

ANABIOSIS

The Journal for Near-Death Studies

Toward an Explanation of Near-Death
Phenomena *Michael Grosso*

Unresolved Problems in the Study of
Near-Death Experiences: Some
Suggestions for Research and Theory *Kevin J. Drab*

The Near-Death Experience: Myth or
Reality? A Methodological Approach *Michael B. Sabom*

Near-Death Experiences and the
Mind-Body Problem *Mark Woodhouse*

Near-Death Experiences: Some
Logical Problems and Questions
for Further Study *Stephen Vicchio*

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THE INTERNATIONAL ASSOCIATION FOR NEAR-DEATH STUDIES

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Anabiosis—The Journal for Near-Death Studies is a semi-annual periodical whose principal purpose is to publish articles concerned with near-death experiences and allied phenomena. Although the Journal will consider for publication any worthwhile manuscript from professionals or lay persons, it particularly welcomes submissions from scholars, scientists, researchers, and practitioners whose work is concerned with the study of human consciousness as it is affected by the prospect or occurrence of death. The Journal *will* publish articles dealing directly with near-death experiences as well as with such related phenomena as (1) out-of-body experiences; (2) death-bed visions; (3) experiences of dying persons, or those in contact with them, prior to the onset of death; and (4) experiences of persons following the death of another. The Journal *may* publish articles on other topics or experiences if such articles make a definite contribution to the understanding of the experience and meaning of death (for example, experiences suggestive of reincarnation).

Concerning the *types* of articles the Journal will publish, it specifically encourages submissions in the following categories: (1) research reports; (2) theoretical or conceptual statements; (3) papers expressing a particular scientific, philosophic, religious or historical *perspective* on the study of near-death experiences; (4) cross-cultural studies; (5) individual case histories with instructive unusual features; and (6) personal accounts of near-death experiences or related phenomena.

Finally, the Journal invites contributions from professionals and lay persons, whatever their background or orientation, but particularly from persons in the fields of medicine, nursing, psychology, parapsychology, sociology, philosophy, and religion. The Journal is especially interested in soliciting manuscripts (in English) from persons living outside the United States of America. The Journal as such has no commitment to any particular position on or interpretation of near-death experiences (and related phenomena) and specifically encourages an exchange of a variety of perspectives on these issues.

Manuscripts should be submitted in duplicate, typed and double-spaced on 8½ x 11 paper, to: Dr. Kenneth Ring, Editor, ANABIOSIS, Department of Psychology, University of Connecticut, Storrs, CT 06268.

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Editor's Foreward

With this issue, *Anabiosis*—formerly the newsletter of the Association for the Scientific Study of Near-Death Phenomena—becomes the journal of the International Association for Near-Death Studies. It is our intention that this journal become a forum for scholarly discussion and debate concerning a wide range of issues related to near-death experiences (NDEs) and allied phenomena. Not only will we be publishing the latest research and scholarly work in the field of near-death studies, we will also be concerned with an examination of NDEs for the light they shed on matters related to history, mythology, religion, human evolution, and the nature of consciousness.

All the articles published here were especially invited for this issue and all were written specifically for the *Journal* with the exception of the paper by Michael Grosso, which first appeared in *The Journal of the American Society for Psychical Research*. Although there may be an occasional exception to this policy, it is our intention for future issues of *Anabiosis* that only original manuscripts be accepted for publication. (We may, however, publish excerpts from forthcoming books in the field of near-death studies.)

Initially, we had expected to print in this issue an article by Fred Schoonmaker describing his twenty years of near-death research. This, unfortunately, was not possible, but we do plan to publish a piece by Dr. Schoonmaker and his long-time colleague, Reverend Loren Young, in the *next* issue of *Anabiosis*, scheduled for December, 1981, in which this research will be described for the first time in a professional journal.

We welcome your comments, criticisms, and, especially, your contributions.

Toward an Explanation of Near-Death Phenomena^{1, 2}

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INTRODUCTION

The human conception of death has undergone radical changes with the gradual decline and repression of archaic modes of thought. Early man lived in a world under the sway of the magical omnipotence of thought; moreover, the modern, post-renaissance man's narrow and mechanized sense of self was unknown to the first people in the childhood of the human race. Orthodox science's view of death is not the view of primitives or of people of the great religious traditions. To the typical scientist, consciousness is the by-product of brain events and perishes with the body. Nevertheless, let us bracket this dogma for a moment and ask: Is death really the extinction of human personality or does it permit some continuity of consciousness? One purpose of what follows is to insist that this deserves to remain an open question, for the evidence suggesting survival is neither so compelling nor the dogmas which deny it so commanding that one can judge on the issue with much confidence.

A complex set of phenomena associated with near-death states seems at first glance to clash with the scientifically orthodox view of death as extinction. Scientists investigating these phenomena refer to them collectively as *near-death experiences* (NDEs). I want, first, to call the reader's attention to certain features of these experiences which demand explanation; we will then look at some of the explanations that have already been proposed and try to evaluate them impartially. At the very least, classic NDEs suggest some rather bizarre capabilities of the human mind; on that score alone they deserve to be studied by students of human behavior. On the other hand, they may turn out to be the foothills of a new frontier of knowledge.

WHAT NEEDS TO BE EXPLAINED?

Two Types of Near-Death Experience

There are two types of NDE. The first consists of deathbed visions. Here the subject typically is ill, usually bedridden, and suddenly at the hour of death experiences a vision. He often "sees" the apparition of a deceased relative or friend. The experience may be accompanied by a remarkable elevation of mood. The dying person is frequently in a state of clear, wakeful consciousness, and the apparition seems to inhabit, or temporarily manifest in, the public space continuous with the patient. Early collections of these cases were compiled and studied by Bozzano (1906, 1923), Hyslop (1908), and Barrett (1926). More recently, Osis (1961) took up the question of deathbed visions, and Osis and Haraldsson (1977a, 1977b) pursued the problem using a cross-cultural approach.

In the second type of NDE a person, not necessarily ill, is suddenly brought into a state on the verge of physical death. This might arise from cardiac arrest, near drowning, mountain-climbing falls, suicide attempts, auto accidents, or other life-threatening incidents. Moody (1975) has constructed a model of this type of near-death experience. The main common elements in the experience are ineffability, feelings of peace and quiet, entering a dark tunnel, being out of the body, meeting with others, encountering a being of light, reaching a border or limit, and undergoing changes in outlook and attitude. The subsequent work of Ring (1980) largely supports the informal studies of Moody (1975, 1977). Ring describes five stages of a "prototypical" core experience: euphoric affect, an out-of-body state, entering darkness, seeing an unearthly world of light, and entering into that world of light. These stages seem like parts of an ordered and developing sequence in which subjects reach the final stages with decreasing frequency. At any one of these stages there might occur what Ring calls a "decisional process." The person "decides" to return to life. However, many cases involve anger or regret over being brought back to life; the process appears to be quite automatic. As Ring points out, we seem to be observing a prototypical or suprapersonal mechanism which manifests in a fragmentary way through a spectrum of personalities.

In addition to the five stages and the decisional process, Ring's cases include other features of classic near-death experiences such as meeting with others, panoramic memory, and so forth. On the whole, features of the two types of NDE, deathbed visions and close-call or resuscitation cases, are not inconsistent.

In a large number of the resuscitation cases the patient temporarily

ceases to display any vital signs. But can we say that such patients were "really" dead? The problem is that during the period of the patient's "death," the organism was still capable of being restored to vital functioning. But we cannot say this of the body of someone who has died "permanently"; so in this sense the resuscitated patient was clearly not dead. On the other hand, the patient, having temporarily lost all vital functioning, would in the great majority of cases have soon joined the ranks of the permanently and irrevocably dead had it not been for the intervention of on-the-scene medical workers. In this sense, one is tempted to say that the resuscitated patient really *was* dead.

The fact that resuscitated patients would, without medical intervention, have died seems rather difficult to reconcile with their having any experience whatsoever. Suppose one dies in the sense that, apart from resuscitation procedures, one would remain irreversibly dead. Once that process has begun, what biological function can we ascribe to having *any* experiences—no less the extraordinary near-death experiences? As long as the organism is functioning vitally, however imminent death may be, it seems less surprising that the brain might throw off some adaptive phenomena—phantasms, memories, deliria. But once the first step of the irreversible is taken and the brain is rapidly depleting its last store of oxygen and glucose, it seems like an overstated and perfunctory gesture to go on producing such elaborate and useless epiphenomena.

THREE CLASSES OF PUZZLING EFFECTS

In particular, there are three components of NDEs which have to be explained: (a) the consistency and universality which they generally display, (b) their paranormal (psi) aspects, and (c) their power to modify attitudes and behavior.

The Consistency and Universality of NDEs

For the phenomenologist or student of the natural history of the mind, the NDE appears as a distinctive finding; a coherent, spontaneous psychic mechanism. The firsthand accounts arise from the most diverse sources—religious believers and atheists, the educated and the ignorant; from old and young, saint and sinner, man and woman. In case after case the same message, though coded differently and in accents and styles that vary, seems to emanate from a universal stratum of consciousness. What appears is a cross-cultural pattern of phenomena that is filtered down and personalized by the experient's inherited cultural constructs. For example, as Osis and

Haraldsson (1977a, 1977b) and Ring (1980) have found, religious beliefs influence the *interpretation*, not the *content* of the experience. Lundahl (in press) has studied near-death experiences of Mormons, some of which date back a hundred years, and found the core phenomena I have described above. Crookall (1965) has collected large numbers of cases, rich in descriptive detail, which again reinforce the reality of the core phenomena. For further historical studies supporting the consistency and universality of the core phenomena, see Audette (in press) and Rogo (1979).

Moreover, there seem to be aspects of the NDE which manifest in contexts which are not directly related to pathology or life-threatening situations: for instance, in dreams (Russell, 1965), mystical experiences (Noyes, 1971), esoteric death-training techniques (Evans-Wentz, 1957), psychedelic therapy with terminal patients (Grof and Halifax, 1977), and mystery cults of antiquity (Grosso, 1979). Needless to say, more work needs to be done to substantiate the claim of universality; nevertheless, the widespread pattern of the phenomena under examination calls for an explanation.

The Paranormal Aspects of NDEs

The second component that needs explanation is the paranormal material sometimes reported in NDEs. Most of this material is anecdotal, but the cumulative effect strongly suggests that there is some substance to the psi-dimension of these experiences. Further support comes from the evidence that altered states of consciousness are psi-conducive (see, e.g., Honorton, 1977). This point is important because near-death situations generate altered states of consciousness.

The psi-components lend weight to the meaningful and consistent features of NDEs in two ways. First, they indicate that NDEs express more than just wish-fulfillment or self-serving fantasy. To the extent that such experiences contain elements of genuine psi, they are oriented toward objective reality. Secondly, psi in general suggests the existence of an alternate, nonsensory reality—a reality which could be construed in terms relevant to post-mortem states. This second point is of course controversial. But the facts about psi persist in being inexplicable in terms of physical theory (Beloff, 1980); they seem to imply the existence of an autonomous psychological order of reality. This should be kept in mind in trying to understand the wider implications of near-death phenomena.

Of course, there is nothing to prevent us from assuming that any psi components found in NDEs result from delusive expectations and irrational desires. This psi-dependent Freudian interpretation will

have to be considered later. For now let us briefly examine some of the types of ostensible ND-related psi effects, for it is these effects which sharpen the challenge of near-death phenomena.

Psi effects related to deathbed visions. In so-called "Peak in Darien" cases, the dying person sees the apparition of a person not known by the former to be deceased. If this is what it appears to be, we could describe it as a kind of transworld ESP. There are a few reports (Barrett, 1926, Bozzano, 1906) of cases in which nobody present was aware that the person whose apparition was seen was in fact dead, thus ruling out telepathy from people at the dying person's bedside. Cases of this type are rare, but this is not surprising in view of the peculiar combination of factors necessary to produce them. Unfortunately, most of the Peak in Darien cases derive from the older literature, though Lundahl (in press) and Ring (1980, p. 208) offer some current illustrations. The impersonal nature of dying in modern hospitals may account for the dearth of recent examples.

Psi effects related to resuscitation cases. In resuscitation cases, or other types of near-death encounters, the dominant psi component comes in the form of ostensibly veridical out-of-body experiences (OBEs). Not all OBEs, of course contain psi components. Yet there seems to be an almost typical report of a classic OB situation in which a person near death finds himself located outside his body and able to observe in detail events occurring in neighboring regions of space. Cases such as this, assuming they can be corroborated, strongly suggest paranormal OB perception, though in any single instance *ad hoc* normal explanations could be invoked. In order to substantiate such claims of ND-related paranormal OB perception, it will be necessary in the future to obtain the cooperation of medical professionals. Obviously this will not be an easy task, given the stringent duties of physicians and nurses on the job. Yet much could be learned if psi investigation could be routinely incorporated into certain medical settings where one might suppose a gold mine of useful data awaits exploration.

As far as I know, Michael Sabom, a cardiologist working at the Emory University School of Medicine in Atlanta, is the first physician actively concerned with investigating the paranormal elements of NDEs. As an example³ of an OBE with a possible psi component, Sabom has described the case of a patient anesthetized for open-heart surgery who, after a period of blackout (called "entering the darkness" by Ring and "the tunnel" by Moody and Crookall), suddenly became aware of his body being operated on. The patient's face was covered by a sheet, yet he claimed to have observed the

operation from a point out of and above his body, as if he were another person, an unconcerned observer. The patient described how the "shining metal" of the knife cut through his chest, the syringes inserted on each side of his heart, and the injection into it. He watched a surgeon cut off bits of his heart, poke around some veins and arteries, and then discuss with the other doctors where the next bypass was to be made. He observed a doctor wearing blood-stained white shoes, another with a blood clot in the fingernail of his right hand.

Two observations particularly struck Sabom from his perspective as a cardiologist. The patient expressed surprise at the large size and actual location of his heart; he compared its shape to the continent of Africa. According to Sabom, this is an apt comparison. The patient also said that part of his heart had a lighter color than the normal myocardial tissue; according to Sabom, discoloration would have marked the site of the patient's previous heart attack.

Such apparently veridical OBEs need to be explained; they lend some weight to the unverifiable visionary claims of near-death or dying percipients. For, if one aspect of the NDE is verifiable while at the same time providing testimony for an extraphysical factor, then it seems less implausible to ascribe ultimately verifiable reality to the rest of the experience.

There are also reports of OBEs in deathbed vision cases. But here the apparent separation process may be more gradual. Osis and Haraldsson (1977b, p. 129) write: "While still functioning normally, the patient's consciousness might be gradually disengaging itself from the ailing body." And in Barrett's (1926) early study, witnesses are cited who have "seen" dying persons' "doubles" splitting off and disappearing at the moment of death. These observations might explain why terminal patients often experience a lessening of pain and discomfort shortly before they die.

The dying patient may only be approaching the state that the resuscitated patient has already entered; yet there still seem to be gradations of entering more deeply into the NDE, as the work of Ring (1980) shows. Obviously, more has to be done on this "stage of entry" idea. One approach might be to obtain information on the dreams and mentations of people just prior to their sudden death or onset of fatal illness. For example, I have recorded several cases of individuals who, a day or so before a sudden fatal illness, unaccountably started to talk about their deceased relatives, had slips of the tongue suggesting subconscious preoccupation with them, spontaneously put their affairs in order, settled accounts, etc., as if in preparation for death.

Psychokinetic phenomena have also been reported in the context of death and dying. Bozzano (1948) made a study of PK events in conjunction with the time of death. Osiris and Haraldsson (1977b, p. 42) referred to a few tantalizing incidents—for example, the stopping of clocks belonging to two of Thomas Alva Edison's associates and also of his own clock within moments of his death. And L. E. Rhine (1970, pp. 330-334) cites several interesting cases of PK effects associated with the dying and the dead, taken from her collection of spontaneous cases on file at the Institute for Parapsychology.

Finally, as further evidence bearing on the psi-conducive nature of death and dying, there is the S.P.R. Census of Hallucinations (Sidgwick and Committee, 1894, p. 393), which showed that veridical apparitions "which coincide in time with the death of the person seen"—i.e., the "agent"—are more numerous than apparitions in any other category.

Changes in Outlook and Behavior

We observe in both types of NDEs a modification of outlook, affective states, values, and goals. This constitutes the third component of these experiences that calls for explanation. In the deathbed cases such effects are obviously of short duration because the patient dies shortly after the experience. Nevertheless, Osiris and Haraldsson (1977a, 1977b) found cases of near-death rise of mood that could not be explained by medical factors. Sabom (1980) did follow-up studies six months after his patients' experiences and found that the modification effects persisted. Generally, it would appear that the near-death syndrome produces beneficial effects—in some respects resembling religious conversion. Chief among these effects is the reduction or elimination of the fear of death and alterations in outlook concerning the meaning of life and the nature of reality. The true benefits of these transformative experiences may, however, be blocked because of the confusion they elicit; patients are often unable to share their experiences and even fear for their sanity. Hopefully, with a better understanding of these phenomena the medical establishment will learn to enhance their utility. In sum, such near-death enhancement effects need to be explained because their adaptive potential seems incongruous with thinking of them as illusory or pathological.

GENERAL REMARKS ON EXPLAINING NEAR-DEATH EXPERIENCES

For an explanation of the NDE to work, it must address itself to

all three components of the phenomenon: its universality and consistency; its paranormal dimension; and its transformative effects, which are usually of a positive nature. It is the *unique combination* of these components which makes it a challenging matter to explain the NDE. Obviously, the mere fact that a phenomenon is universal and consistent in itself need not impress us; drunkards of all cultures and personality types, for example, consistently have the same sort of experiences—say, delirium tremens. Consistency and universality here is no bar against seeing the drunkard's experience as delusory. But it is a different matter with near-death experiences, for we do not expect delusory experiences to produce momentous changes in personality or to involve extensions of normal human capabilities.

Methods of Gathering Data

Scientific research in NDEs is still in its infancy. Most of the work so far has consisted of collecting reports unsystematically from pre-selected sources. Little or no medical and psychological data were included in the early collections of cases. The first systematic approach was that of Osiris (1961), who used modern sampling techniques and computer analyses to sort out the patterns in his data. The recent work of Sabom (1980; Sabom and Kreutziger, 1978) and Ring (1980) has rightly stressed the importance of prospective research. Respondents were selected on the basis of undergoing a near-death *event*, not necessarily a near-death *experience*. Both researchers found that over 40 percent of the patients who had undergone near-death events had the experience we are trying to explain. This seems to show that the NDE is a common clinical occurrence. However, this may be a hasty conclusion. Patients who have had an unusual experience when on the verge of death might be more likely to respond to a questionnaire than patients not having had such an experience, thus biasing the sample. A truly prospective investigation of NDEs would have to take place within a given hospital where *all* resuscitated patients were asked, as a part of the routine examination, whether or not they recalled any unusual experiences.

Special Problems in Trying to Assess NDEs

Near-death phenomena are not easy to assess impartially. One reason is the emotional reactions they arouse. On the one hand, people disposed to believe in life after death may be inclined toward credulity. On the other hand, those disposed to equate belief in survival with outmoded superstition might be prone to avoid dealing with the more challenging features of NDEs. Another reason is in-

tellectual. The prevailing scientific orthodoxy tends in one way or another to identify human beings with their physical organisms; this, in effect, logically rules out any meaningful concept of survival of death. In short, the survival hypothesis, which is one possible explanation of NDEs, appears to be peculiarly resistant to rational and scientific investigation.

Requirements for an Adequate Scientific Theory of NDEs

The first requirement for any scientific theory or hypothesis is that it be consistent with all aspects of the phenomena being studied. But consistency by itself is not enough; more than one hypothesis may be consistent with the phenomena. It is also necessary to show that competing hypotheses don't work. Further, the theory must be consistent with the total system of knowledge. If this consistency is not forthcoming, large-scale revisions in this system may be necessary. Finally, an adequate theory should enable us to predict new features and ramifications of the *explicanda*. Given these requirements, I don't think we know enough about near-death phenomena to provide a decisive theory or explanation. At most, we can take the first step and try to see whether some of the explanations that have already been proposed are consistent with the reported phenomena.

EXPLANATIONS OF NEAR-DEATH EXPERIENCES

The Bipolar Model of Osiris and Haraldsson

Using information from a pilot study (Osiris, 1961), and other sources, Osiris and Haraldsson constructed a model to predict patterns in deathbed phenomena; this model is a "bipolar" one which contrasts two mutually exclusive hypotheses: survival and destruction. They then compared these two poles of explanation with relevant patterns in the findings on deathbed visions from their cross-cultural surveys of deathbed phenomena in the United States and India (Osiris and Haraldsson, 1977a, 1977b). The patterns involved had to do with the source and content of the visions, the influence on them of various medical and psychological factors, and their variability of content across individuals and cultures. Consider, for example, the influence of hallucinogenic factors; on the assumption of the survival hypothesis, the authors predict that drugs known to cause hallucinations will *not* increase the frequency of survival-related visions, nor will other states in which contact with reality is weakened or absent. They also predict on the survival hypothesis that conditions known to be incompatible with occurrence of ESP will decrease the fre-

quency of such visions. Regarding this point, for instance, the authors found that the majority of the reported deathbed hallucinations were visual and of short duration—which is the case in most spontaneous ESP experiences. (Pathological hallucinations tend to be auditory.) And finally, they found that, unlike the case of pathological hallucinations, there was little variability in the content of deathbed visions across individuals and cultures, again a finding compatible with the survival hypothesis. The authors conclude that overall the “central tendencies” of their data are consistent with the survival hypothesis of near-death experiences as they formulated it in their bipolar model (Osis and Haraldsson, 1977a, p. 258).

Let us now look at several reductionistic explanations of near-death experiences, some of them engendered by criticisms of the Osis-Haraldsson work, and then proceed to a discussion of a non-reductionistic Jungian approach and the survival hypothesis in an effort to understand these experiences.

Medical Factors

Drugs and sensory deprivation: The parapsychologist John Palmer (1978) has criticized the work of Osis and Haraldsson (1977a), who in turn provided a lengthy rejoinder (1978). The main thrust of Palmer’s remarks is that certain baseline data are lacking in the study which invalidate the major conclusions, e.g., that medical factors such as drugs did not significantly influence the deathbed apparitions. Osis and Haraldsson contend that they did take the relevant information into account in interpreting their data, and that this information was derived from medical literature and the judgments of medically trained respondents. A major point made by Osis and Haraldsson in their response to Palmer is that the counter-survival explanation has to fit a special *type* of apparition—namely, the survival-related apparition. It is not enough to say, for instance, that drugs produce hallucinations to explain away deathbed visions; you must show that the kinds of hallucinations typically produced by drugs fit the pattern of hallucinations occurring in the deathbed scenario. But this is no easy matter, for typical drug-produced hallucinations are not at all like typical near-death hallucinations.

Palmer points out (p. 394) that sensory deprivation and stress are known to facilitate hallucinations. This is true. In a study of the psychological aspects of cardiovascular disease, for example, Reiser and Bakst (1975, p. 637) speak of the “simultaneous sensory overstimulation and monotony” prevailing in the hospital recovery room or intensive care unit—conditions conducive to hallucinatory experi-

ences. Three factors, however, clearly differentiate such hospital-induced hallucinations from NDEs. First, the former usually take place hours or days *after* the close brush with death, while the latter are reported by the patient as having occurred *during* the resuscitation procedures. Second, the post-operative effects in the first group of patients consist largely of "confusion, disorientation, and misperceptions," while the hallucinations of the ND experiencers are often reported as vivid, detailed, and accompanied by feelings of joy. And finally, Kornfeld and Zimberg (1965) describe the behavior of patients in the first group who "go berserk" and try to flee from the medical attendants; this type of behavior contrasts sharply with the frequently reported near-death behavior of NDE patients who become angry when they are restored to normal consciousness.

Cerebral anoxia and temporal lobe seizures. In a review of Osiris and Haraldsson's (1977b) *At the Hour of Death*, James F. McHarg (1978), a British psychiatrist, criticized the authors for failing to consider the "most important" (p. 886) explanation for their ND findings: cerebral anoxia (oxygen shortage in brain metabolism). Osiris and Haraldsson (1979) reply that the main behavioral manifestations of cerebral anoxia are anxiety, disorientation, and distortions of perception. These are poor matches for the ND syndrome. Further, there are reports (in Audette, 1979) of the extensive but hitherto unpublished work of Schoonmaker, a Denver cardiologist, who found cases of typical near-death experience in which cerebral anoxia was definitely ruled out as a relevant factor.

McHarg also considers temporal lobe paroxysms (epileptic seizures) and cites three examples from his current clinical work. McHarg adds an important point: "A paranormal basis for the *content* of deathbed visions is not invalidated, however, by a medical reason for their mere occurrence" (p. 886). But McHarg goes on to suggest that what Osiris and Haraldsson take to be survival-related features of deathbed visions—e.g., seeing apparitions of the dead with a take-away purpose and feeling religious elation—are "rather typical [emphasis mine] of temporal lobe paroxysms." This, however, seems to me an unverified exaggeration. There are actually a variety of epilepsies with varied symptomology. Temporal lobe seizures are commonly displayed in bizarre, explosive episodes (Elliot, 1966); for example, a patient urinated into a fireplace, another climbed into a window-display of pastries—unaware of what they were doing. Visual aspects of seizures, unlike those of the classic NDE, consist of "dimness of vision, hemianopia [blindness in half of the visual field], blindness, crude flashes of light" (Elliot, 1966, p. 143). Furthermore, Schoonmaker (see Audette, 1979) is said to have collected to date 55

cases in which resuscitated NDE patients displayed flat EEGs. This clashes with the idea of temporal lobe paroxysms since they consist of deviant patterns of electrical activity in the brain, not the *absence* of such activity.

The temporal lobe is associated with memory, and seizures in that area often evoke memories. We are reminded of Penfield's (1975) experiments on electrostimulation of the temporal lobe which evoked vivid memories in epileptic patients. Penfield, however, underlines the mechanical nature of these electro-resuscitations of memories; this, again, contrasts with the meaningful experience of meeting others in a transformative near-death experience.

Finally, what if some NDEs *were* accompanied by temporal lobe paroxysms? McHarg notes that such brain dysfunctions could conceivably facilitate paranormal experience. Perhaps McHarg's patients—those who were not near death—were catching glimpses of another world. Why must transworld ESP occur, if it does occur, only among those who are near death? There might be other conditions of eruption into the "other" world—natural, spontaneous, or even deliberately inducible.

Religious Expectations

Palmer (1978, p. 395) thinks that dying patients who believe in survival expect to be taken away by apparitions; hence their hallucinations may be generated by their expectations. But what about the "no-consent" cases, in which the patient departs under protest? This seems to indicate an external agency. And there are also cases where the patient has no religious beliefs and expects nothing in particular. On the whole, the empirical findings across the board so far indicate that religious beliefs influence the *interpretation*, not the *content*, of experiences of this nature.

Even more problematic is Palmer's assumption that believers expect a benign reception committee to greet them at the time of death. Actually, there is plenty of evidence from religious phenomenology indicating less sanguine anticipations. Christian and Hindu iconography and mythology are replete with intimations of post-mortem horrors; in both traditions there are many paintings, illustrated manuscripts, and icons which depict the moment of death as a perilous passage, a frightful encounter with the forces of good and evil. From a psychological point of view, religion seems to encourage attitudes of collective guilt, enshrined in such doctrines as Original Sin. Certainly the ancient Greek *Hades* or the Babylonian *Kurniga* (land of no return) did not suggest any blithe expectations.

According to the *Tibetan Book of the Dead* (Evans-Wentz, 1957), there is—as Moody, Ring, and others have found—a Being of Light awaiting us at death; but the religious Being of Light is awe-inspiring, terrifying, and most of us cannot bear the thought of facing it.

The Epicureans of Graeco-Roman antiquity happily embraced a form of materialism whose chief charm was a promise of extinction after death. For the Epicureans this seemed an improvement over the anticipated terrors of the after-world. One could indeed make a good case for an *irrational* basis to the rise of modern materialism as a form of flight from the tyranny of priests and their infernal visions of an after-life. The empirical picture, by and large, is more humane; happily, it clashes with the paranoid propensities of the religious imagination. I want to bring this point out because certain explanations of ND phenomena arouse resistance among the more rigidly rational types of modern man. There are historico-psychological reasons for this defensive armoring against everything “occult,” “spiritual,” or “supernatural.”

Depersonalization

In one of their several papers on near-death experiences, Noyes and Kletti (1976) suggest a psychologically reductionistic explanation of the phenomena: that they are expressions of the “depersonalization syndrome” (feelings of unreality, emotional detachment, slowing of time, etc.). Let me begin with a comment on the title of this paper: “Depersonalization in the Face of Life-Threatening Danger: A Description.” This seems to indicate that the authors did not set out to *describe*, but rather—as shown by the term “depersonalization” in the title—to place an *interpretation* on the phenomena. “Depersonalization” is hardly a *descriptive* term. The authors appear to have ruled out at the start any but a reductionistic explanation. However, this explanation is forced; depersonalization does not adequately characterize near-death phenomena. The main difficulty is that the two types of experience have opposite affects: depersonalization tends toward a flattening affect and shriveling mental capacities. It is essentially a negative phenomenon. In NDEs, on the other hand, we observe an opposite tendency toward heightened affect, expanded awareness, and a sense of profound and lasting significance.

In connection with one of their cases, Noyes and Kletti (1976) describe what they call the *feeling of unreality*. The subject reported that as she

went deeper, reality vanished and visions, soft lights and an extreme

feeling of calm acceptance passed over me like waves. . . . I was stronger because of being more whole, because I was no longer *me* as I had once known myself. I had a feeling of becoming part of a greater whole . . . (p. 22).

The authors are too hasty in forcing this *vanishing of reality* into the pathological slot of the depersonalization syndrome. Their tacit assumption seems to be that any deviation from standard, everyday reality *must* be pathological. The possibility that what was involved was the loss of only *one* sense of reality, and that *another* sense of reality was emerging does not seem to occur to Noyes and Kletti. The experience doesn't describe a loss in an exclusively negative sense; the loss also involved a *gain*, an opening into a larger reality. In fact, the enlarged sense of reality seems to have been in part a function of the loss of personal identity in the narrow sense. The subject seems not to have been *depersonalized*, but—more accurately—*transpersonalized*.

Schizoid Defense

Several psychologists have discussed the way the fear of death gives rise to defensive belief-systems involving the notion of a soul distinct and separable from the body, and able to survive death. According to this way of thinking, belief in an immortal principle of man is seen as a disguised alienation from the body—a schizoid solution to the brutal problems of being human. R. D. Laing (1965) is no reductionist, but he has provided trenchant descriptions of the "unembodied self"; there is, according to Laing, an existential process whereby a person, in the face of the oppression and terrors of existence, retreats to his inner self and creates a private citadel safe from the disasters of the external world. Could this help us to explain near-death experiences? Laing writes: "In this position the individual experiences his self as being more or less divorced or detached from his body. The body is felt more as one object among others in the world than as the core of the individual's own being" (p. 69). This alienation from the body, which Laing sees as a strategy of desperation, tends to produce the schizoid personality. Schizophrenia, according to Laing, is only an extreme development of this basic defense strategy.

The schizoid tendency would be aggravated in a near-death crisis—and it is true that reports of NDEs are replete with accounts of alterations of the patient's body image such as those Laing describes. But in his account of the schizoid process everything culminates in sensations of inner deadness leading to a need to re-establish contact with the external world. This is the *reverse* of the near-death process, where we typically observe an enlivening of affect along with a readi-

ness to let go of the external world.

Narcissism, Denial of Death, and Freudian Reductionism

Few people have written more searchingly on the denial of death than the psychoanalyst, Otto Rank. In his collection of essays, *The Double*, Rank (1971) examines the widespread phenomenon of the double as it appears in literature, folklore, and anthropology. The empirical cases that Rank looks at—e.g., those of de Maupassant and Goethe—are instances of autoscopy. In these, the percipient sees an apparition of himself in outer space. This, of course, is unlike the typical out-of-body experience associated with a near-death crisis in which the perceiving consciousness seems to be located outside the body. Nevertheless, Rank generalizes from the autoscopic phenomena and chooses to see all constructs “of soul, higher worlds, and immortality” as projections of the narcissistic ego in the face of the “increasing reality-experience of man, who does not want to admit that death is everlasting annihilation” (p. 84). Rank is uncompromising in his Freudian reductionist judgment: “The idea of death therefore is denied by a duplication of the self incorporated in the shadow or in the reflected image.” This makes short shrift of the highest human dreams. It is an outlook which inverts the classic Platonic formula: Plato’s image-sensory world is now the *really* real world and the realm of ideas and ideals are reduced to images and shadows. Thanks to his commitment to Freudian dogma, Rank can speak confidently of “increasing reality-experience” as if the only real experiences were definable in terms of a single reality principle.

But there are two lines of reasoning that do not tally with Rank’s conclusions. First, he describes the personality characteristics of those who generate “double” phenomena; they seem to be narcissists—persons with pathological fixations on themselves. If this is so, then “double” phenomena ought to be proportional to narcissistic behaviors. This is not an obviously true proposition. But we might be able to formulate such a claim in a testable way—for example, we could predict that persons who have the most gratifying NDEs also display a significant frequency of narcissistic traits. At the moment, however, there is no evidence in support of such a relationship.

The second difficulty with Freudian reductionism is the veridical psi-component sometimes found in OBEs and NDEs. The psychiatrist Jan Ehrenwald (1978) follows Rank in claiming that OBEs “exhibit an assorted set of defenses and rationalizations aimed at warding off anxiety originating from the breakdown of the body image, from the threatening split or disorganization of the ego, and, in the last analysis, from the fear of death as a universal experience” (p. 161).

Unlike Rank, however, Ehrenwald has thought and written a great deal about psi. He admits that some OBEs (and no doubt some NDEs) contain veridical information that strains the wish-fulfilling hypothesis; but this is not enough to persuade him that OBEs are not fundamentally delusive and the product of denial of death. As far as I can see, however, this is little more than the expression of a metaphysical dogma. After all, it is hard to see why, if an experience is merely a subjective wish-fulfillment, it should contain any verifiable, objective information. Moreover, many persons who have had OBEs report that their lives were significantly and permanently changed by these experiences (see, e.g., Osis and McCormick, 1978); such changes are not what we would expect to result from narcissistic illusions. And there is still another point about OBEs which is at odds with the Freudian interpretation. There are numerous cases in which the experient becomes frightened *after* finding himself out of the body; the fear of death results from the experience itself and causes its sudden termination. Thus the fear of death seems to *inhibit* the experience rather than give rise to it.

The Birth Experience

According to Stanislav Grof, a researcher into the therapeutic and theoretical implications of psychoactive chemicals, subjects under the influence of LSD often relive aspects of the birth process (Grof and Halifax, 1977). The contention—quite plausible, especially in the light of Penfield's (1975) work on the neuro-electrical activation of memories—is that under special circumstances we may re-experience the agony of expulsion from the amniotic sac of "oceanic bliss" into the world of individual existence. For Grof these traumatic birth memories have important therapeutic implications. He is not, however, a Freudian reductionist; on the contrary, he has used nonspecific chemical amplifiers of consciousness to enrich and enlarge the cartography of inner space.

Based on Grof's observations, the astronomer Carl Sagan (1979) suggests an intriguing explanation of near-death experiences in his popular tour of the wonderland of modern science, *Broca's Brain*. He poses the problem effectively: "How could it be that people of all ages, cultures and eschatological predispositions have the *same sort* of near-death experience?" (p. 302). Sagan speculates that the basis of near-death and mystical experiences is somehow "wired-in" (note the characteristic mechanical type of metaphor) to the physiology of the human organism, and that drugs or other types of mechanism might trigger and thus reactivate these experiences in the form of

vivid hallucinations. Out-of-body experiences would be affective replays of ejection from the womb at birth. The tunnel effect reported so frequently in NDEs might represent a flashback to the process of exiting through the "tunnel" of the vagina. (It might, of course, as well be seen as the psychic equivalent of the process of exiting from the present dying body.) Sagan writes:

. . . every human being, without exception, has already shared an experience like that of those travellers who return from the land of death: the sensation of flight, the emergence from darkness to light, an experience in which, at least sometimes, a heroic figure can be dimly perceived, bathed in radiance and glory. There is only one common experience that matches this description. It is called birth (p. 304).

Sagan calls attention in this quotation to three important ideas. One is that we seem to be dealing with a basic mechanism of psychophysiology. The second is that there is a fundamental analogy between the birth process and the death process. And third is that NDEs and mystical experiences are somehow structurally related.

However, the difficulty arises in seeing the NDE as *nothing but* an illusory psychophysiological reflex. At least we would require some evidence in support of the hypothesis; for instance, if Sagan is right, then people who had bad births—difficulties in the process of exiting through the birth canal, etc.—should not have benign near-death experiences. (And would those who come into the world by way of Caesarean section be immune to NDEs?) Yet even if such connections were established, nothing would follow concerning the "reality" of near-death episodes. Other factors need to be taken into consideration, such as the occurrence of veridical psi components. Further, the essential structures of birth and death experiences differ in this way: birth moves from "amniotic bliss" to expulsion into the traumatic light. The pattern in the near-death process is the reverse: we *begin* with the pain and shock of the dying process, and *then* proceed to experience a light which, however, is uniformly said to be warm, loving, and gentle. If the near-death experience is a flashback and replica of the birth experience, why this inconsistency? The forms of the two processes are not analogous, as we would expect if one were a flashback of the other. They seem in fact to be the *reverse* of each other: being born into this world is painful and dying out of it seems to be pleasant. It is clear that we are not yet any closer to an adequate explanation of near-death experiences.

A NONREDUCTIONISTIC JUNGIAN APPROACH TO NEAR-DEATH EXPERIENCES

Grof, from whom Sagan borrowed to formulate his hypothesis

about NDEs, is a phenomenologist with Jungian leanings. Data emerging from psychedelic research led him to validate Jung's concept of archetypes and their relation to the stream of our personal consciousness. Grof, like Jung, was clearly not disposed to reducing them to mere physiological epiphenomena. I would like to propose a possible Jungian explanation of near-death experiences. At the same time, I believe that this approach will have to be supplemented by findings from parapsychology.

The Archetype of Death

I shall make use of two assumptions from the field of Jungian analytical psychology. The first assumption is that certain collective psychic structures—forms, ideas, archetypes, empirically substantiated by data from dreams and mythology—in some logically prior way *exist* free from the limits of space and time. The archetypes represent the point of intersection between personal time and timeless transpersonal being. Jung (1968) himself put it this way:

The deepest we can reach in our exploration of the unconscious mind is the layer where man is no longer a distinct individual, but where his mind widens out and merges into the mind of mankind—not the conscious mind, but the unconscious mind of mankind, where we are all the same (p. 46).

The second assumption is that the archetypes function to assist the growth and evolution of the personality. Jung calls this process "individuation." The archetypes come into play especially during mental emergencies, as automatic responses to crises of individuation. Jung (1971, p. 38) also stresses what he calls archetypes of transformation, which involve "typical situations, places, ways and means, that symbolize the kind of transformation in question." One other immediately relevant thing to note is the ineffable, paradoxical, and numinous nature of the archetypes.

Research on near-death experiences may be uncovering data which empirically support the hypothesis of an "Idea" or "Archetype of Death"—a collective psychic structure whose function is to assist a human personality during a major crisis of individuation. According to Jungian theory, such an archetype would represent and contain the racial memory and wisdom of mankind. The collective experience of the human race has come up with this as the best possible way to die. The archetype is a paradigm—an old Platonic term—for how to die. It is optimally functional for dying in the same way the lung through evolution has become optimally functional for breathing. Near-death phenomena point toward an archetype or paradigm for a *healthy death*—a somewhat paradoxical expression, I admit.

The advantage of this explanation is that it saves the important subjective phenomena: the experience of ineffable unity, transcendental elation, and so forth. For, as Jung claims, the archetypes are merging phenomena with numinous overtones. It also accounts for the transformative effects of NDEs, which seem to involve release from the limitations of ordinary, space-time bound individual existence. Yet there remain two thorny problems for the hypothesis of a death archetype. First, what is the fate of *personal* consciousness in this archetypal transformation of death? Second, what are we to make of the psi components of NDEs? The genuine paranormal effects obviously occur in a specifiable space-time framework and seem to involve awareness of particular deceased individuals.

According to the theory of archetypes, superpersonal structures "survive" death partly because they never undergo birth the way individual bodies do. Before John Jones was, the archetypes are. But what happens (in this Platonic-Jungian atemporal world) to the *personal* consciousness of John Jones? Some of the testimony from near-death cases indicates that the unique personality survives, for what the experiencers often claim they "see" are apparitions of recognizable, *unique* beings. Of course, this is not all; other things are also "seen," sensed as amorphous presences, or otherwise "perceived" as mythic forms. In the world glimpsed by dying patients, personal and transpersonal elements apparently co-exist. The near-death experience, like the Jungian archetype, is full of paradox. It strains the limits of our normal conceptual apparatus, as if it would in some way both unite and dissolve opposites.

The facts seem to support a paradoxical explanation of the fate of the individual. The description from Noyes and Kletti (1976) that I quoted above bears repeating: ". . . I was no longer *me* as I had once known myself. I had a feeling of becoming part of a greater whole." This speaks of a *transformation* of personal identity. There are different ways of describing this fundamental experience. Some call it the highest quest of the mystic, others regression to the magical omnipotence of primary narcissism. How shall we decide which interpretation to place upon this basic phenomenon of transcendence? This brings us once again to the paranormal factor in NDEs.

The Psi Component

The reductionist has neat and coherent schemes for digesting the dreams of artists and the visions of mystics and dying persons. But it is no easy matter for them to swallow such puzzling fish as ESP and PK. It is the psi component in near-death experiences that stands

squarely in the way of reducing them to being mere illusions.

But having said this, we must also consider the explanation offered by parapsychologists who have a leaning toward reductionism. They would claim that if we combine the known paranormal powers of embodied minds with a basically Freudian metaphysics, we can account for near-death phenomena and still reject the survival hypothesis. Suppose a dying patient experiences a veridical apparition of a relative who died before the patient was born, precognizes in detail some unusual future event, or provides a verifiable report of being out of the body. Why, these parapsychologists ask, can't we say that this is merely an example of the patient's psi operating in the service of a regressive tendency toward wish-fulfillment? In fact, there is hardly anything, no matter how remote from "ordinary" reality, that they do not ascribe to the supposed infinite psi-potential of the living human being. This "super-ESP" hypothesis (Gauld, 1961), as it is called, has been aptly characterized by Osis (1979) as "that strange invention which shies like a mouse from being tested in the laboratory but, in rampant speculations, acts like a ferocious lion devouring the survival evidence" (p. 31).

Moreover, as other parapsychologists have argued, if such extraordinary paranormal abilities exist in human beings, then it seems plausible to take the next step and consider the possibility of survival. In short, the super-ESP hypothesis is self-canceling, for the more effectively it argues for fantastic powers of the living mind, the less implausible—in fact, the more probable—it seems that there is an element of human personality capable of surviving after death.

THE SURVIVAL HYPOTHESIS

The immediate attraction of the survival hypothesis is its consistency with the beliefs of almost all those who have had the classic near-death experience. Ring (1980), for example, found a "huge effect" here. Although those having the experience were found to be *less* inclined to believe in survival to start with, as compared to non-experiencers, they were much more likely to believe in it afterwards. Thus, as Ring points out, it is not merely "coming close to death that tends to convince one that there is life after death; it is . . . the experience itself that proves decisive. The testimony here is unambiguous" (p. 169). Of course, since the claims of these experiencers, particularly those about the nature of the after-death world, are not publicly verifiable, we cannot consider them as "proof" of survival. But a mass of such accounts with congruent claims must, after a critical point, begin to count as a special consensus. Is it possible that those

who come closest to experiencing death know by acquaintance more about it than the rest of us do?

Needless to say, this will not do for the skeptic. Belief in life after death is unpopular among most intellectuals today. One reason for this is that there are supposedly good *a priori* arguments against the conceivability of survival. An excellent discussion of this problem from a philosophical point of view is offered by H. D. Lewis (1978) in *Persons and Life After Death*. The prevailing conception of the person derives from modern physicalism, the ruling philosophy that sees everything mental as ultimately reducible to physical states. Yet the major tendency of parapsychological research is to upset the pretensions of physicalism. Indeed, some able persons have persuasively argued the case for the impossibility of reducing psi phenomena to physical principles (see, e.g., Beloff, 1980). This is a problem that requires full discussion. I will only remark here that the more unlikely it becomes that psi can be explained in terms of physical principles, the more intrinsically plausible the survival hypothesis becomes.

An evaluation of the survivalist explanation of near-death phenomena demands a full account of other types of evidence for survival, such as mediumistic communications, veridical apparitions of the deceased, and reincarnation memories. Explaining NDEs is obviously a large undertaking. The most that can be said now is that they cannot be adequately accounted for by any of the reductionist theories, but that to invoke either Jungian or outright survival hypotheses would be premature. To embrace such non-reductionistic explanations is to commit oneself to far-reaching revisions of the general nature of things. One desires more solid ground from which to make such transcendent leaps. In the light of the facts, one is entitled to abstain from final judgment and rest in the skeptical attitude—but this means with regard to the pronouncements of physicalism as well as to the claims of the survivalists. One is rendered free—in a Jamesian, pragmatic way—to accept the survival hypothesis, for such a belief is consistent with near-death phenomena. But the great question of who we are and what our fate is after death is still open. We may be on the threshold of new discoveries. Whether we advance or whether we stagnate in indifference will depend upon the courage and collaboration of many—both hard-headed scientists and students of the humanities.

NOTES

1. This paper is scheduled to appear in a book edited by Dr. Craig

- Lundahl: *A Collection of Near-Death Research Readings*. Chicago: Nelson-Hall, in press.
2. This article is reprinted here through the kind permission of the author and Mrs. Laura A. Dale, editor of *The Journal of the American Society for Psychical Research*, where Dr. Grosso's paper was originally published.
 3. This example is taken from a tape recording of a lecture given by Dr. Sabom at the Psychical Research Foundation (Sabom, 1980; see also Sabom and Kreutziger, 1978).

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Unresolved Problems in the Study of Near-Death Experiences: Some Suggestions for Research and Theory

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INTRODUCTION

The occurrence of unusual experiences in association with near-death conditions or brief periods of clinical death has attracted widespread attention as a result of the work of researchers such as Moody (1975), Osiris and Haraldsson (1977) and Ring (1980). Commonly termed near-death experiences (NDEs)¹ these events are characterized by their realism and by a common set of features, including out-of-body experiences, the perception of tunnels, bright lights, landscapes, and deceased friends and relatives, as well as strong positive affect.

Public interest in NDEs has focused on the implication that such cases are evidence for post-mortem survival. However, the majority of scientists studying NDEs and similar phenomena have tended to be more conservative in their outlook, preferring to treat the subject as a psychological issue until further research can "replace present conjectures, if not with certainties, at least with a better judgement than we can now make concerning what is probable" (Stevenson, 1980).

The focus of NDE research is currently on the collection and analysis of anecdotal descriptions. Whether this field of study advances beyond the present level to produce "understanding, prediction and control above the levels achieved by unaided commonsense" (Allport, 1947) may well depend more on the questions asked by researchers than on the nature of the phenomenon itself. A promising beginning has already been made in quantitative and conceptual studies of NDEs (Gabbard, Twemlow & Jones, in press; Osiris & Haraldsson, 1977; Noyes, 1977; Ring, 1980) which supports the idea that these phenomena will prove amenable to scientific investigation. My hope is that the thoughts and suggestions presented in this paper will contribute to further advance research and theory into NDE phenomena and related subjects.

Although the consensus of most workers in the field is that no satisfactory explanation has yet been found for the NDE, this is not an admission of the failure of scientific method, nor does it imply that a naturalistic explanation will not be found for the phenome-

non. The investigation of NDEs is still primitive and has yet to develop its own methodology. As a result, most of the limitations and difficulties encountered by NDE researchers are not inherent in the phenomenon itself, but are expressions of problems brought in from other fields. The chief offender here is the field of psychology which, because of more than fifty years of behavioristic orientation, has failed to advance in its study of complex internal events. For example, mental phenomena such as imagery, dreams and thought are as little understood as NDEs. It will take some time before our conceptual tools reach a level of sophistication comparable to our technologies.

In my judgement, the immediate impetus to NDE research will nevertheless come from the application of ideas developed in such disciplines as psychiatry, cognitive psychology, and neurophysiology. As advances are made in these fields, NDE research will benefit and perhaps one day even reciprocate with its own contributions (perhaps as part of a new subspecialty, e.g., psychothanatology).

Guiding Assumptions of NDE Orientations

A frequent failing in scientific inquiry, and one which could prove particularly harmful to NDE research, is a form of myopia in which an investigator seeking to test a favored hypothesis may be blinded to the occurrence of potentially valuable events not related to that hypothesis (Bachrach, 1965). Progress is far more likely to come from researchers who are receptive to new ideas even when they do not agree with their preconceptions about NDEs.

Although the field of NDE research is still confined to the study of anecdotal reports, no one undertakes an investigation without some assumptions as to "what will happen." Even when these assumptions are implicit or vague, they exert a guiding influence on what one chooses to examine and how that examination is to be conducted.

The assumptions guiding contemporary interest in NDEs can be divided into the following very general groups:

1. The *Parapsychological* assumption states that the mind can become independent of the body, and separate from the physical dimension. Since it can function in other realms of existence, it follows that the mind can possibly survive physical death. The similarities between certain eschatological mythologies and NDE descriptions are considered by many as evidence suggestive of an "independent soul."

2. The *Psychopsychical* assumption has been useful to those para-

psychologists (Ehrenwald, 1974; Palmer, 1978; Tyrrell, 1953) wishing to explain veridical material gained during out-of-body experiences (OBEs) without subscribing to the idea that the mind can be independent of the body. This approach postulates that the OBE or NDE is a complex tapestry of hallucinatory material and psychically-derived information. Such an assumption, while leaving the nature of the psychic processes undetermined, accommodates all aspects of the OBE or NDE: the veridical information acquired is attributed to the psi-conductive properties of the condition, and non-veridical contents are simply fantasy-constructs of the unconscious which provide a subjectively compelling "explanation" for the origin of the information.

3. The *Archetypal* assumption states that a variety of abnormal conditions can activate latent unconscious processes ("matrices") deep in the mind, producing the archetypal elements which constitute NDEs. This view of NDEs has been advocated by such theorists as Jung (1959) and Grof and Halifax (1977) who argue that these neurological substrates of mind are the basis of man's personality and therefore should be investigated to gain a deeper understanding of human nature.

4. The *Pathological* assumption states that NDEs are the products of a mind disorganized by abnormal psychophysiological conditions. Any regularities in the content of NDEs or suggestions of their transformative effects are explained psychiatrically as ego-defensive maneuvers (e.g., depersonalization, regression, autoscopy, or indiscriminate acceptance of all afferent stimuli) designed to deal with the disrupting condition (Noyes, 1977; Todd & Dewhurst, 1955).

Because NDEs are such rich experiences and so little understood at present, their features can be "massaged" to prove almost any assumption. The ease with which NDE data can be made to conform to one's guiding assumptions is particularly evident in the proselytizing attempts of some religiously zealous individuals who have published collections of NDE reports claiming to support their particular ideologies (Ford, e.g. 1978; Rawlings, e.g. 1978; Wilkerson, e.g. 1978). An example of the opposite extreme is the argument that the similarities between NDEs and psychopathological states are *ipso facto* proof that they are identical (Siegel, 1980).

It seems to me that the most sensible position to take on NDEs at this time is that any number of explanations have a fair chance of being correct, and, accordingly, it would be premature to commit oneself to any particular stance beyond its heuristic value for generating hypotheses. There is evidence to suggest that some portions of NDEs may be pathological, while other features may have a

parapsychological component. It is reasonable to assume that each guiding assumption may have some validity and that the most comprehensive explanation may be that the NDE is an amalgam of pathological, psychological, and parapsychological components which are integrally interlinked in ways that we may never fully understand.

Future research would be far more productive if it is preceded by a consensus on the goals and methodologies of the field, as well as by a concern with clear, operationally oriented definitions. The importance of making premises and assumptions explicit cannot be over-emphasized; whenever possible, they should be developed into formal scientific hypotheses. Ring's (1980) effort to develop scales by which to quantify the experiential aspects of this phenomenon is an especially propitious step toward developing reliable and valid measuring instruments in this field. My belief is that the overall aim of NDE research is to gain a publicly useful understanding of the nature of these experiences; therefore, research procedures and theoretical speculations should reflect a concern with elucidating the phenomenon rather than an indiscriminate adoption of concepts and methods from other fields solely for their convenience or prestige value.

It seems to me that a promising direction to follow would be the path of specialization. I believe that considerable value will be found in moving from cumbersome global theories to mini-theories regarding different aspects of the NDE. Later in this paper I will present a number of ideas for such NDE research. Among these suggestions is the possibility that the NDE may actually be a *composite* of various discrete states of consciousness. If this idea is correct, then each state in the NDE may yield to different forms of investigation, and that in turn should increase the likelihood of interdisciplinary contributions.

For now, however, I wish to begin with some suggestions for improving current approaches to NDE research.

SUGGESTIONS FOR NDE RESEARCH

Using the Anecdotal Report

Personal accounts of unusual subjective experiences have never been well received in academic psychology. Should use of the anecdotal report be tolerated in the early stages of inquiry, there is considerable pressure to move as rapidly as possible to testable hypotheses and systematic research. Although the *goal* of NDE research should be to test such hypotheses in the laboratory, the field of near-

death studies may have to resign itself to the possibility that anecdotal material will continue to comprise the bulk of its data for some time. Because of the ample supply of NDE reports, however, there should be sufficient data available to develop testable hypotheses.

In view of a continued reliance on anecdotes, researchers should thoroughly examine the issues peculiar to this kind of data collection. Studies of unrestricted descriptions of subjective experiences are generally prone to some of the severest methodological problems existing in the social sciences (Selltitz, Wrightsman & Cook, 1976).² Some of these will be considered next.

In view of the strong feelings associated with NDEs, it is understandable that certain individuals may feel compelled to fabricate NDE stories. The media's widespread dissemination of NDE reports provides anyone wishing to describe an NDE or to elaborate upon a meager one all the information necessary to deceive even a seasoned investigator. No satisfactory criteria currently exist by which to evaluate the credibility of an NDE report. The accumulated experience in the field of psychical research regarding psychic fraud and delusion should caution the NDE researcher against accepting an account as true simply because the anecdotist seemed to lack any obvious motive for dishonesty. As West (1948) points out, not only is willful deceit often hard to detect, but sometimes the individual may have no reason other than the pleasure of deception for its own sake, or the desire to foist bogus experiences upon an unappreciative scientific world. Although this problem is somewhat lessened by the agreement among descriptions from individuals ignorant of others' NDEs, there is little question that the validity of any studies carried out on NDEs is a direct function of the honesty of the individuals reporting their experiences.

The unreliability and deceptiveness of memory creates serious problems for many fields concerned with retrospective accounts of experience. The problem of false and distorted memories seems particularly acute when dealing with altered states (Fischer, 1975); once again, however, the agreement among many recalled NDEs makes this difficulty less problematic. The subject of memory difficulties, especially in relation to state-specific knowledge and NDEs, is nevertheless a particularly important one and will be touched on a little later in this paper.

Until the experimental production of NDEs becomes feasible, it is likely that most studies will be based on non-random sampling, i.e., using whatever cases come to one's attention. Since not everyone may wish to communicate his NDE, and the researcher is limited in

the number of cases he can collect in a geographical area, any sample will necessarily be biased and hence difficult to generalize from.

The possibility of bias of a different sort stems from the researcher's expectations which may prejudice the results of an interview or influence him to reject cases that do not meet his preconception of an NDE. This latter form of selection bias seems to plague all NDE researchers, for one must either draw a line between the vagaries of most hallucinations and those experiences displaying patterns similar to those delineated by Moody (1975), or be overwhelmed by irrelevant material. At this stage of NDE research it is premature to say where to draw the line between acceptable and unacceptable cases for the NDE category. In my own collection, for example, I have accounts of many unusual experiences occurring in connection with perimortem conditions which contain material not relevant to the Moody pattern (e.g., teleological insights, precognitive visions, telepathy, clairvoyance, and so on) but which may nevertheless be important for future study. The Moody pattern offers a general guide, but researchers should avoid inflexibility here and should remain attentive to miscellaneous elements that may yet open new doors.

One direction of analysis of anecdotal material that might prove especially revealing would be to examine the more qualitative characteristics of the NDE using Marsh's (1977) ideas of focus, structure attributes and flow for describing alternate states of awareness. Another valuable area of investigation would be the use of comparative linguistic analysis to detect differences in the language of NDE reports and other experiences (Landon & Fischer, 1970).

Classifying the NDE

Although the term *near-death experience* is useful when referring to the aggregate of unusual mental events associated with perimortem conditions, it has limited value when discussing the phenomenon in the context of other psychological states. In addition, the lack of an adequate explanation for the NDE makes it difficult to classify within the spectrum of human experience. The emphasis on abnormal physiological conditions often associated with NDEs may further aggravate the problem. Thus one tends to consider the concomitant mental events as pathological in nature. The resultant diversity of terms currently employed to refer to NDEs, e.g., hallucinations, visions, depersonalization, spiritual journeys, and so on, tends to be more evaluative than descriptive and thus may hinder interdisciplinary investigation of the phenomenon.

These difficulties are further compounded by the fact that the

NDE does not represent a *unique* set of unusual events; such elements as tunnels, out-of-body experiences, other-worldly beings, light, and panoramic memory, for example, are also found in many other conditions, although recent research suggests that some elements may occur with significantly less frequency in non-perimortem conditions (Drab, in preparation; Gabbard, Twemlow & Jones, in press). In order to focus on the commonality of these elements across a range of disparate conditions, I have suggested that the term *paraversal* be used when referring to experiences involving these elements (Drab, 1980). Although this paper is concerned with the NDE, it should be understood that many of the ideas expressed here are equally applicable to the majority of unusual experiences containing paraversal elements. One should, then, view the NDE not as an isolated and special phenomenon in itself but rather as one in a family of related experiences containing paraversal elements. If these experiences share a common mechanism, such an approach will encourage the development of interlocking experiments that will reveal more about the mechanism and how it operates in each situation. A promising direction for future research would be the systematic analysis of similarities and dissimilarities between experiences in perimortem conditions and other conditions associated with unusual states of consciousness brought about by hallucinogenics, temporoparietal tumors, meditation, hypnagogic states, psychomotor epilepsy, CO₂ inhalation, lucid dreams, psychotic hallucinations, mystical visions, out-of-body experiences in otherwise normal conditions, and so on.

Undertaking Cross-cultural Studies

The value of NDEs depends to a great extent on what they may reveal about human nature. Once the reports of near-death experience from other cultures are examined, it will be easier to judge which aspects of the NDE represent more or less universal experiences and which aspects are culturally determined. Cross-cultural studies may also introduce new explanations or insights, especially when a culture has a very different view of NDEs from that which is characteristic of Western Society. Although the establishment of the cross-cultural universality of an NDE element would be a significant advance in understanding, it will not *ipso facto* prove that the experience is a real event; alternative explanations may be equally supported by such evidence.

The cross-cultural study by Osis and Haraldsson (1977) of hundreds of deathbed experiences of Indians and Americans is so far the

only investigation of its kind. Although the researchers felt their findings were consistent with those of Moody, regrettably they did not concentrate on most of the more elaborate paraversal elements in their study.

NDE researchers might well take note of a cross-cultural study by Sheils (1978) which demonstrated that about 95 per cent of nearly 70 non-western cultures believed in out-of-body experiences. McIntosh (1980) found results similar to those of Sheils in a field study examining beliefs about out-of-body experiences in three ethnic groups of Papua Guinea. These studies illustrate the type of work NDE researchers could undertake.

Although the attempt to find parallels between NDEs and the eschatological beliefs of other cultures is a valuable avenue for research (Garfield, 1975; Grof & Grof, 1980; Holck, 1978), it cannot substitute for the collection of first-hand NDE accounts from members of other cultures.

Centralizing Collection of NDE Materials

It is generally assumed that the more data one collects concerning a particular phenomenon, the fewer problems one has with random sources of error. Therefore, studies based on large samples of NDE reports are as a rule highly preferable to those using few cases. Unfortunately, such studies demand far more time, funds, and facilities than are presently available to most individuals interested in conducting such research. The ideal solution would be to establish a central archives which would serve as a repository for NDE reports. The content of such an archives would be maintained in computer storage, microform, or written material, and could be made available to interested inquirers. The International Association for Near-Death Studies intends to create this type of archives. Toward this end, investigators will be encouraged to submit copies of their own collections for eventual storage. Organizations that frequently receive NDE reports, such as the British and American Societies for Psychical Research and the Psychical Research Foundation, will be asked to send copies of such material to the archives. In order to facilitate retrieval of data, a classification and coding system will need to be developed. Centralization of data collection will also encourage standardization of data gathering methods, through the use of such structured interview schedules as the one developed by Ring (1980).

TOWARD A COGNITIVE CONCEPTION OF THE NDE

Discrete States of Consciousness

The notion of *altered states of consciousness* is one of the more attractive conceptions used to classify the NDE. Unfortunately, the term has been used so indiscriminately that it is almost meaningless, having become synonymous with any sort of unusual experience or perception; applying it to the NDE does not clarify the matter. The faddish over use of the altered state idea has not only made it a weak conceptual tool, but has also obscured the important controversy over whether the concept of alterations in consciousness is even valid (Weitzenhoffer, 1978).

Tart (1975, 1978) has improved the situation somewhat by proposing the term *discrete altered state of consciousness*. His use of "discrete state" is intended to single out radical changes in awareness that represent unique, dynamic patterns of structures and subsystems comprising consciousness. Examples of such changes include non-dreaming sleep, dreaming sleep, lucid dreams, marijuana or alcohol intoxication, and meditation. Although there can be considerable variations in the particulars *within* a discrete state, the overall organization of the state is stabilized by a number of processes causing it to retain a discrete configuration which distinguishes it qualitatively from other states. Regardless of whether altered states are as distinct from each other as Tart suggests, or are merely differences of degree on a continuum of awareness (Horowitz, 1975; Singer, 1977), the general idea helps clarify a muddled issue. As Tart (1977) points out, the common-sense form of discrete states is similar to the gestalt concept of pattern recognition, the feeling that "this condition of my mind feels radically different from some other condition rather than just an extension of it."

The question here, therefore, is whether the NDE can be considered a discrete altered state of consciousness. My initial impression is that the NDE containing elaborate elements such as tunnels, mystical unity, landscapes and panoramic memories exhibits a radical departure from the configuration of ordinary waking consciousness. Closer examination, however, reveals that the NDE does not represent a single unique pattern of consciousness, but rather a variety of *discrete configurations*. For example, the experience of leaving one's body and floating around the room is clearly a different organization of awareness from the state of ordinary consciousness, but it is also very dissimilar from a state in which one is in a beautiful, brightly illuminated pastoral scene, joyfully interacting with deceased rela-

tives, or from an overwhelming experience of mystical unity with a brilliant light.

This qualitative difference between contiguous elements may well imply the lack of a direct causal link between them. Therefore, the possibility exists that rather than constituting an unfolding unitary process as Ring (1980) has proposed, the content of NDEs should be regarded as a collection of independent, discontinuous psychological events. At least some of the elements (e.g., out-of-body experiences, mystical unity with light, and being in other-worldly environs) seem to represent discrete states, while the remaining elements (e.g., elevated mood, noises, colors, and simple forms) seem to represent unusual variations in normal cognitive and perceptual processes. Thus, I submit that the NDE is not a specific state of consciousness containing a causally linked sequence of elements, but is instead a condition in which one can expect to find the occurrence of successive, yet independent, discrete altered states of consciousness intermixed with miscellaneous variations in perception, emotion and thought.

This conception places emphasis on the discrete states which are known to occur in other conditions and decreases the importance of the role of the eliciting pathological condition by viewing it as one of a number of situations conducive to the occurrence of such mental events.

Transitional Features of NDEs

A common feature of NDE reports is the absence of logical transitions between elements. An experient may one moment find himself floating above his body and in the next moment moving through a tunnel or walking in a peaceful meadow, with no sense of how he "went" from one setting to another. Expressions such as "suddenly" and "the next thing I knew" abound in reports used to describe the abrupt changes in elements (Drab, 1976). When interviewing near-death experients, I have often observed that their descriptions tend to concentrate on continuous aspects such as positive emotions and pay little attention to the lack of continuity between elements—even though such discontinuity in normal waking experience would be rather disturbing to most people.

In a recent study of mine (in preparation) of 71 reports of moving through a tunnel-like space, 79 per cent of the cases experienced no prior elements or sense of transition to "their" tunnels, i.e., they just suddenly were "there". This is particularly surprising in view of the transitional meaning generally given to tunnels and passageways. Of

the cases studied, only half reported any elements subsequent to their tunnel experiences; and of those reporting further elements, half reported no transition to the new element—only an abrupt change in awareness. Although systematic studies have not yet been performed on other specific features of NDE contents, perusal of the reports in my collection clearly shows the same kind of discontinuity between them. Instances where a logical transition does occur between elements may represent important *exceptions* to the rule or merely the retrospective interpretations of the experient trying to present his NDE as a cohesive, meaningful event.

These sudden transitions between elements in NDEs may represent shifts from one discrete state to another. Tart (1978) discusses the transitional periods between discrete states and notes that they seem to be fragmentary, frequently being described as a blank space. He postulates that these transitional periods are inaccessible to recall because they represent intervals when consciousness is in a disorganized state; it is at these times that psychological and/or physiological patterning forces are constructing a new discrete state. If this idea is correct, then it may be possible during these transitional periods to detect the formative processes resulting in a new state. Tart suggests that it may be plausible to make thorough observations about these periods by “training to establish an ‘observing self’ that phenomenologically is partially or wholly detached from the ongoing operations of consciousness” (1978).

Language and Memory

Many NDErs find it difficult to communicate their experiences to others, e.g., Ring (1980) found approximately 60 per cent of his cases claimed that their perceptions and emotional experiences during the near-death episode defied verbal expression. Another common problem is the NDEr's inability to recall portions of his experience; some experiencers remember very little, yet have a strong sense that they were aware of far more. Most individuals who undergo perimortem conditions recall no unusual experiences. This finding, however, may be a result of a disruption in memory retrieval rather than a lack of experience *per se*.

Difficulties in communication and memory are in fact common to many altered states, and create methodological problems for researchers interested in such states. Problems with expression and memory, which may be interdependent, would suggest that the experience is “incommunicable” to the individual's own cognitive structure. This gives it a sense of “specialness” in the individual's mind which may be unwarranted.

A positive step toward understanding the nature of NDEs is to help experiencers recall and communicate their experiences. The subject of language and memory anomalies is a complex area which has generated some fascinating theoretical models that may apply to NDE research. A brief discussion of these theories may help to illuminate certain aspects of the NDE.

The information-processing approach to hallucinations advocated by Horowitz (1970, 1975) assumes that there are various systems used by the mind for the representation of thought: enactive, image and lexical. During many unusual conditions, the mind makes little use of the lexical (language) mode because the image representational system predominates. Thus, in normal consciousness it would be very difficult to translate experience like NDEs into the lexical system. Therefore, it is the over-reliance of the mind on the image mode during altered states, rather than the inadequacy of language itself, which is at fault. Because the typical NDE seems to be composed predominantly of imagery and emotion, this explanation may generate research on how information processing theory can assist us in coping with recall and communication problems. We may be able to obtain this information by encouraging NDErs to communicate through drawings, poetry, and other imagery-oriented media.

Another approach to language and memory difficulties entails the concept of *state-boundness* which assumes that experiences occurring in a particular state of awareness can never be fully retrieved or communicated accurately in another state. Hence the experience is "bound" or "specific" to that state (Bustamante et al., 1970; Goodwin et al., 1969). In order to regain knowledge acquired during an NDE, the experiencer's original state must be either re-induced or approximated in some symbolic manner. The concept of state-bound experience seems to possess valuable applications for NDE research. For example, the original state may be approximated by hypnotically regressing the individual to the time of the experience or by producing a comparable physiological condition through drugs or external stress.

The attractiveness of the state-bound concept should not, however, lead to a neglect of more mundane explanations for memory and communication difficulties, e.g., repression, inexperience with altered states, poor education or the desire to make the experience seem more profound than it actually was. A state-bound approach also tends to encourage a feeling that many aspects of the NDE are impossible to convey or study in normal consciousness. Tart (1972) has suggested training what he calls state-specific scientists capable of

conducting research into the states they are experiencing. Although this is an exciting idea, it is questionable whether such investigators will be an actuality soon.

As a variant on the state-bound concept, I propose that we consider the Guthrian idea that information is contiguously paired with whatever pattern of stimuli was present during its acquisition. Retrieval and communication processes are appreciably affected if the stimulating conditions existing at the time of acquisition were altogether different from those existing at the time of attempted retrieval and utilization (Weitzenhoffer, 1954). Conversely, similarity between the original conditions and those present during recall should facilitate retrieval of the original information.

Difficulty in information transfer between states may be due to insufficient similarity between states or to cultural constraints which specify that these states should be experientially separated. Although some altered states are easily repeatable (e.g., through drugs or spiritual disciplines), permitting generalization, the NDE tends to be a single event, and the individual is not always able to assimilate the information adequately. This obstacle may be overcome by exposing individuals who may undergo perimortem conditions in the near future (e.g., chronically ill patients, persons with a high risk of heart attacks, mountain climbers, etc.) to various altered states and by teaching them appropriate language for describing these states (Marsh, 1977; Siegel & Jarvik, 1975). This "cross-training" approach may give the individuals a wider associative range of patterns that will assist recall and communication of NDEs if they do occur.

Psychophysiological Correlates of NDEs

Assuming a direct relationship exists between psychological and physiological events, it would seem reasonable to look for specific psychophysiological indices of the NDE as a distinct state or composite of states. Palmer and Vassar (1974), Sarbin and Slagle (1972), and Kelly (1977) have argued that the weaknesses of verbal reports can be alleviated to some degree by combining them with psychophysiological measures as convergent indices of a particular experience. Although there are considerable difficulties in assessing the relationship between subjective states and physiological processes (Kennedy, 1976), any progress in this area could mark a breakthrough in NDE research. If a certain psychophysiological pattern were found to accompany the NDE, this knowledge could rapidly lead to fundamental insights into the structure and operation of the mechanisms producing the experience. For those who may feel

resistant to reducing the NDE to a physiological explanation, it is well to remember that we are only discussing the *conditions* that are conducive to a variety of experiences containing paraversal elements. Controlled study of NDEs may be accomplished if individuals can be trained, possibly through biofeedback, voluntarily to produce relevant physiological states in themselves.

CONCLUSIONS

There is a tendency to forget that however unusual an experience may be, it still involves a functioning mind that continues to receive, interpret, store and retrieve information often in the same ways used in its normal state. The NDE is, therefore, a *cognitive* phenomenon regardless of its nature; the NDEr retains a human mind attempting to make sense of the information presented. Even if the parapsychological explanation proves correct, there is no reason to assume that a disembodied mind ceases to organize and use information in ways consistent with everyday cognitive processing.

This assumption has influenced most of what I have discussed in this paper and suggests that some of the more experimentally productive approaches to the NDE will be based on what is already known about normal cognitive functions.

In any event, the subject of NDEs is an exciting and challenging area which will benefit from the contributions of both the layman and the scientist. Indeed, at this stage in NDE research, no idea is too outlandish if it stimulates rational inquiry.

In this paper, I have discussed only a few of the new directions that NDE research might take and have outlined a cognitive conception of the NDE which I believe merits further development. I hope that my suggestions will contribute to the growing interest in the interdisciplinary scientific study of the NDE.

NOTES

1. My own preference would be for the more inclusive phrase *perimortem experiences*.
2. Since many of these problems are created by individual idiosyncracies the strong interagreement among NDE descriptions tends to improve the situation slightly.

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The Near-Death Experience: Myth or Reality? A Methodological Approach

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Since the publication of *Life After Life* (Moody, 1975), numerous reports have confirmed the existence and basic pattern of the near-death experience (NDE) as described by the author of this book. Considerable controversy continues to exist, however, over the interpretation of these near-death accounts. A major portion of this controversy focuses upon one central question: Is the NDE an authentic experience? For the near-death survivor who has encountered an NDE, there is usually little doubt as to the reality of the experience: "That was real. If you want to, I'm perfectly willing for you to give me sodium pentathol . . . It's real as hell."¹ For a large segment of the medical and scientific community, however, these experiences are felt to be mental aberrations provoked by the emotional and physiological stresses of the near-death condition: "People who undergo these 'death experiences' are suffering from a hypoxic state during which they try to deal psychologically with the anxieties provoked by medical procedures and talk. . . . We are dealing here with the fantasy of death . . ." (Blacher, 1979). Thus, a standoff exists between the near-death survivor who insists that his NDE is "real as hell" and leading scientists and physicians who maintain that such experiences are merely a "fantasy of death." If this controversy is to be resolved, some objective means of evaluating the NDE must be found. It is the aim of this paper to present one such means of evaluating this experience in regard to the current controversy over whether, indeed, the NDE is myth or reality.

I first became interested in investigating the NDE after reading Dr. Moody's book, *Life After Life*, in 1976. My skepticism of Moody's findings prompted me to begin a systematic investigation of these experiences in patients of my own who had survived a close brush with death. Accompanying me in this endeavor was Sarah Kreutziger, then a psychiatric social worker at the University of Florida. One of the goals of this study was to determine whether or not the NDE was an accurate account of a *real* situation.

The patients we chose for this study had all survived at least one

episode of *unconsciousness* and *physical near death*. *Unconsciousness* was taken to mean any specific period of time during which a person lost all subjective awareness of environment and self—a condition most commonly referred to in lay terms as “blacking out.” *Near death*, on the other hand, meant any bodily state resulting from an extreme physiological catastrophe, accidental or otherwise, which would reasonably be expected to result in irreversible biological death in the majority of instances and would demand, if available, urgent medical attention. Using systematic interviewing techniques, we questioned these patients about possible recollections from their period of unconsciousness and near death. In addition, we recorded each person’s age, race, area of residence, size of home community, occupation, religion, frequency of church attendance, previous knowledge of NDEs, and fear of death and belief in an afterlife both before and after the crisis. Characteristics of the medical crisis were also noted, including the type and location of the event, the estimated duration of unconsciousness, and the method of resuscitation. If details of the medical resuscitation *per se* were claimed to have been “observed” by the patient, then a comparison was made between the details of the *actual* resuscitation (as reconstructed from the medical record and/or the testimony of others present at the time) and the patient’s own account based on his NDE.

To date, one hundred and sixteen near-death survivors have been interviewed in this study. The mean age of this group is fifty-three years, with a range from seventeen to eighty-six. Seventy-eight of these persons had been resuscitated from a cardiac arrest, twenty from a non-cardiac comatose condition, ten from an intraoperative crisis, seven from a severe accident, and one from a suicide attempt. Seventy-two persons from this group could recall a definite experience that had occurred during the period of unconsciousness. In thirty-six of these experiences, the person claimed to have had a floating sensation “out-of-the-body” during which his own unconscious physical body and immediate surroundings were “observed” from a position several feet above the plane of the physical body. This “out-of-body” sensation was typically described in the following manner: “It was a feeling of height, great distance, a light feeling, like being up in a balcony looking down and watching all this and feeling very detached as though I was watching someone else, like you might watch a movie.”²

In attempting to explain this portion of the NDE, physicians and scientists have traditionally begun with the assumption that visual and auditory perceptions are *always* a direct and indivisible function of the physical body and can, under no circumstances, occur apart

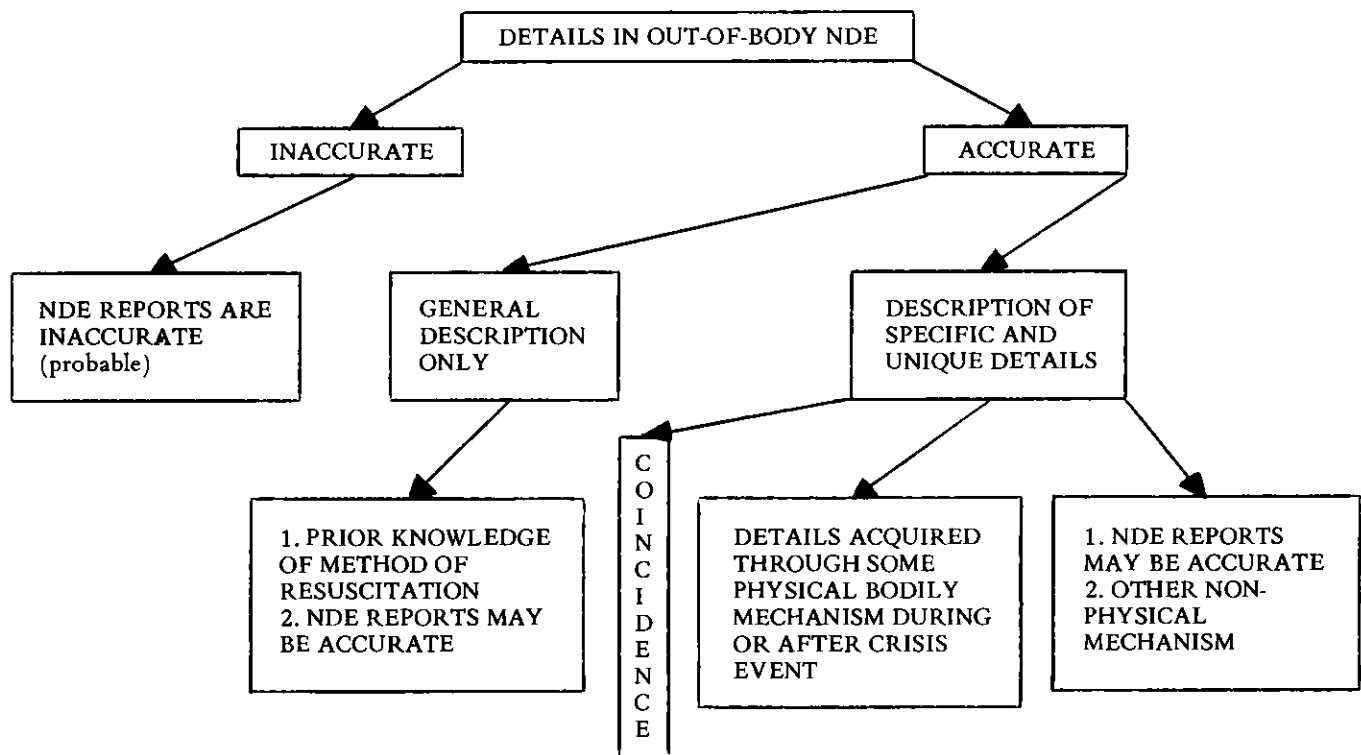
from the physical confines of brain and body. Using this line of reasoning, proponents of this traditional approach have concluded that any sort of "out-of-body" experience, near death or otherwise, is simply not possible regardless of how "real" it had seemed at the time. Explanations for the apparent contradiction between experiential (i.e., "It's real") and traditional scientific (i.e., "It's simply not possible") assessments of the NDE are then sought to find some physical or psychological bodily mechanism to account for the NDE. Such explanations have included hallucinations, dreams, temporal lobe seizures, physiological derangements (hypoxia, hypercarbia), depersonalization reactions and others.

When I began my study of the NDE, I was convinced that the NDE would readily be accounted for using some traditional scientific explanation. I have searched for such an explanation over the past five years and have not yet found one that is adequate. In recent years I have begun to consider another approach toward explaining the NDE, an approach which holds open the possibility that the perception of an "out-of-body" experience at the point of near death may be accurate, i.e., that it somehow *does* occur "out-of-body." To test this hypothesis, I am using a scheme similar to the one outlined in Figure 1. According to this scheme, I am critically examining the details of all NDEs that contain descriptions of resuscitative events and am comparing these descriptions to the medical records and/or the testimony of others present at the time of the near-death event. If the details reported from the NDE do *not* match the known facts in the case, then this would be strong evidence against the claim that an accurate observation of the situation had occurred from an "out-of-body" (or any other) location. If, on the other hand, the details from the NDE matched the known facts in the case, several possibilities would arise. If only a general description of the resuscitation was contained in the NDE—such as, "I saw several doctors and nurses standing around my bed doing things to my body"—then this description, although materially correct in its own right, would offer little substantive evidence that the resuscitation had been viewed from an "out-of-body" location. Such a general description could easily be contrived by a nonmedical layman using common knowledge of hospital procedure *without* invoking any special means of perception.

However, if accurate details of the resuscitation were described by the near-death survivor from his NDE and these details were found to be specific and unique to the situation in question, then something more than "common knowledge" of resuscitation procedure would be demonstrated. If such specific details were present in only one or

FIGURE I

DETAILS REPORTED IN THE OUT-OF-BODY NDE



two cases, one might argue that the finding is mere coincidence. If several cases were found, however, coincidence would be unlikely and other possibilities would arise. Could the near-death survivor have acquired the information about his resuscitation through some physical *bodily* mechanism either during or after his crisis event? For example, could he have caught a *physical* glimpse of the ongoing procedure at a time when he was not fully unconscious? Could he, while semiconscious, have physically listened to what was being said at the time and then constructed a visual image of the actual situation based on this verbal input? Or could someone (i.e., a doctor or nurse) have explained to him after he had regained consciousness what had occurred during the resuscitation? All such physical explanations for the acquisition of accurate and specific knowledge must be considered first before examining alternative hypotheses.

Suppose, however, that no physical explanation can be found—that is, the near-death survivor acquired accurate and specific information about his resuscitation that was out of his physical visual field, was not discussed by others present, and was not explained to him following his return to physical consciousness. The possibility would then arise that the information was acquired through some non-physical means such as an “out-of-body” experience.

Consider, for example, the following transcript of an interview I had with Don Knowlton, a respiratory therapist at a neighboring Atlanta hospital. In this interview Mr. Knowlton describes to me the NDE of one of his patients whom he had helped to resuscitate. Many of the details of this man’s NDE were verified by Mr. Knowlton. Unfortunately, I was not able to personally interview this patient prior to his death a few days following his cardiac arrest. Thus, this patient is not included in my NDE study. Nevertheless, I present this case as an example of many of the points raised in the foregoing discussion.

(In this interview the K stands for Mr. Knowlton, the S for the author.)

K: *I was on the floor working with a patient and heard the code call and realized that the room was across the hall from me and I just sorta ran in. The patient was a 62-year-old Caucasian male and he was on the floor and the nurse was attempting to breathe him. The first thing I did was to start CPR. He was beginning to go bluish. His face was mottled. The nurse was breathing him so I started CPR. He was a post-MI [heart attack]. He had been in CCU [Coronary care unit] about three or four days, I’m not really sure, and he came out of*

there. It had been a mild MI. He was on the floor for routine care and he had a lung problem and we were treating him for that. He had been out of CCU for about a day and a half. Anyways, as I was pumping him, the nurse left the room. She left the room to go get the crash cart, so I started doing both—one man CPR. I must have done it for less than a minute and by that time there were other members of our team there. I continued CPR and the next member of the team started breathing with an Ambu* bag. By that time the crash cart had come into the room and we had gotten the 100 percent O₂ [oxygen] bag off the cart and hooked it up to the wall outlet and were bagging him with 100 percent O₂. So I stayed with CPR. As they brought the crash cart in the room, it was behind him possibly a foot or so and to the right. We use an aluminum lock on the bottom of the crash carts that theoretically you can remove if you bend twice like that. The nurse doing it was a student nurse and she was uptight about it and was having difficulty. I saw what was happening so I reached in my pocket and gave her my scissors to put in the lock to twist in between beats. I continued then with CPR for four to five beats, and she handed me back my scissors. At that time the resident [physician] had arrived and took over with normal resuscitation procedure. [We used] a normal black anesthesia mask [to breathe for the patient]. The one we were using was the larger size. He was not obese but was heavy and well nourished. He had an underslung jaw so in order to cover it, we just grabbed the biggest mask we could find which came well above the bridge of the nose almost to the hairline.

S: Was the patient lying on the floor face up?

K: Yes.

S: Was the Ambu bag to the right or left of the patient's head?

K: It can be either way but in this case it was to the right. I was working to the left. I was in on the left side of him. Automatically we bag from the opposite side . . . [The crash cart was] behind his head and to the right and the Ambu bag and part of a therapist, because the therapist was down on her

*[A face mask with a bag used to ventilate unconscious patient]

knees bagging, was between him and the crash cart.

S: So the mask, bag, and therapist would have obstructed his vision from the crash cart even if his eyes had been open?

K: It would have been beyond the range of peripheral vision. I could tell you he didn't have his eyes open because if we don't have the patient hooked up to a monitor during CPR, I try to watch his face to see if there is any response until somebody gets in and does a femoral artery pulse check and then I start concentrating on that. I was watching his face for the color change and his eyes were closed. It's been my experience in codes [Code 99] that they are rarely open.

S: Right. Mine too.

K: Now I don't say I watched him every second and he could have opened his eyes for a moment without me seeing it. When the doctor came in, he started checking the eyes to see if they were fixed and dilated and I do remember him lifting the eye up. The eyes were not fixed and dilated at that point but they were enlarged. And by then some three or four minutes had passed and I can only gauge roughly in time. It's very difficult to look back and later say it was so many minutes. Well, the resident came in and checked the eyes and then went down and started monitoring the femoral pulse. The nursing supervisor had come in the room and was standing behind the crash cart and was recording. She functioned as recorder. [She is] probably an easily-identifiable woman. She's heavy-set and a good five foot eight or nine inches tall and probably in her late 50's or early 60's. She's very quiet—never says a word. She was doing all of the recording. I had been working on him for about fifteen minutes and his staff doctor came in and they had gotten the monitors on him and he was straightlined [no heart beat] except of my pulsing. He was hooked up to the EKG about five minutes into the code I would say. So we stopped and we both watched the monitor and it was flatlined. The resident had me stop for about thirty or forty-five seconds. They had already gotten the IV in. Anyway, they stopped for about thirty seconds, I guess. It seemed like a long time so I assume it was thirty seconds, you know. He was straightlined so I went back to pumping. I pumped for another, possibly, four or five minutes. There

were some medications given and I don't really remember what they were. I usually shut all that out and concentrate on time. He had me stop again and then we were getting a little bit of ventricular fib—[a weak and ineffective heart rhythm]—just a squiggly line. So I went back to pulsing [CPR] and there were more medications given and we began to get a beat. I thought I felt a beat. He was being perfused apparently because in this process we drew an arterial blood gas. It came back and I remember the blood gas—his PO₂ was somewhere around 180 or so. We were over-ventilating him obviously. The pH [of the blood] was sitting down around 7.25 or so. I began to feel a little beat and I told the resident at the time so I stopped. At that point we began to get a normal sinus rhythm. We got a few ectopic-type beats [extra heart beats] and then we got a normal sinus rhythm. His blood pressure at that point with a Doppler [device used to measure low blood pressures] was about 80 or 90 over doppler. Then they started dopamine [a cardiac stimulant]. At that point I quit CPR but stood right there ready. So we got his blood pressure up to 110 over 60, somewhere in there—I don't really remember. I remember it was stable enough so we could move him. He was still being bagged but we had elected not to intubate him at that point which is contrary to the usual. Normally we just slip it [the intubation tube] right in [the lung]. He had a slightly underslung jaw and we started at one point to intubate but the position he was laying in, it was hard to get around behind him. So he had an underslung jaw and when we put the laryngoscope [instrument used to insert intubation tube into lungs] down, it was very difficult to visualize the [vocal] cords, so we just came out and went back to bagging [ventilating with Ambu bag]. And then we began to get intermittent voluntary breaths, so the therapist elected not to pursue intubation. We never cardioverted him, which is again unusual. We got his blood pressure up and he was breathing on his own and on the monitor his pulse looked fairly stable. So we rolled a sheet under him and picked him up to put him on the bed to transport him to CCU. I stayed with him for another couple of minutes. I transported him on down to CCU. The following day I went in and was talking to him and I asked him how he was feeling. He felt great and wanted to get out of CCU. After a couple of minutes of conversation, he looked at me and said, "You were the fellow who was working on me yes-

terday.” Well, I said I was there. But there was, gosh, four of the RT staff [respiratory therapy] plus the nurses and nursing supervisor and resident. He said, “You were working on me because I remember seeing you.” I said, “Well, that’s good, but I don’t remember you having your eyes open at all.” He said, “No, no. When I was up above.” I said, “Okay. What do you mean ‘Up above’?” He said, “Well, this is going to sound a bit weird to you but you’re a little bit older and look like you’ve been around and maybe you won’t think I’m nuts. So I gotta talk to somebody.” So I said, “Talk.” Then he described this feeling that he had had and what he had seen. What he described to me was no sense of fear, no sense of panic. He said he felt just sorta light and comfortable. He realized that as he was looking that he was higher than the people around him and he was looking down on his own body wondering what all the fuss was about. The only thing he felt was a great sense of relaxation, sorta at peace without pain. Then I asked him if he had seen anything in particular and he sorta laughed and said, “Yes. I remember the trouble you had getting that lock off of the mechanics cart.” And our crash carts do look like the standard auto mechanics tool box. He said “I remember the trouble the nurse had getting the lock off of that mechanics cart. You handed her your scissors,” or no, he said, “You handed her something.” And I said, “Yea, my scissors.” He said, “Yea, whatever. But then she got it open.” I then said, “Well, how did you feel? I’m curious about all of this.” He said, “Well, I just felt comfortable and just wished that you people would just relax and be happy because I was happy and comfortable and didn’t want to be bothered.” Then he said, “Oh. I remember that big heavy nurse standing over behind the crash cart writing things down on a clipboard and she had a stopwatch. I was wondering what she was worried about the time for because I wasn’t going anyplace.” I wasn’t aware that she had a stopwatch. I wasn’t even aware of this myself. I later asked her and she said, “Sure. I always keep one up at the corner of the clipboard because there are no code clocks in the rooms.” I wasn’t even aware of it myself because normally being down with the patient I don’t look up and around to see what’s happening. Then he said he felt like he just wished people would leave him alone and that he had no sense of fear. Until that time he had had a sense of fear of dying or a sense of fear with the pain. He said after that he had no fear of it. I

asked him if he realized death at that time and he said the word death had never occurred to him. He just felt comfortable and knew it was all over. A sense of finality. But the word death didn't occur to him. Then he said he felt like he had to come back to his body or put himself back together is the way he put it. That was all he remembered.

S: Had he observed other arrests while in the hospital in the CCU?

K: Not to my knowledge. Let's say I didn't answer a code for the previous couple of weeks but I only work one shift and I'm off two days a week so it's possible. However, in CCU, codes are handled differently. The nursing supervisor would handle it but the CCU crash carts are not locked. They never bother to lock them because they never leave CCU.

S: Are the crash carts kept out in the halls?

K: No they are kept in a separate room over behind the nursing station.

S: Could he have gone and looked at it?

K: You would have to go out of your way to see it. You could, yes. A patient could if he knew what he was looking for and went out of his way. He could, yes, by accident.

S: But he was admitted directly from ER to CCU?

K: Correct.

S: And from CCU directly to the ward room?

K: Yes. And then he was on nasal oxygen, so this would have limited how far he could have gone. We use two lengths of tubing so they can get as far as their bathroom and that's it. I seriously doubt if he would have taken his oxygen off. He was a little concerned about being short of breath. He was a little hyper.

S: Could you see the nurse's stopwatch?

K: No. I was down on the floor working on him and I looked

over and could only see the top half of the nurse standing over behind the crash cart. She held the clipboard so I couldn't see the top of it, but I didn't make an effort to look at it. I just glanced over for a second. I later asked her about it. In fact, on another code a couple of days later, I noticed she used one. I didn't know that she had used one.

S: Was there any verbal mention of the stopwatch during the arrest?

K: No. The only thing is that once in a while—and I'm now drawing more on general knowledge than specifics—they will ask how far we are into the code. It's only asked after we have been into the code for twenty or twenty-five minutes. I have thought that it was part of the decision making of the running M.D.'s as to whether to continue the code or not.

S: Was there a verbal discussion about the lock on the crash cart and the scissors?

K: Not a word said. I was pumping and looked over and saw that she was having trouble. She was just frantically turning [the lock]. Instead of bending back and forth like this, she was turning. So rather than instruct her as to how, I carry suture scissors, so I just reached into my pocket and handed it [the scissors] to her like that. Very quickly. She just grabbed them and shoved them into the lock and twisted them. To the best of my knowledge there was not a word said. Not even "here." It was just done very quickly.

S: And the stopwatch, could he have seen it in CCU during an arrest?

K: No, because in CCU they have code clocks on the wall which begin counting as soon as the alarm goes off.

S: Have you read a lot about NDEs?

K: No, not really. I may have glanced through a few articles on it but they are usually such a religious thing and I'm not oriented towards reading this sort of thing.

S: So he volunteered this to you?

K: Yes. I just made myself available, like, "I'm here if you want to talk to me." I didn't see him after that and he died a few days later. It really didn't make a real impact on me and it was just one of those things you file in the back of your mind although it was interesting.

If Don's statements about the resuscitation and NDE are correct (and I have no reason to believe that they are not), then this patient could recall at least two specific events that had taken place during his crisis that Don could verify. These events were the twisting open of the aluminum lock on the crash cart with a pair of scissors and the use of a stopwatch to time the resuscitation by a nurse in the corner of the room. As best as can be determined, neither of these events could have been *physically* seen by the near-death patient who had an oxygen mask and "bag" over his face at the time. Moreover, neither of these events were verbally discussed at the time by people in the room. How, then, could this man have known about these occurrences? He claims to have actually "seen" them from a detached position near the ceiling of his room. Could this have really occurred and, if so, how?

Obviously, these questions cannot be answered on the basis of this one anecdotal account of an NDE. This case demonstrates, however, a method by which the accuracy of certain aspects of the NDE may be checked. If details in the NDE are found to be accurate, then these details may be analyzed using the scheme outlined in Figure 1. In my book, *Recollections of Death: A Medical Investigation* (Sabom, in press), I examine thirty-six NDEs using this scheme. The results of this analysis are then interpreted in the light of other scientific research dealing with the nature and interaction of the human mind and brain. I believe that through research such as this that the controversy described in the beginning of this paper between the near-death survivor who claims his NDE was "real as hell" and the skeptical scientist who steadfastly maintains that these experiences are a mere "fantasy of death" will begin to be resolved.

NOTES

1. Personal Communication: Near-death survivor.
2. Personal Communication: Near-death survivor.

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Near-Death Experiences and the Mind-Body Problem

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When the tension between the conceptual and the empirical becomes too great, that is, when old theories and new evidence appear not to fit each other, the scientific community divides roughly into two camps. The first group more or less accepts the evidence, usually with certain qualifications, and goes in search of a theory or conceptual framework within which to fit it. The result is sometimes a paradigm shift. The second group stands with the accepted theoretical framework, again usually with some qualifications, and rejects or explains away the alleged facts on the grounds that they are incompatible with what we already know to be the case.

Although the above description is an oversimplification, it nevertheless applies straightforwardly to current controversies surrounding near-death phenomena. A small number of scientists and medical doctors accept the phenomena for what they are minimally purported to be by numerous subjects, namely, the temporary experience of being out of one's body, although further interpretations given by those subjects are open to critical scrutiny.¹ We shall call this the *objectivist* view. The other group, by far the great majority, rejects the out-of-body interpretation, giving instead their own *subjectivist* or "hallucinatory" explanations which take a variety of forms. Which interpretation is correct?

A number of perspectives come into play. It is the biomedical scientist's job to propose physiological explanations and to examine the adequacy of various hallucinatory accounts. It is the psychologist's job to research the characteristics of near-death experiences and to assess critically those variables that bear upon the validity of the research. And it is the philosopher's job to examine the logical adequacy of competing arguments and the conceptual and methodological issues that underlie those arguments. My purpose in this paper is to examine the debate in light of several questionable assumptions regarding the mind-body problem.

Let me state at the outset that my sympathies are with the objectivist interpretation, although I, too, have my reservations about individual accounts, particularly those pertaining to the transcendental aspect of the experience, e.g., that so-and-so saw the Virgin

Mary. Hallucinatory-type explanations simply do not fit the growing body of data or else appear hopelessly *ad hoc*. For example, they do not account for the patient's knowledge of events in the operating room. In addition, characteristics which define hallucinations are missing in NDEs. Moreover, at least one cardiologist claims to have correlated NDEs with flat EEGs, a claim which, if born out, would appear to rule out the possibility of hallucinations.² Thus, I am concerned with the assumptions that mistakenly may channel the critic of NDEs into an unworkable subjectivism, assumptions that when set straight may help render more acceptable an objectivist interpretation. In a limited fashion we may be able to have our cake and eat it too when it is seen that NDEs and an enlightened materialism are perfectly compatible.

I

Although in the West mind-body dualism is traceable to both Greek and Egyptian cultures, its modern formulation stems from Descartes. Matter is solid (or composed of tiny indestructible "corpuscles"), visible, extended, measurable, discontinuous, and inert or passive. Mind is fluid, invisible, extensionless, at best only indirectly measurable through its manifestations in physical substance, continuous (though supporting distinguishable mental states such as sensations and thoughts), and active, e.g., volitional. Neither is reducible to the other, and each interacts in some poorly understood way with the other. This much with significant variations is affirmed by dualists, with materialists rejecting mind and urging that at the time of death there is nothing "left over" to survive the body.

To continue with our brief conceptual cartography, dualism is logically entailed by, say, Christian theism, but the reverse is not true; being a dualist and a believer in survival doesn't in itself entail any particular religious commitment. On the other hand, materialism, which is the philosophical credo of most scientists *qua* scientists, is usually held to be logically incompatible with religion, particularly the doctrine of immortality.

Many critics of NDEs may reject them, I think, because they believe that such phenomena, taken literally, are incompatible with scientific materialism and the foundations of medical science in particular. Somehow, one just can't be a doctor and suppose that the "real person" is the ghost in the machine, not the machine itself. The issue is further clouded by the fact that dualism is usually assumed to be the only alternative to materialism and is somehow associated with being anti-scientific, "soft-headed," sympathetic to occult

phenomena, and the like. Thus because dualism is associated with an objectivist interpretation of NDEs, scientific materialism seems to require the subjectivist interpretation.

But is it really required? Actually, there are two questions to consider: (1) Does an objectivist interpretation of NDEs logically preclude commitment to some form of materialism? (2) Does such an interpretation entail a form of dualism? The answer to each is negative. If dualism and materialism are incompatible, then whatever is logically consistent with the latter cannot possibly be entailed by the former. Our task then becomes that of showing how an objectivist interpretation of NDEs is compatible with materialism. Our account will also be strengthened by showing how several dualist considerations can be made to fit the emerging materialist model.

II

Materialism traditionally connotes a commitment to "matter," the physical stuff of which the furniture of the world is made. A scientific materialist ought to hold that the ultimate stuff of the universe is what physics in broad outline says it is. And anyone following the rise of the "new physics" has watched matter become increasingly dematerialized of its traditional properties in favor of energy and its numerous forms. The story is by now a familiar one, particularly to readers of Capra (1975), Zukav (1979), Bohm (1978), Heisenberg, etc., although the impact has yet to be felt in public education.³ Briefly summarized, the picture unfolds as follows. Matter and energy are not merely intertranslatable one to the other as "co-realities." Rather, matter is (but a form of) energy, and the latter is the fundamental reality. Subatomic particles are functions of compressed energy, "knots" within fields where vibratory interaction is very intense. The perception of solidity "out there" is a function of phase-locking of different field vibrations. Energy is active, and the being of material objects is constituted by their becoming. The appearance of physical discontinuity is (always?) grounded in the reality of an underlying continuum of energy. As Einstein (1961) himself summarizes: "There is no place in this new kind of physics for both the field and matter, for the field is the only reality." It would be intellectually dishonest to portray the preceding as established fact. Yet many of the best minds in the field have made it clear that this is where we are headed, at least in broad outline. Thus while I have not seen the phrase in print, a commitment to "energy-materialism" now appears very much in order.

What are the implications of energy-materialism for NDEs? To

begin, the idea of emanations of energy from a “nearly dead” body should not surprise us on theoretical grounds. The factual question is thus left open as to whether such departures actually take place, and an objectivist interpretation cannot be ruled out on *a priori* grounds. There are two directions we may take in visualizing such a departure. We may suppose that this energy results from a corresponding reduction in mass, although, of course, the amount of mass involved need only be fractional given the potentially large amount of energy packed into even a drop of water. One test consequence of this approach would be to engage in some sophisticated measurements of possible mass reduction at the time of “bodily departure.” An alternative model involves our supposing the existence of a secondary body of energy that exists in the same general space as the physical body but is not co-extensive with it, i.e., does not necessarily stop at the skin’s surface. This involves nothing more conceptually disturbing than the supposition that several types of energy systems can occupy the same general region of space. Even now, strong and weak nuclear, gravitational, and electromagnetic forms of energy are to be found within the limits of my skin. Thus an objectivist interpretation of NDEs and energy-materialism are conceptually compatible.

Let us explore a bit further the implications of the alternate-body model. Bearing in mind that what is crucial to science is not its metaphysics, e.g., “To be is to be material,” but its epistemology, e.g., “To be is to be detectable,” we have to suppose that this body of energy vibrating at higher frequencies is at least in principal detectable or measurable in some fashion, even if the technology is not yet available to us. Given this assumption, moreover, we must then determine if that energy-body is one of the four (now three) known basic forms of energy or whether it constitutes a fifth (fourth) form unique to living organisms.

There is already much pioneering work in this general area conducted independently of NDE research, e.g., by Burr (1973), Osiris and McCormick (1980), Moss (1979), etc.⁴ I draw attention particularly to the work of the Japanese physician, Hiroshi Motoyama (1980), whose belief in the existence of alternative energy-bodies is buttressed by his development of a computerized instrument for measuring energy imbalance along acupuncture meridians and between *chakras* (energy centers postulated by various systems of Yoga) connecting such bodies. His instrument is currently used in numerous hospitals throughout Japan as an important diagnostic tool.⁵ While progress is slow and “proof,” if any, far away, there are nonetheless potentially viable models available to us. Energy-bodies needn’t be only the stuff of pipe dreams.

Of course, the difficulties loom large in doing significant research to detect such normally invisible entities. For example, Kirlian photographers repeatedly have photographed "phantom limbs" of plants. Now if there are phantom limbs, there can be phantom bodies remaining when the original "physical" model is removed. The catch is that the picture must be taken several seconds after the removal of the original and that only about 1 in 400 photographs is successful in producing this effect, for reasons not understood. How such procedures can be applied effectively to humans, much less to those undergoing spontaneous NDEs, remains to be seen. Yet with the *a priori* objections removed and research possibilities open to us (which are not the job of the philosopher to speculate on), there seems every reason to push ahead and put the objectivist interpretation of NDEs to the test.

III

And what is the dualist to make of energy-materialism? He is naturally inclined to accept an objectivist interpretation of NDEs, since survival is already built into his theoretical framework. Proceeding with the same assumption as the typical materialist, viz., that solid physical stuff or nonphysical stuff are the only viable options for minds, the weakness of standard materialism in accounting for NDEs becomes the dualist's potential trump card. Energy-materialism, however, changes much of this. Why? Because many of the categorical descriptions of the dualist's mind or spirit are applicable to energy. Energy, like mind, is invisible, fluid, diaphanous, active, lacking rigid (spatial) boundaries, and capable of existing independently of matter (which is after all but one of its many forms). The fact that we cannot directly "see" others' experiences no matter how powerful our neural scanning devices—a fact that led a number of brain researchers, such as Eccles and Sherrington, to espouse dualism—is hardly evidence for dualism if it is perfectly compatible with energy-materialism; we do not, after all, "see" energy either. I should emphasize that the problem for the dualist is rather severe in this regard. For it is not that he is now merely without certain *evidence* that would have tended to strengthen his position. Rather, the categories that enable him to uniquely *define* his position are becoming so sparse that he stands in danger of retaining little of substance to defend; his territory is being usurped.

Let me elaborate on this "vanishing point" hypothesis in more detail. Patients who reportedly leave their bodies in operating rooms often describe with great precision the goings-on in the room during

their near-death experience. Moreover, their "observations" are frequently such that they could only have been made from a point of view apart from the body. Now a point of view is a point in space, yet non-spatiality is a defining characteristic of the dualist's mind. Hence, the point of view in question cannot be that of a spiritual entity. The irony of this is that while the dualist is normally able to rely upon the body to provide the point of view, NDEs that one would expect to strengthen his case turn out instead to undermine it, i.e., the basis for a point of view is lost.

The dualist may still take the offensive, however, in pointing to a serious problem for the energy-materialist. Suppose we are successful in detecting and measuring in some fashion some energy or bio-plasmic body that can separate from its physical counterpart. On what grounds can we then identify this body with the experiences, memories, and personality of the person who underwent an NDE? How do we know that this etheric double is Jones? If by "identify" we mean somehow "observe Jones's emotions in an energy field," then of course we cannot. But this objection is hardly telling against the energy-materialist since it is precisely the problem the dualist faces, too. Experiences are not visibly identifiable with anything, energy, spirit, or matter. Besides, the energy-materialist may point out, when we look for Jones's memories, etc., we should be looking for structure and function, not for little "things" floating in space. Analogously, we do not "see" information in a computer. The most promising structuralist account in this regard is given in Karl Pribram's (1978) "holographic" model of information processing.

The dualist may also urge that, even if we are successful in our search for an energy body, the most this could strictly demonstrate is that the departure of the mind/soul is "correlated" with an object that now falls within the purview of scientific investigation. Thus, for example, Seymon Kirlian (1961) once described his photographic process as involving "the transformation of non-electrical properties of the photographed subject into electrical ones via the motion of a field. . . ." Are these nonelectrical properties possibly those of a non-physical entity? The way appears open for the dualist to argue in a systematic fashion that the mind manifests itself empirically under certain conditions but is not an empirical entity in itself. In this way dualism may be preserved no matter what strides are made in science. The cost of preservation, however, is high, namely, increasing lack of intelligibility. To reiterate an earlier conclusion, as more of the characteristics typical of the dualist's "mind" are absorbed by the energy-materialist, the former is left with a conceptually vanishing

point. After all, the *kind* of entity X is, is normally determined by the characteristics it manifests.⁶

Despite the preceding arguments, a theological retreat is open to the dualist. This retreat consists in insisting upon the distinction between, say, the Christian "soul" and our ordinary minds and experiences—a distinction that I have blurred in this paper. Thus a Christian theist might hold out for an immortal, nonphysical soul while conceding my case for energy-materialism with respect to the mind. While such a move is certainly a logical possibility, the price of doing so is very high. For everything that is psychologically or morally descriptive of me, anything that could justify a "final judgment," and every part of me the survival of which I would *care* about, is wrapped up directly or indirectly with the mind, my psychological self. The soul that leaves all this behind, so to speak, cannot be said to be me in any meaningful sense. It is no more me than anyone else. The future of such contentless stuff, be it the original essence of the Divine or not, would from a personal point of view be of no more concern than, say, the future of a pint of my blood subject to eternal but lethal doses of radiation in some far away place. In short, the motivation to take seriously a doctrine of salvation collapses.⁷ Such, it seems to me, is the high price to be paid.

At the other end of the metaphysical spectrum, the traditional materialist may object that all the talk of energy-bodies concedes too much to the dualist. Indeed, the materialist is being asked to modify his model of human nature as much as if not more than the dualist. Our request may be premature, but it is neither unreasonable nor incoherent if we take the evidence from theoretical physics and NDEs seriously. Energy-materialism is a mediating proposal in terms of which both traditional materialism and dualism may be seen as abstractions. The former hypostatizes the more stable forms of energy as matter, the latter hypostatizes its more fluid diaphanous forms as mind. Each may be faulted for transforming differences of degree into those of principle, that is, into distinct metaphysical models. In fact, my energy-materialism might better be called "energy-monism" along the spectrum of which the materialist takes one and the dualist takes two distinctive slices as reality. The final verdict on NDEs is far from in. But when it comes, it should not be predicated upon the assumption of a set of misguided and extreme metaphysical models of mind.

NOTES

1. The literature describing NDEs is becoming voluminous. Two ex-

- tensive critical examinations are Osis and Haraldsson (1977) and Ring (1980).
2. An excellent discussion of the merits and weaknesses of these interpretations is found in *The Journal of Nervous and Mental Disease*, 1980, Vol. 168, No. 5, in articles by Rodin, Schnaper, Sabom, Moody, Stevenson, and Ring.
 3. Cf., for example, Fritjof Capra (1975) and Gary Zukav (1979). Some of the more startling applications and implications are discussed in interviews with David Bohm (1978) and Karl Pribram (1978).
 4. With the exception of Osis's work (which was described to me personally) the concepts of "life-fields," "auras," and secondary "bioplasmic" energy bodies are discussed in Mishlove (1975). See also Burr (1973), Alvarado (1980), and Tiller (1974).
 5. Motoyama (1978). I am indebted to Kenneth Ring for bringing Motoyama's work to my attention.
 6. "Privacy" may well remain a problem here, i.e., as an irreducible and defining feature of the mental. Without examining the issue in detail, let me indicate that to support my account, I would attempt to show that the difference between the direct, privileged knowledge each of us has of our own experience and the "public" knowledge of our bodies implies no more than a difference of degree between energy and matter.
 7. The philosophical issues and arguments surrounding this claim are more extensively examined in Woodhouse (1970).

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Near-Death Experiences: Some Logical Problems and Questions for Further Study

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INTRODUCTION

Both sections of this paper serve as an attempt at clarifying the logical status of related phenomena known as near-death experiences (NDEs). In the first part of this paper five logical problems are discussed that may have direct bearing on any attempts at forming a logically coherent interpretation of near-death experiences. In the second section a number of questions relevant to NDEs are raised that may be deserving of some further study.

I

The Problem of the Fallacy of Misplaced Concreteness

Much of the literature on NDEs is full of seemingly straightforward statements like, "X died but then was resuscitated." Apparently simple statements like these may in fact be at the heart of a great deal of confusion about many contemporary discussions of life after death. Problems arise because we tend to assume that death is an *event*. In fact, we tend to shift rather uneasily from the noun, *death*, which is thought of as an event, to the verb, *dying*, which is construed as a process. This view of death as an event seems to be deeply ingrained in the Western mind. It only apparently has the merit of common sense because the structure of our language renders reification easy to believe. The word *dead*, since it exists in the language, would seem to be a term that names a "thing" in the same way the "Empire State Building" names something. It does not seem strange to say that since "deadness" has a name, it exists, it is a thing. But this reification is dangerous. This view of death as an event or thing is implicitly assumed in much of our art and literature and, more importantly, our legal system and medical practice. We often tend figuratively, and sometimes literally, to see death as a "grim reaper" or an "exterminating angel." These kinds of uses of the word *death*

fall into what Whitehead has called "the fallacy of misplaced concreteness," or regarding an abstraction as if it were a thing.

The repercussions of this view should be clear. If we view death as an event, it occurs instantaneously. The genesis of this mistaken idea can be found in a time prior to a clear understanding of the distinction between clinical death and cellular death. Clinical death is nothing more than an abstract set of descriptions for the absence of various vital signs. It is quite possible to be clinically "dead" one moment and clinically "alive" the next. Indeed, it happens in open-heart surgery all the time. In patients who are not resuscitated, "cellular death" follows "clinical death." But "cellular death" is also not an instantaneous event or reification. It is a process that develops according to a set of quite complex variables—temperature, original physical health of the patient, blood/oxygen supply to various organs, etc. The difference between clinical and cellular death, however, is that once the process of cellular death is well on the way to completion, most of the major organ systems of the body have begun to break down. When this begins to occur, "life," an abstraction used to label the sum of the metabolic activities by which an organism grows, reproduces, etc., is irrevocably lost.

The immediate import of all this should be clear: Many researchers and theorists writing on NDEs may be calling a person "dead" when in fact he is involved in the *process of death*, and this process, at least to a certain extent, appears to be reversible.

The Problem of Parallels

In much of the literature on NDEs there is often a tendency to use parallel descriptions and experiences, often from ancient literature, for the purpose of proving the transcendental character of these experiences. Raymond Moody (1975), in his short chapter on parallels, serves as a good example. He makes a number of references to the *Bardo Thodol* (1960), the Tibetan Book of the Dead. A close reading of the Tibetan text reveals that at the moment of death a lama reads the *Thodol* to the dying person; the reading ostensibly describes the events that take place after death. The purpose of the instruction is to guide the soul of the deceased and to impart certain knowledge that can facilitate the soul's travel. Moody correctly points out this description has a number of important similarities to the accounts offered by the subjects in his research.

Other researchers have stressed the similarity of contemporary near-death experiences to accounts given in "The Dream of Scipio" (1967), the conclusion to Cicero's *On the Republic*. In this work

Cicero tells us, through the character of Scipio, of a panoramic vision coming as the result of a close brush with death. In this vision Scipio is met by Scipio Africanus, the Elder, a dead ancestor who guides him into paradise.

James Hastings' *Encyclopedia of Religion and Ethics* (1928) contains a number of other cross-cultural examples of out-of-body experiences associated with NDEs. In one of these stories a dead Chippewa chief is carried home after battle. Along the way he separates from his body, and after several unsuccessful attempts to reenter his body, he returns in this spirit form to the battlefield. In despair, he finally cries, "I am seeking to return to my body." With a desperate effort he darts through what he sees as a flame that separates him from his body. Sometime later he awakens in his weakened body to tell of the ordeal. Similar accounts can be found in Orphic literature, Plutarch, many of the principle Upanishads, the Zoroastrian's Bundahishn, and the work of the 18th-century Swedish mystic, Emanuel Swedenborg.

I have no problem with any of these examples being used as indications that experiences similar or even parallel to the current literature can be found in ancient texts, but I think it would be a mistake to necessarily interpret them as confirmations of the fate of the dead.

Moody (1975) seems to have a dim awareness of this himself; he offers one possible explanation for the parallels, as well as a rejoinder:

Is it possible that the near-death experiences I have collected were influenced by works of the kind which I have discussed? All of the persons with whom I have talked had some exposure prior to their experiences to *The Bible*, and two or three know something about the ideas of Plato. On the other hand, none were aware of the existence of such esoterica as the works of Swedenborg or *The Tibetan Book of the Dead*. Yet, many details which do not appear in *The Bible*, or even in Plato, constantly crop up in the accounts which I have gathered, and these correspond exactly with phenomena and events mentioned in the more unusual sources (p. 88).

He continues by implicitly suggesting that there is something quite remarkable about these parallel accounts:

It must be acknowledged that the existence of the similarities and parallels among the writings of ancient thinkers and the reports of modern Americans who survive close brushes with death remains a striking, and, so far, not definitively explicable fact. How is it, we might well ask ourselves, that the wisdom of Tibetan sages, the theology and visions of Paul, the strange insights and myths of Plato, and the spiritual revelations of Swedenborg all agree so well, both among themselves and with the narratives of contemporary individuals who have come as close as anyone alive to the state of death (p. 89).

Although his position is more implicit than explicit, he seems to

believe that not only is the structure of these contemporary and ancient stories the same, but their interpretation is the same as well. But there are some serious logical problems with this point of view.

Doubtless, cases of NDEs are more numerous today as the result of advances in medical technology, but we must not be naive enough to assume that the ancient world could not have had its share of these experiences as well. When we are resuscitated today, we most often give credit to the extraordinary accomplishments of medical personnel and accompanying equipment. In ancient times, NDEs might very well have been interpreted as revealing something terribly profound about the mysteries of death, when in fact the proper interpretation of those ancient experiences *may* have nothing to do with what happens after death at all.

The Problem of the Genetic Fallacy

There is another way of looking at this problem of parallels that is just as illogical. It is usually made by reductionists who suggest that near-death experiences can be explained in terms of purely natural factors, usually psychological or physiological—nervous disorders, frontal lobe disorders, repressed desires, auto-suggestion, hypnogogic or hypnopompic sleep, and so on. In order to understand what this second parallel thesis amounts to, let us consider the following example from Teresa of Avila (1946):

Often when the soul least expects it, our Lord calls her suddenly. She hears very distinctly that her God calls her, and it gives her such a start, especially at the beginning, that she trembles and utters plaints. She feels that an ineffable wound has been dealt her and that the wound is so precious in her sight that she would like it never to heal. She knows that her divine Spouse is near her, although He does not let her enjoy His adorable presence, and she cannot help complaining to Him in words of love. The voice of the Well-Beloved causes in the soul such transports that she is consumed by desire, and yet does not know what to ask, because she sees clearly that her Lord is with her. What pains could she have? And for what greater happiness could she wish? To this I do not know what to answer; but that of which I am certain, is that the pain penetrates down to the very bottom of the bowels, and that it seems that they are being torn away when the heavenly Spouse withdraws the arrow with which he has transpierced them. As long as that pain lasts, it is always on the increase or on the decrease, it never remains at the same intensity. It is for that reason that the soul is never entirely on fire; the spark goes out and the soul feels a desire stronger than ever to endure again the love-pain she has just experienced (p. 119).

As you can see, this experience contains at least some of the core elements of NDEs. It is an important example, however, because of

what many reductionists would say about a young woman like Teresa who had taken a lifelong vow of chastity. A reductionistic interpretation of this experience might say something like the following: Natural desires for sexual love have been inhibited and repressed from consciousness. Nevertheless, these desires are active in the unconscious and press for some kind of fulfillment. Since they cannot be expressed in a direct way, they achieve satisfaction through a delusory experience of the presence of a male deity. Of course, it might be added that not all religious experiences, of which NDEs are just a small part, provide such easy targets for the reductionists.

Various questions can be raised as to the cogency of these kinds of explanations. The most obvious is that at best these interpretations are purely speculative in nature. Social scientists often take principles established in other contexts and apply them to near-death experiences. Eventually these applications must stand a more rigorous test.

The real problem with reductionistic explanations of NDEs, however, lies not in a lack of empirical data, but rather in what the data are believed to show. In short, reductionists believe that if you can show parallel or phenomenologically similar experiences in which there are known psychological or neurophysiological determinants, then any theological interpretation of NDEs is specious. This point of view is often expressed in terms of pointing out the phenomenological similarity between NDEs and certain drug-induced hallucinatory experiences. One interesting point about these drug experiences is that they are not solely a product of the 1960's. William James, at the beginning of this century, called attention to the use of nitrous oxide as a source of religious experiences. There are also many ancient as well as modern religious traditions that have used similar drugs for such purposes. The important philosophical question is this: What relationship, if any, do these kinds of parallel experiences have to non-drug-induced NDEs?

Bertrand Russell (1935) had a rather reductionistic answer to this question:

From a scientific point of view, we can make no distinction between the man who eats little and sees heaven and the man who drinks much and sees snakes. Each is in an abnormal physical condition, and therefore has abnormal perceptions. Normal perceptions, since they have to be useful in the struggle for life, must have some correspondence with fact; but in abnormal perceptions there is no reason to expect such correspondence, and their testimony, therefore, cannot outweigh that of normal perception (p. 188).

Russell's point of view raises some important issues. But before moving to them we must first note an important distinction. Reduc-

tionists must decide whether they want to say that NDEs spring from abnormal states or the much weaker claim that experiences similar NDEs are known to occur in abnormal states. If they are making the latter claim, then these assertions amount to very little. Patients in mental institutions often claim to be in touch with Jesus, Moses, and like figures, in ways that are similar to NDEs. But this does nothing to show that theological interpretations of NDEs are specious, any more than my intoxicated friend having an experience similar to those involved in the ordinary perception of an elephant would prove that all experiences of elephants are delusions, or, more importantly, that elephants don't exist.

But Russell seems to be arguing the harder line, namely, any religious experience is the result of an abnormal state of consciousness. How one might go about establishing a claim like this is, of course, problematical. However, for the sake of the reductionist's argument, let's assume it is true. It is still logically possible, even if Russell's assertion is true, that the way God chose to reveal himself to human beings is through these abnormal states of consciousness. As long as this position is logically possible, the reductionist's point of view cannot be a necessary conclusion.

The Problem of the Possibility of Transitoriness

One interesting point about NDEs that seems to have been totally ignored in the literature is this: If we were to accept these reports as constituting evidence for survival after death, it would not necessarily follow that we survive death for all eternity. It could be the case that survival after death, if it does exist, is a transitory experience, lasting a short time. Indeed, it may be the case that God has decided to let us go out with a real treat that lasts for only an instant. It does not necessarily follow that if X believes that NDEs provide evidence for survival after death that X must also be committed to the claim that this form of survival will last forever.

The Problem of Paradigm Shifts

Not too far down the road it may be the case that adjustments in some of our scientific assumptions will be required for us to understand these experiences more fully. But this kind of realization is different from arguing that some overarching paradigm shift need occur in our thinking in order to begin to make clear interpretations of these phenomena. Expressions like "a new scientific revolution" and "a shift in our most fundamental scientific categories" are all too often used in the NDE literature to exhort people to think more

open-mindedly about these experiences.

Most often these discussions of “paradigm shifts” proceed from some insights of Thomas Kuhn (1962):

Each innovator necessitated the community's rejection of one time-honored scientific theory in favor of another incompatible with it. Each produced a consequent shift in the problems available for scientific scrutiny and in the standards by which the profession determined what should count as an admissible problem or as a legitimate problem-solution. And each transformed the scientific imagination in ways that we shall ultimately need to describe as a transformation of the world within which scientific work was done. Such changes, together with the controversies that almost always accompany them, are the defining characteristics of scientific revolutions (p. 14).

According to Kuhn, paradigms become “supertheories,” theoretical formulations covering a wide range of data and organizing it into a consistent and coherent body of knowledge. Paradigms begin to shift when these supertheories no longer retain their overarching explanatory value, and other theories begin to compete with the original supertheory. I must confess that I frankly am not all that sure that there has been any shifting of fundamental scientific categories vis-à-vis NDEs, and if there were, I'm not so sure that we have been clear enough about Kuhn's rather murky language that we know what a scientific paradigm is in order to recognize when new ones come along. Indeed, a proper understanding of the nature of scientific inquiry, as well as a grounding in formal logic, might go a long way in persuading “paradigm shifters” that the old categories of understanding may do quite nicely in analyzing NDEs. What frequently seems to happen is that there is a good deal of the closing of eyes to evidence alleged against something one believes in. The result is often a kind of deduction of facts from principles, instead of inducing principles from facts. When Galileo invited astronomers of his time to view the moons of Jupiter through his telescope, some refused on the grounds that if they saw anything it would be an illusion, no doubt diabolical, since the number of heavenly bodies had already been established. Of course, the astronomy of the time allowed no provisions for the discovery of new heavenly bodies. Perhaps this story tells us more about a certain cast of mind than it does about the need for new scientific paradigms. When confronted with closed-minded people, one feels helpless, for no amount of evidence seems to be clinching. Frequently, the facts are just plain ignored or simply brushed aside as irrelevant. This approach often offends people of a more empirical cast of mind. Empiricists are supposedly ready to throw out principles that don't fit neatly with

the evidence. Yet, ironically, when it comes to the study of NDEs, empiricists often suffer from the same kind of *a priori* thinking they accuse the religionists of. A cure for this malady is probably to be found in the cultivation of open-mindedness and not necessarily in the tooling out of new "scientific paradigms."

Another problem in this shifting of paradigms is that a careful analysis of those "new models" offered to explain NDEs often shows that the models themselves are logically confused. One of the supposed shifts involves the use of the work of Karl Pribram (1971, 1976) on perception and memory in constructing a new "scientific paradigm" for viewing the world in general and NDEs in particular. The key feature of Pribram's work is that he has suggested that the inherent structures of the world may be analogous to the interference patterns on a hologram. The brain, in Pribram's view, is the instrument by which human beings receive the messages from this holographic reality and translate it into our familiar three-dimensional reality. Recently there have been at least two attempts to develop interpretations of NDEs through the use of Pribram's theory. I need not spend time here detailing the connection between Pribram and the NDE theorists who use his theory. All that need be done is to show that the holographic model of perception may rest on some old mistakes. If that can be demonstrated, it would be ill advised to think of Pribram's theory as a shifting in paradigms.

The problem with holographic theories of perception has been skillfully pointed out by Stephen Braude (in press). Professor Braude essentially argues that Pribram's theory is both reductionistic and atomistic. Implicit in Pribram's model is the notion that reality can be reduced to atomic parts, in this case, to frequencies forming interference patterns. As Braude points out, Pribram sees these frequencies as "atomic or basic in the sense that they are building blocks for our familiar perceptual and experiential reality."

An important point to understand about this claim is that the structure of nature is not just analogous to these interference patterns of the hologram, it is the stuff of which the ordinary three-dimensional perception of reality is made. As Braude points out, Pribram's point of view essentially involves two basic assertions about the way reality is:

1. Nature is made up of atomic parts analogous to frequencies on a hologram.
2. Our ordinary perceptions are ordered arrangements composed of these atomic parts.

Both 1 and 2 rest on a fundamental mistake. The mistake involves

assuming that there is some most fundamental way of parsing the parts of the world. Once again, Braude is helpful on this point:

To see what is wrong with the idea that nature has a preferred parsing, ask yourself the question: How many things are in this room? The important fact to observe here is that this question has no single correct answer. Before we can answer it, we need some idea of what is to count as a *thing*. And it is crucial to realize that different sorts of objects or entities may legitimately count as things in different contexts. Independently of some context in which certain descriptions of the room but not others count as appropriate, the question simply has no answer. If we are atomic physicists, we might consider atoms or constituents of atoms to be things. And in that case the room will contain an enormous number of things. If we are household movers or insurance agents, however, there may be far fewer things in the room. Moreover, it is clear that similar considerations apply to any given object—say, a table or a hand. Of any object *X*, we may ask, ‘What are the elements of *X*?,’ and different sorts of things will count as elements in different contexts. Thus, an artist, physician, chemist, and physicist might give different inventories of the things composing a human hand. Thus, even when we agree that the hand is composed of things, there is no *preferred list* of things—i.e., no set of hand-components that is absolutely more fundamental than any other set.

In order to make this clear, Wittgenstein apparently used to exhort his students to see that “language only makes sense in the mouth of a man.” What I think he meant is that language and perception only make sense in the context in which they are uttered or thought. If this is the case, there can be no one more fundamental parsing of reality. An example might be of some help on this point.

Suppose Mrs. X, an artist and sculptress, calls her husband, an anal-retentive CPA, for the purposes of discussing a robbery that has recently occurred at their home. Both are concerned with generating an accurate list of the things taken from Mrs. X’s studio. As the sculptress begins to develop her list, she thinks about *one* of her pieces that has been taken. It consists of several metal trash cans tied together with chicken wire, supposedly symbolizing the plight of the 20th-century woman. When Mrs. X makes her list, she writes, “One sculpture: The Plight of the 20th-Century Woman.”

Now Mr. X is a pragmatic sort. When he writes his list, it reads, “Six (6) ten (10)-gauge aluminum fifty (50)-gallon trash cans; 34 ft. of 1/4 in. chicken wire; six (6) 15 in. aluminum trash can lids.”

This example should serve to illustrate a crucial point. What Mrs. X is thinking cannot be explained solely in terms of the structure of what is happening within her, that is, the structuring of her mental imagery. The same mental image for Mrs. X produces a different thought for Mr. X because the context in which he views it (them) is

quite different from his wife. What our mental images represent function differently in different contexts and result in different thoughts, even though the mental imagery may essentially be the same. Thus, we begin to see what Wittgenstein meant by language only making sense in the mouth of a man, as well as why holographic theory is a deceptive and inadequate model for the way perception works. Needless to say, the analysis of these kinds of mistakes is a terribly complicated matter; for a more detailed description of the logical problems inherent in holographic interpretations of NDEs, I direct you to Braude's excellent article mentioned in the bibliography.

Ironically, even if this holographic model of perception were a cogent explanation for near-death experiences, it reduces to a curious genus of the mechanistic species, a scientific paradigm that has been around at least since the time of the pre-Socratics.

II

In addition to the five logical problems mentioned in part I, I would also like to make a few comments on some questions concerning NDEs that may be worthy of some further study.

Why do some individuals return with stories to tell while others remember nothing?

Figures from Noyes (1976), Kastenbaum (1979), Ring (1980), and Sabom and Kreutziger (1977) suggest that, at a minimum, about 40 percent of people in life-threatening situations experience at least some of the components of the classic NDE. One may quibble with this figure on a number of fronts, the principle one being that at this point in near-death research all literature has consisted of self-selected samples. In a more random selection process this figure of 40 percent may be much lower.

Leaving these problems aside, however, one might ask a different question: Why don't the other 60 percent have classic NDEs? An answer to this question might lead us in many different directions. One argument that might be given is that only certain people actually survive death. This same point is raised rather clearly by Kastenbaum (1979):

If one or a few, why not all? Grant the possibility that what seem to be ghosts or apparitions are sometimes ghosts or apparitions. The sightings appear to be relatively uncommon when we consider the frequency of death itself. One could ask the usual question: How could there be any ghost, even one, any time, under any circumstance? Or could one ask a different question: If there are perhaps ghosts on occasion, why not more

often? Why doesn't every deceased person yield a spirit that is somehow perceived by the survivors? A similar inquiry may be lodged of the "dis-carnate minds" that have occasionally seemed to communicate through "mediums" in a reasonably convincing fashion. Why don't we hear from the dead all the time, or at least more commonly? Is the problem the short supply of authentic mediums? The inability or lack of fine tuning that keeps most of us from receiving messages? Can it be that only a few deceased people choose to communicate, or that only a few can? More radically, perhaps: Is it the case that a few humans survive death in some form, but that most do not? This concept is not entirely unknown (for example, Hocking's theory of "conditional immortality"). It would raise a problem for most people who are accustomed to thinking in terms of general laws or principles that govern the universe. What goes up must come down—but only sometimes! One and one make two, but sometimes three, and sometimes make nothing at all! Twentieth-century science (notably theoretical physics) has provided us with alternative conceptions of the universe that still do not seem at home with our intuitive or conditioned sense of "how things really are." Possibly, some people die and stay dead while others do not. Such a notion would take some getting used to. At the moment it stands as one more obstacle to accepting survival explanations of phenomena such as apparitions and mediumistic communications (pp. 180-181).

Rawlings (1978) has theorized that many near-death survivors who have no recall are actually repressing hellish experiences. Kenneth Ring¹ has also suggested that since NDEs seem to take time to develop, some people may be brought back before the process could unfold. Ring has also pointed out that the recall of NDEs may be analogous to the recall of dreams—some people wake up in the morning and remember, while others do not.

What is the relationship of religious background to the interpretation of near-death experiences?

Osis (1961) and Osis and Haraldsson (1977) report visions of religious figures, dead family members, and deceased friends as important components of the NDE. Ring (1980), Kubler-Ross (1976), and Sabom and Kreutzing (1977) report similar findings. Most of these researchers tend to interpret these visions as glimpses of the afterlife. Rodin (1980) believes these experiences may be structured by previous cultural and religious conditioning. Osis and Haraldsson (1977), Sabom and Kreutzing (1977), and Ring (1980) disagree, pointing out that many of the people having these visions were not at all religious. Ring (1980), for example, claims that neither the likelihood nor depth of near-death experiences is systematically related to individual religiosity. This assertion seems to be based on the self-evaluation of religiosity by the subjects in Ring's study, but I wonder

if this issue isn't more subtle than asking even well-meaning and honest people whether or not they believe in God. The use of an "index of religiosity questionnaire" may be confusing because it implicitly ignores the distinction between considering oneself to be nonreligious and participating in a cultural context where although an individual may be a nonbeliever, he may still be well aware of the myths, symbols, and rituals that inform the lives of the devout in his culture. Using Ring's analysis, it would seem impossible for most of us to dream of Santa Claus, since in our waking state most of us no longer believe in the existence of the jolly fellow with the red suit. But this is clearly wrongheaded. We often dream of fairies, unicorns, and an assortment of other mythic creatures, even though in our waking state we are quite dubious of their existence. Kalish (1979) has suggested that group identification and cultural background may have a great deal to do with how subjects interpret NDEs. This question certainly deserves more careful cross-cultural study than it has so far been given.

What is the relationship between NDEs and near-death suicides?

To this point the literature attempting to answer this question has been quite disappointing. The best-known attempt at dealing with this issue is Moody's (1977) seven-page chapter in *Reflections on Life After Life*. In the beginning of that chapter he informs us that he wishes to address himself to two questions:

Do persons who have had near-death experiences from causes other than suicide attempts come back with any particular attitude toward suicide?, and Do reported near-death experiences which resulted from suicide attempts differ in any way from those that had other causes (pp. 43-44)?

Moody answers the first of these questions by asserting that although many of his subjects felt they did not want to "come back from the dead," they all disavowed suicide as a means of returning to death. He mentions one man who had "died" in an accident:

While I was over there, I got the feeling that two things it would be completely forbidden for me to do would be to kill myself or to kill another person . . . If I were to commit suicide I would be throwing God's gift back in His face . . . Killing somebody else would be interfering with God's purpose for that individual (p. 44).

He answers the second query about the experiences and attitudes of the suicide attempters by claiming the same kind of unanimity:

All mentioned that after their experiences, they would never consider trying suicide again. Their common attitude is that they had made a mistake, and that they were very glad they had not succeeded in their attempts (p. 46).

It should be clear that Moody is telling us in no uncertain terms that suicide is a morally reprehensible act. Indeed, considering the surroundings in which the suicide victims find themselves, one could argue Moody sees suicide as a damnable act. Moody quotes a man who was despondent over the recent death of his wife. The man "died" as the result of a gunshot wound, and was resuscitated.

I didn't go where my wife was. I went to an awful place . . . I immediately saw what a mistake I had made . . . I thought, 'I wish I hadn't done it (Afterword).'

Moody spends the remainder of his short chapter on suicide attempting to marshal support for this moralistic position by quoting Plato, John Locke, Thomas Aquinas, and Immanuel Kant, who all argue, with varying degrees of plausibility and effectiveness, that suicide is morally reprehensible, and that the victim "arrives in the other world as one who has deserted his post; he must be looked upon as a rebel against God." Moody later parenthetically adds he "does not present the above arguments to endorse the reasoning or to make an ethical or moral judgement about suicide." (p. 47) But if this is not his purpose, one can only wonder what it might be. Nevertheless, in the final few pages of this chapter, he does raise some subtle and important points about suicide and survival after death.

I realize that the experiences I have quoted in this chapter raise many questions. Some have pointed out that in certain cultures suicide is not morally condemned, as it is in our own . . . Some persons commit suicide for altruistic reasons, to save others, for example. What would people who undergo such 'heroic' deaths experience? Or what of the people who take their own lives in the throes of psychotic depression or horrendous loss (pp. 47-48)?

It is important to see that Moody's position on suicide is more implicit than explicit. Indeed, he seems to be reformulating a rather old argument and clothing it in the validity of personal experiences and sage philosophers.

Moody seems to be making two important claims about the relationship between religion and morality. First, if we can establish that there is a God who will punish us for committing suicide, then we have a good reason for not doing so. There seems to be an underlying principle which gives this point its validity. That is, human beings are often motivated to perform right actions and refrain from wrong ones because of a belief in heaven and hell.

From the moral standpoint this point of view suffers from some problems. In order to understand these, consider the following example.

Suppose Mr. Y gives a very large sum of money to the United Way. All other things being equal we would ordinarily think highly of Mr. Y and the action he has performed. The action raises his moral stock; it makes him an exemplary individual. But suppose later on we find out that he had given the money for two reasons: first, he was promised double the sum he gave if he performed this act of charity, and second, he was told that his hands would be chopped off if he didn't give it. What would our reaction be to Mr. Y, knowing these two new facts? We might still be very happy he gave the money, but we would no longer think in such laudatory terms of Mr. Y. Now when Moody implies that we should be motivated to perform right actions and refrain from wrong ones because of a belief in heaven and hell, he is essentially advocating a position that our motives be like those of Mr. Y's. Although it may be the case that religious people believe that God will punish the evil and reward the good, it seems they should oppose the view that these rewards and punishments give us reasons for acting morally.

Moody's second point is perhaps more fundamental than the first. Simply put, it is this: The way we know that suicide is wrong is because God is clearly telling us so. We avoid the problem of conflicting religious points of view on suicide, for we have a genuine Divine revelation, a glimpse of the great beyond, as a source of moral certainty. This second claim would also seem to rest on a more general ontological principle that morally right and morally wrong actions are commanded and forbidden by God.

In the *Euthyphro* (Plato, 1950), Socrates challenges someone who held both of these general principles to be true at the same time. He asks his companion whether the view that an act is right because it is willed by God is compatible with the position that God wills an act because it is right.

Socrates argues that God is by definition a "morally perfect being." The proof of this is that no one would call a being "God" unless the being were morally perfect. To make this point clear, he offers the example of a triangle which we would refuse to call a triangle unless it were a three-sided figure whose angles equalled 180°.

It follows, then, that to know any being is "God," we must first know if that being is "morally perfect." But if moral goodness is determined according to God's will, or if any act is right or wrong simply because God wants it that way, then we have to know that God exists and what he wills before we can know what is morally good.

Thus, if we hold both that God is, by definition, "morally good" and that God's will defines moral goodness, we find ourselves in a

peculiar position. We cannot determine whether God exists until we have determined first (and independently) what moral goodness is. But we cannot determine what moral goodness is because, by definition, "moral goodness" is what God wills it to be.

It may well be that Moody would ignore this discourse, claiming that since we have direct knowledge of God through these near-death experiences, these arguments do not apply. But this is clearly not a valid objection. Consider the following example: Suppose while attempting to drown myself, in the midst of that twilight between life and death, a form suddenly appears stating he is God. Suppose the form declares that Moses was a false prophet whose ten commandments were really the handiwork of the devil. The form then announces the "true commandments: commit murder, tell lies, break promises, and kill yourself."

Needless to say, if this happened to us, most of us would reject figure's claims. Why? Because what this form commands us to do is clearly evil. But if any act is right simply because God wills it, we are not justified in rejecting the possibility that this figure could be God. It is a mistake to believe that we get our ideas of right and wrong from God. Rather, it is in light of our ideas of right and wrong that we frame our notion of God. This certainly makes sense from the standpoint of developmental psychology. Few mothers would teach their children about God first and then about not playing on the steps.

What implications does all this have for Moody's view of suicide? One obvious repercussion is that the general ontological principle on which his second claim is based is obviously false. If we say that suicide is wrong simply because God says so, then we have admitted that right and wrong are grounded on something other than the will of God. Perhaps Nielson (1959) put it best:

No information about the nature of reality, the state of the world, or knowledge that there is a God and that he issues commands, will by itself tell us what is good or what we ought to do. The statement 'God wills X' is not a moral pronouncement. Before we know whether we ought to do X, we must know that what God wills is good. And in order to know what God wills is good, we would have to judge it, for otherwise, it would be rhetorical to ask, 'Is what God wills good?' But it is not rhetorical to ask that question. 'God wills X' or 'God commands X' is not equivalent to 'X is good' in the same way as 'X is a male parent' is equivalent to 'X is a father.' 'God wills it, but is it good?' is not a senseless or self-answering question like 'Fred is a male parent but is he a father?' The moral agent must independently decide that whatever God wills or commands is good (cited by Brody, 1977, p. 128).

Needless to say, this position of Moody's suffers from some serious logical defects. Only two other researchers, Ring (1980) and

Rosen (1975), have written on this question. Unfortunately, their data seem to be conflicting. Ring argues that near-suicide experiences are essentially identical to near-death experiences. Rosen contends that all of his subjects reported peaceful and tranquil feelings during their jumps, as well as overwhelmingly positive transcendent experiences. None of Rosen's subjects, however, experienced panoramic visions, as well as many of Ring's other core elements. This question of the relationship between suicide and near-death experiences deserves more systematic attention than it has thus far been given.

How do transcendental interpretations of near-death experiences affect traditional Judeo-Christian beliefs about survival after death?

In order to understand what this question involves we have to get clear on just what survival after death has amounted to in the history of the Judeo-Christian faiths. In doing this we find ourselves in the midst of a number of vexing problems. Perhaps the most interesting of these can be understood by looking at the two figures below:

(A) <i>Edna</i>	(B) <i>Ralph</i>
sleeping	gone to
but will	his
some day	eternal
meet her	reward
maker	

Both figures A and B are reasonable representations of tombstones I have seen in New Haven, Connecticut. At first glance neither figure seems particularly interesting. When you consider, however, that Edna and Ralph were married to each other and, in fact, are buried side by side, the inscriptions on the stones are incongruous. Ralph is "gone," but Edna, curiously enough, is "sleeping." This discrepancy arises precisely because there are two views of survival after death in the Judeo-Christian tradition.

Edna's variety, "resurrection of the body," developed in Hebraic literature over a long period of time and came to fruition in the writing of the Apocalyptic books. (Daniel, c. 165 B.C. is probably the best example of this literature.) It consists in the belief that, at the end of time, the bodies of the dead will be resurrected from the grave and reconstituted. This belief started as a hope voiced by the Prophets, who awaited a vindication of the justice and righteousness of Yahweh in a time when the land would be restored and the political yoke that held them in bondage would be lifted.

By the time of the writing of Isaiah (700-400 B.C.), the realization

began to be made that this vindication would not occur here and now, but rather would be postponed to the future.

O, Lord, in distress they sought thee,
they poured out a prayer
when thy chastening was upon
them.

Like a woman with child,
who writhes and cries out in
pangs,
when she is near her time,
so were we because of thee, O Lord;
we were with child, we writhed
we have as it were brought forth
wind.

We have wrought no deliverance in
the earth,
and the inhabitants of the earth
have not fallen.

Thy dead shall live, their bodies
shall rise.

For thy dew is a dew of light,
and on the land of the shades thou
will let it fall. (Isaiah, 26:19)

A century and a half later, after countless hardships and tragedies, the author of Daniel echoes the same hope when he says, "And many of these who sleep in the dust of the earth shall awake . . ." (Daniel, 12:2). The logic of these passages is quite simple: Since God has not vindicated himself here and now, it must occur in another life. For the Hebrew people of the Apocalyptic period, this new life consisted of a resurrection of the body.

The origin of the idea of resurrection is a question of continuing debate. Harris Birkland (1926) has argued that the ancient Jews borrowed the idea from the Persians during the period of the Persian domination. Others have claimed that the notion is taken from the Baal cults of the Canaanites, complete with their dying and rising gods. A third position, which to me seems most plausible, is that the Jews, during the time of the Prophets, began to experience a sharpened sense of the importance of the individual. This, coupled with repeated demonstrations that Yahweh would not make good the covenant in the present, produced the notion of survival after death in Hebrew thought. Because God was still thought to be just

and righteous, even in the face of these continuing inequities, vindication came to be understood as occurring in a life to come. It was faith in the just and powerful Creator that brought solace in the face of death.

The other form of survival after death, "immortality of the soul," is epitomized in figure B. Although there are many varieties of belief in immortality, the chief emphasis is always on a dualism in the human person of body and soul. The body is subject to corruption because it is mortal. It will begin to decay at the moment of death. The soul, however, is immortal and not subject to death. It continues to have life apart from the body. It is this nonmaterial element, the soul, that is important, for it continues to exist unencumbered by the body.

The concept of immortality of the soul is not originally a Biblical notion. The idea pervaded Orphic thought in ancient Greece and was developed most fully by Plato in the *Phaedo*. As early Christianity came into contact with Hellenistic and Roman cultures, the notion of immortality slowly made its way into the Church. It may have originally entered the Christian tradition as a specific attempt to describe hope for eternal life in terms of Greco-Roman categories. It is clearly very different, however, from the Hebraic strain of Christian thought that stresses resurrection of the body.

One of the first mentions in Christian literature of the concept of immortality of the soul can be found in Irenaeus's *Against Heresies* (1977). This document was written by the Bishop of Lyons as a response to gnostic heresies of Marcion and others of the second century. In Book V Irenaeus attempts to deal with the problem of what happens to the individual in the interim between death and resurrection. His answer incorporates a limited notion of the soul, but it is only animated when it is tied to the body. In this text Irenaeus has gone well beyond the New Testament in terms of his willingness to accept Hellenistic ideas regarding survival after death. Metaphysical interpretations of NDEs are more or less tied to this dualistic view of the self. Ironically, this point of view is not to be found in Biblical literature.

It should be clear that a number of natural questions follow from the transcendental interpretation of NDEs. If this is the proper interpretation of NDEs, should we devalue the Biblical point of view? Indeed, what should we do with the celebration of Easter? The empty tomb is superfluous or redundant. There is no need for Easter if we are immortal.

Can near-death experiences ever give us proof for continued survival after death?

This question is directly related to the last.

The Biblical tradition speaks of a hope for resurrection; it says little about filling clipboards full of information about spirits who have floated back from the dead because, in principle, resurrection is unverifiable. If resurrection occurs at the end of time, we certainly cannot show “now” that it will be certainty “then.” Hope for resurrection follows as a corollary to belief in a good and loving God. If life after death were a matter of certainty, there would be no need for faith. Many people having NDEs seem to confuse knowing and believing, but these individuals have little more than personal assurance, which brings us precisely to what faith is all about. Faith is not a matter of fact, it is a matter of internal assurance—an assurance that frequently lives very close to doubt. Sren Kierkegaard (1941) realized this only too well. He spent a considerable amount of his time combating the clergy of his day who also insisted on proofs for the existence of God and the afterlife. Little did he know that a century later people would still be trying to establish rational grounds for believing in the afterlife. He understood that the person of faith is more like a lover than a scientist:

But does thou believe it could occur to him (the lover), dost thou believe that it would be an abomination to him, to talk in such a way as to try and prove by three reasons that there is after all something in this thing of being in love?—pretty much as when the parson proves by three reasons that it is profitable to pray, so that this thing of prayer has sunk so low in price that there must be three reasons alleged to being it a little but into repute (p. 167).

Kierkegaard points to an error many NDE researchers make. They don't seem to realize that the awareness of the afterlife is not like the awareness of a mathematical formula. Mathematics remains valid independent of our observation of it. Love and faith are only meaningful in the minds and hearts of people.

Just how this experiential knowledge of God and the afterlife relates to ostensible evidence can be seen in the following example from John Wisdom (1944-45):

Two people return to their long neglected garden and find among the weeds a few of the old plants surprisingly vigorous. One says to the other, “It must be that a gardener has been coming and doing something about these plants.” Upon inquiry they find that no neighbour has ever seen anyone at work in their garden. The first man says to the other, “He must have worked while people slept.” The other says, “Look at the way these are arranged. There is purpose and a feeling for beauty here. I believe that

someone comes, someone invisible to mortal eyes. I believe that the more carefully we look the more we shall find confirmation of this." They examine the garden ever so carefully and sometimes they come on new things suggesting the contrary and even that a malicious person has been at work. Besides examining the garden carefully they also study what happens to gardens left without attention. Each learns all the other learns about this and about the garden. Consequently, when after all this, one says, "I still believe a gardener comes," while the other says, "I don't," their different words now reflect no difference as to what they have found in the garden, no difference as to what they would find in the garden if they looked further and no difference about how fast untended gardens fall into disorder (pp. 188, 190).

What is instructive about this example is that both men agree as to which organic items in the garden can be properly referred to as "weeds" and which should be called "roses." There is no disagreement between the men as to how the garden looks. The difference comes in how that evidence is to be interpreted. This story of Wisdom's may serve as an appropriate analogy for how one might view ostensible proof for survival after death. In Wisdom's example we find out far more about the two men than we do about the gardener. Similarly, the study of near-death experiences may tell us considerably more about the people having these experiences, and the researchers and academicians writing about them, then it does about survival after death. What is perhaps more important, however, is that the issue of survival after death may in principle be one that is clouded in obscurity and possibility. And perhaps it is best that way.

NOTES

1. Kenneth Ring, personal communication, May, 1981.

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