predictions, based on the competing hypotheses, and to examine the data for confirmation of one and refutation of the other. Unfortunately, with NDEs as with studies of many other anomalous phenomena, we have not yet reached the point of being able to make such predictions readily; and this study of NDEs involving deceased persons underscores the need to identify more clearly what we would expect to find if NDEs in general, and deceased-person cases in particular, are solely the product of physiological or psychological factors and,

TABLE 6 Occurrence of Other Features

Feature	Deceased-person cases ($n = 74$)	Non-deceased-person cases ($n = 22$)	χ^2
Light	66 (89%)	132 (66%)	8.28, $p < .005$
Darkness/tunnel	45 (61%)	88 (44%)	5.46, $p < .025$
Out-of-body experience	32 (43%)	101 (50.5%)	.87, *n.s.*
All 3 features	21 (28%)	32 (16%)[a]	4.55, $p < .05$

[a] 23 of these, or 11.5% of the total, also saw unknown figures.

conversely, what we would expect to find if they are instead altered states of consciousness revealing the continuation of personal consciousness after death.

This need becomes particularly apparent when we realize that many of the findings of this study could be used to support either interpretation. For example, people seem to see deceased persons more frequently when they are actually close to death than when they are not. A person near death may be more able or likely to perceive a surviving deceased loved one who is actually present when the person is on the verge of death; however, a person near death may also be more likely to hope or expect to see a deceased loved one, and his or her deteriorating physical condition may facilitate the production of an hallucination.

Another potentially important, but at this stage inconclusive, finding is the tendency for deceased-person cases to occur more frequently in connection with accidents and cardiac arrests and less frequently in connection with childbirth and surgery. This tendency suggests that deceased-persons cases occur more frequently in connection with conditions of sudden onset. Such a finding might weaken the expectation hypothesis because there was presumably less time for psychological precipitants, such as expectation or fear of dying, to have generated an hallucination. On the other hand, one could also argue that time to anticipate or fear death (as in the days, weeks, or months preceding childbirth or surgery) might allow the person time to think about deceased loved ones, mentally resolve unfinished business, and therefore reduce the need to generate an hallucination of deceased persons during an NDE. Before we can reasonably choose between these two opposing interpretations, we need more information about the frequency and characteristics of apparitions[2] in general in acute situations, as compared with conditions of more gradual onset.

[2] I use the word *apparitions* here to call attention to an important distinction that should be drawn more clearly between unshared sensory experiences that are pathological in origin and those that are not. Stevenson (1983) discussed the need to distinguish between unshared sensory experiences of mentally healthy persons and the hallucinations of persons who are mentally ill. In this article, I have used the word *hallucinations* to refer to the hypothesis that visions of deceased persons during an NDE are produced by psychological or physiological conditions associated with illness. I use the word *apparitions* in a more neutral sense, to refer to visions or other unshared sensory experiences involving a deceased person without implying any theoretical assumption as to their origin or cause.

Perhaps more importantly, however, we should also be cautious about drawing any conclusions yet from this apparent association between suddenness of onset and the feature of seeing deceased persons, without much more detailed and specific information about the actual suddenness of onset in each case. For example, in the case of accidents, although the NDE did most often occur at the scene of the accident, in some instances it did not occur until later, perhaps in the emergency room or intensive care unit of the hospital. Even when the NDE occurred at the scene of the accident, it is not always clear that the NDE began immediately at the moment of impact. Moreover, even in a sudden accident, there may be a few seconds before impact when the person recognizes what is about to happen—perhaps enough time to allow expectation or fear to play some role. Similarly, in cases of cardiac arrest or other sudden illness, the crisis event may have been preceded by symptoms that may or may not have generated concern in the person. Likewise, we also need more information about whether there were in fact significant fears or expectations of dying among persons with conditions of more gradual onset, such as childbirth or routine surgery. Nevertheless, the tendency found in this study for deceased-person cases to occur in situations in which there seems to have been less opportunity for a buildup of fears and expectations would make it worth trying to get more information related to this feature for future studies.

Despite such difficulties in trying to make predictions and evaluations based on these two competing hypotheses, some of the findings of this study do suggest that the expectation/hallucination hypothesis, in one or another form, may not be as assured as many scientists might assume and, conversely, that the survival hypothesis may be more worthy of consideration. For example, a finding that at first sight seems inconclusive is that people who see deceased persons during an NDE most often see people who are biologically and emotionally close to them. On both the survival and the expectation hypothesis, this is what one would expect. Nevertheless, some of the other findings related to this feature of who was seen seem to weaken the hallucination hypothesis. In the first place, if visions of people are hallucinations produced by expectation and the fear that one is dying, perhaps coupled with an impaired physiological state, why are so many of the figures

seen not identified? On the expectation hypothesis, one would think that the expectation would have put a known face, including that of a religious figure, on the hallucination more often than was the case.

On the expectation hypothesis, we might also expect more people to have hallucinations of deceased pets. Many people are emotionally close to their pets and hope or expect to be reunited with them, as well as with people, after death. Among these 274 cases, however, only 2 people reported seeing pets. One participant, who saw her deceased mother, even commented that she was disappointed that she did not see any deceased animals, especially her deceased pets, because she loved animals so much.

Although most people identified were emotionally close relatives, there were nonetheless a substantial number (32%) of people seen who were emotionally neutral or distant or whom the participant had never met. Many participants commented that seeing these people was unexpected and a "surprise." The expectation hypothesis seems a bit strained when we try to account for these numerous instances in which the deceased person was not someone the participant would particularly care about seeing. It might make more sense to think that a deceased, but surviving, grandparent who had died before the participant's birth would want to be present, either to greet or send back this unknown, apparently dying grandchild, than it does to think that the participant's expectation, hope, or fear produced an hallucination of a grandparent whom he or she had never known. Furthermore, even among those participants who did see a loved one, the person seen was not always one whom the participant would presumably most expect or want to see. One woman, who did see a very dear and recently deceased friend during her NDE, nevertheless told us: "I must be honest—if I had a choice of seeing a loved one again—it would have been my own father whom I was very close to." This participant's mother had also died recently, at about the same time that the friend did, but the mother also was not seen. Before rejecting the hallucination hypothesis to explain the appearance of these "unexpected" figures, however, we again need more information than we presently have—such as about the frequency with which people experience apparitions of emotionally neutral or distant persons in circumstances other than NDEs, or whether a deceased

person (e.g., a grandparent) whom the participant had never met had nevertheless had an important role or place in the participant's life.

We might also expect people to see living people more often than they do, if NDEs are hallucinations produced solely by psychological or physiological factors. Many people commented that it was the thought of the people that they were leaving behind that seemed to end the NDE, whether or not they wanted or chose to go back to their bodies. Under these circumstances, if NDEs are hallucinations, we might expect those living loved ones to have figured in the hallucinations more often than they did. In fact, as I mentioned earlier, only 11 of the 274 people in this study reported having seen living people.

The relatively young age of the deceased-person participants, and especially the lack of any difference in age between the deceased-person participants and the non-deceased-person participants, seem also to weaken the expectation hypothesis. As I suggested earlier, on the expectation hypothesis we might expect older people to hallucinate deceased persons more frequently than younger persons do, because they are more likely to have lost significant persons, and greater numbers of significant persons, and also since, being close to death themselves, they might generally feel more need for the comforting hallucination of a loved one. As with many of the predictions or interpretations one tries to make in a study of this kind, however, this one must be considered conjectural or preliminary only, until we have much more knowledge than we presently have about factors precipitating apparitions of deceased persons in general.

In sum, none of the findings in this study is particularly conclusive, much less fatal, with regard to the expectation/hallucination hypothesis. Nevertheless, there is another important issue that we also need to consider when evaluating competing hypotheses, and that is the convergence of features, both in individual cases and in groups of cases as a whole. For example, one potentially important finding in this study was the association between seeing an unusual light and seeing a deceased person: 89% of the participants seeing deceased persons also reported seeing a bright light, an incidence significantly higher than that among participants not seeing deceased persons (Table 6). Light is a commonly reported feature

of mystical or religious experiences, and in our studies we have found that in NDEs light was reported more often when participants were near death than when they were not (Owens et al., 1990). Seeing a light might have a physiological explanation, although we do not yet know enough about the physiological state of people experiencing NDEs to suggest an adequate one. But then, why is seeing a deceased person associated with seeing a light? We also have to remember another significant finding in this study, which is the tendency for people who see deceased persons to have an experience that also included all of the other three features examined (an OBE, a darkness or tunnel-like phenomenon, and a light) more often than those who do not see a deceased person. It would seem to be necessary to add a psychological explanation, such as expectation, to the physiological one; but, as we have seen, the expectation hypothesis also has some weaknesses.

Greyson, Stevenson, and I have discussed elsewhere (Cook et al., 1998; Kelly et al., 2000) the importance of taking into account the convergence of features when evaluating competing hypotheses. When viewed in isolation, many features of NDEs and many individual cases can be explained by nonsurvival interpretations. When we must begin invoking multiple explanations, however, for groups of cases as well as in individual cases in which many of these features occur together, then a single explanation such as survival may gain strength. Weaknesses of alternative psychological or physiological explanations, and the need to propose multiple explanations to account for all NDEs and for all features of NDEs, do not necessarily establish the survival hypothesis as the more likely explanation. Nevertheless, the present inadequacy of alternative explanations and the convergence of features suggesting survival warrant our taking the survival hypothesis seriously as we plan, conduct, and evaluate future research.

I wish to emphasize that my primary purpose in this article has not been to argue for the superiority of the survival hypothesis but only to suggest that it may be worthy of closer, more serious consideration—both as a framework for generating empirical research and as a candidate explanation for phenomena observed—than it has so far received from researchers. A major goal for future research on NDEs must be to address the question of why some people experience NDEs whereas others, in appar-

ently similar physiological or psychological conditions, do not, and the related question of why some people experience particular features of NDEs, such as an apparition of a deceased person, whereas others do not. Another important issue to be addressed in future research is the relationship between NDEs and related phenomena such as out-of-body experiences, mystical experiences, or apparitions that occur in circumstances other than those involving an NDE. Identifying possible predictors of NDEs and of particular features of NDEs may be seriously restricted and hampered, however, if all plausible interpretations of the findings are not considered. Another important purpose of this article, therefore, is to suggest that the survival hypothesis may in fact be a plausible interpretation, contrary to the assumption of most modern scientists and philosophers. On the one hand, there is a large body of empirical observations and research relevant to the survival hypothesis (for reviews, see Gauld, 1982; Griffin, 1997; Paterson, 1995; Stevenson, 1977). On the other hand, there are theoretical arguments suggesting that the survival hypothesis is not implausible, especially those stemming from the view that the brain may serve, not as the producer of consciousness, but as a filter of consciousness (for this view, see Bergson, 1913; Burt, 1968; Huxley, 1954; James, 1898/1900; Schiller, 1894). Research on NDEs—as well as on related phenomena, such as apparitions of the deceased—may benefit if undertaken with this additional theoretical possibility in mind.

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