

BOOK REVIEW

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Dying to Live: Science and Near-Death Experience, by Susan Blackmore. London, England: Grafton, 1993, 291 pp., £6.99 (Distributed in the United States by Prometheus Books, \$23.95).

Susan Blackmore is an English parapsychologist of skeptical leanings who, thanks to this book and her frequent media appearances, is quickly becoming the critic near-death experience (NDE) lovers love to hate. And, as she herself has confessed (Blackmore, 1992), she fully expects many people to hate this book because it seeks to give a purely materialistic and reductive explanation for the NDE, and one that deprives it utterly of any implication of life after death. As a result of her provocative and uncompromising views and her interest to make them more widely known, Blackmore has cheerfully thrown herself into the unrewarding role of spoilsport at the NDErs' garden party, the Queen Skeptic on television talk shows and documentaries, and, not surprisingly, has lately made something of a career as the combative heroine for such professionally debunking organizations as the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP), on whose Executive Council she now sits. With opinions and affiliations like these, it would be understandable that persons sympathetic to the NDE and its spiritual import would be motivated either to avoid Blackmore's book in droves or, if they were to read it, to trash it unmercifully.

Neither response, however, at least in my judgment, is warranted. This is a book that, like death itself, demands attention, and that offers not only a bracing challenge to persons interested in the NDE,

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but unexpected rewards for those who make the effort to follow Blackmore along the road that leads ineluctably at the end to her severe and stoic conclusions.

Before I review the intellectual journey that Blackmore conducts for her readers, I need to say a little more about her aims in writing this book. Blackmore aligns herself from the start with the time-honored tradition of skeptical inquiry, which seeks to rob reports of religious, mystical, or even paranormal experience of any aura of transcendental revelation. Any suggestion that such experiences derive from "other worlds," or any reality other than that which is humanly constructed, is an anathema and must be completely rejected. In this respect, Blackmore is following the historical example set by none other than Sigmund Freud himself in the early days of psychoanalysis. In a famous incident described in his autobiographical memoir, *Memories, Dreams, Reflections* (Jung, 1961), Carl Jung recalled that he was urged by his mentor never to abandon the sexual theory of psychoanalysis lest their work be overcome with "the black tide of mud of occultism" (Jung, 1961, p. 150). Blackmore is engaged in a similar struggle today against a formidable and large array of NDE enthusiasts, and her book is an attempt to strip them of every argument used to support the claim of the NDE's transcendental meaning.

The principal object of her contentiousness, of course, is the widespread assumption that the NDE suggests, or even proves, a life after death. From Blackmore's perspective, this claim is absolutely insupportable and her book means to demonstrate why this implication is not only a false but a completely meaningless promise. Naturally, with this aim so obvious from the start, it is no wonder that many readers, hoping for and wanting to believe the opposite, would defect from Blackmore's proposed journey at this point.

To lay the foundation for her thesis, however, Blackmore must first establish something else: the total inadmissibility of any kind of dualistic thinking about the NDE. Of course, dualism itself is no longer in fashion in most contemporary scientific discourse, and Blackmore, as her book's subtitle intimates, yokes herself to today's prevailing trends in science in order to buttress her position. One must not think, despite the popular tendency to do so (she even uses the phrase, "the dualist temptation," early in her book, as though it is something to be feared), that there is any "soul" or independent center of consciousness that can detach itself from the body at death or at any time. Such ideas are merely the products of an untenable

dualistic mode of thought that must be rooted out at all costs. Nothing is to be gained by perpetuating such illusions in a modern age. And with nothing left to separate from the body at death, there can naturally be no possibility of survival and therefore no life after death. As Blackmore puts it in her stark conclusion, "We are biological organisms, evolved in fascinating ways for no end at all. We are simply here and this is how it is. . . . There is no one to die" (p. 263-264).

Although these assumptions are not stated openly at the beginning of her book, it is soon obvious that they underlie Blackmore's entire inquiry into the nature and meaning of the NDE. And like her historical predecessors of similar persuasion, Blackmore conducts her examination of the NDE chiefly by trying to provide a neurological explanation of all of its major features and in this way attempt to slam the door soundly on all transcendental interpretations. Her reasoning is classic William of Ockham in relation to any would-be contemporary Aquinas of the NDE: if the facts of the NDE can be quite satisfactorily accounted for, at least in principle, by the theories and findings of empirical science, there is no need and no justification for any extrascientific, much less metaphysical, assumptions. In this respect, Blackmore also follows in the footsteps of those early critics of religious experience whom William James (1902/1958) once and forever branded "medical materialists" and against whose reductive dismissals of such experience he contended, not altogether successfully, with his customary elegance.

This, then, is Blackmore's initial stance: she is going to attempt to provide a thoroughgoing, purely materialistic explanation of the NDE by dissecting each of its major components with the hand of modern neuroscience. But this is only half her aim. Blackmore, I must advise you, for all her toughmindedness, is very far from a naive reductionist, and her efforts to analyze the NDE in this way are not meant to destroy it, but to reveal its hitherto largely unsuspected and momentous implications for the nature of consciousness and personal identity. She may begin her undertaking with the tools of the neuroscientist, but she will leave us with the insights of the Buddha, and that is what makes Blackmore's contribution to our understanding of the NDE so original and so deserving of our scrutiny and thought.

With this as prologue, then, to Blackmore's assumptions, methods, and aims in this book, let us now examine some of her specific propo-

sitions about just how the NDE is to be explained and what, in her view, it really tells us about ourselves.

To begin with, Blackmore, following the example of Karlis Osis and Erlendur Haraldsson in their well-known book on deathbed visions (Osis and Haraldsson, 1977), offers us a contrast between two competing general hypotheses about the NDE. One she calls simply "the afterlife hypothesis," while the other is labelled "the dying brain hypothesis." The first, and clearly the most popular, she says (at least among the lay public), is supported by four considerations: (1) the consistency of the NDE across persons and places and through history; (2) the reality of the experience; (3) the paranormal features of the NDE; and (4) the power of the NDE to transform the experiencer's life. But already here the attentive reader will feel that Blackmore is subtly loading the dice against those who are open to the transcendental possibilities of the NDE.

None of the four considerations she mentions, *as she herself immediately points out* (p. 5), necessarily entails the presumption of an afterlife as such. It is of course perfectly possible to acknowledge the existence of all four of these factors without committing oneself to an afterlife position. Therefore, it would have been fairer and more accurate for Blackmore to label this view of the NDE something like "the transcendental hypothesis," or perhaps "the literalist hypothesis," and to state clearly that this understanding merely leaves open but does not compel an afterlife interpretation. But Blackmore's purpose here, one feels, is not merely expository but rhetorical. Like Ronald Siegel, the psychopharmacologist who years ago began to play the same kind of role in NDE circles that Blackmore occupies today (e.g., Siegel, 1980), she wants to paint a black-and-white contrast at the outset between "believers" in the NDE and skeptics, and insinuate that the former also believe that NDEs clearly imply an afterlife. Although this correlation is surely made by many, with various degrees of conviction, it is not made by all of those who are prepared to acknowledge that the NDE is an authentic experience. After all, as Blackmore surely knows, many of her colleagues in the field of parapsychology itself do not necessarily subscribe to a belief in life after death.

The other hypothesis, that of "the dying brain," we already understand, is the one that will elicit Blackmore's sympathy and the one she will try to defend. It, too, is supported by the consistency argument, but here the consistency of the NDE is said to derive from the fact that everyone has a structurally similar brain that mediates

the experience of dying in much the same way. Blackmore also gives a second reason for this hypothesis, namely that all the features of the NDE can occur in the absence of a near-death crisis. By and large, I agree with this proposition, but I cannot see why it has a special pertinence to the dying brain hypothesis. Indeed, many researchers like myself who reject a purely materialist view of the NDE would have no difficulty in acknowledging that coming close to death is only one way near-death-like experiences occur.

In any case, once Blackmore has stated, however cogently, these adversarial positions, she is about ready to roll up her sleeves and get to work. First, however, some preliminary reviewing of the near-death literature is necessary in order to establish that there is at least a reliable phenomenon to be explained and to consider the various factors that affect the occurrence of the NDE. I won't comment on this section of Blackmore's book—which takes up the first two chapters—since this will be familiar territory to virtually all readers of this journal, except to mention two related important points that affect her subsequent presentation. One is that she rejects the notion that the NDE is a unified phenomenon and that it occurs in much the same way regardless of the circumstances that bring it about, the "invariance hypothesis." The second is that she believes that certain features of the NDE, such as noise, the tunnel, the light, and "other beings" are more likely to occur when the brain has been directly affected by some kind of insult or by drugs; whereas feelings of peace, mystical revelations, the life review, and positive aftereffects can manifest in the absence of any toxic condition to the body. One could certainly quibble with the tenability of this classification. For example, it seems odd that she would place the phenomenon of the light in one category while assigning mystical features to the other. As is well known, the literature on mystical experience is replete with light phenomena, and many writers on the subject have stated that an encounter with an ineffable, radiant light is at the very core of such experiences. Consequently, the classification that Blackmore makes here seems arbitrary and suggests at least the possibility that it may have been formulated mainly for the convenience of the theorizing that is to come later in her book, rather than for any sound empirical or logical basis.

However that may be, she is now ready to explore the neurological underpinnings of NDEs and functionally equivalent experiences, and most of the remainder of her book is given over to a detailed examination of these phenomena from that perspective. Here, I can only

hope to give something of an overall summary of her argument, but before doing so I need to say that there is a great deal in Blackmore's book here that is forcibly and ably presented, and her chapters are rich with interesting experimental data and ideas for research that will advance our understanding of NDEs.

Blackmore begins by attempting to show that features of NDEs, such as the noise, the tunnel, and the light, may stem from a variety of disturbed brain-related states. For example, the noise sometimes described by NDErs may have its origin in stimulation of the cochlear region of the ear, which is highly sensitive to cerebral anoxia. Alternatively, a portion of the temporal lobe, which seems to mediate sounds as pitch, could be implicated in reports of unusual "transcendental" music. Both the tunnel and the light may be understood, Blackmore says, as reflecting an irradiation of the visual cortex, which could occur in a particular fashion because neuronal disinhibition mechanisms can be activated by anoxia (though Blackmore is clear that anoxia is only one possible trigger for NDEs, and then maybe only an indirect cause). Blackmore's presentation here is strong on detail, though it is not overly technical, and she offers theoretically-minded readers a great deal of information and speculation to ponder concerning the possible neurological basis of these effects.

Blackmore offers similar explanations for other features of the NDE. The feelings of peace and well-being, which so often permeate these accounts, are traced, not unexpectedly, to the role of a massive release of endorphins on coming close to death, and frightening NDEs to morphine antagonists such as naloxone. The sense of being out of body is the brain's retrospective reconstruction of a plausible reality based on lack of sensory input and a temporary breakdown of the body image. Since there is nothing at all that can leave the body (for that would imply dualism), the notion that the soul has escaped the body's confines is pure, if understandable, illusion. What about the claims people sometimes make that they can see unlikely objects in improbable locations during these alleged out-of-body episodes? Blackmore devotes a chapter to exploding these claims, and finds the evidence completely unconvincing or, at best, inconclusive.

Two chapters are devoted to the life review; the second one has moments of brilliance and overall was one of the best in the book. Blackmore explains the life review by showing that endorphins lower the threshold for seizures in the temporal lobe and limbic system and, together with the outpouring of certain neurotransmitters, cause memory-mediating structures, such as the hippocampus, to release

a flood of stored images. The hyperreality of the NDE is merely a mental model based on a dropping away of all sensory input and the resultant heightening of internal brain-mediated awareness. The timeless quality of NDEs owes its existence to the fact that eventually the everyday model of the self, which mediates a sense of time, itself breaks down.

And so on. It is neither possible nor necessary to indicate here how Blackmore seeks to explain within a consistent neurological framework every single facet of the whole skein of the NDE. It is sufficient, I think, merely to offer a sampling of her treatment to suggest the nature and value of her approach. The questions that call to us next are: what are we to make of her contribution? and what is a fair assessment of it?

It may surprise readers—or even Blackmore herself—that I myself very much resonate to the kind of neurological explanation for the NDE that Blackmore offers in her book. Indeed, in my own lectures on the subject, I use a schema very similar to hers in its main outlines, and postulate many of the same links that she does. I have also sketched a version of this theory in my most recent book *The Omega Project* (Ring, 1992), where the interested reader will again note many points of commonality with Blackmore's model. (Blackmore herself, though she references my book, never seems to mention these conjunctions, probably because she insists in casting me—in a friendly enough way, to be sure, and never with meanness—in the role of one of her antagonists.) In this respect, we both ally ourselves with an emerging cluster of similar neuroscientific models of the NDE (e.g., Jourdan, 1994; Morse and Perry, 1990; Persinger, 1994; Saavedra-Aguilar and Gómez-Jeria, 1989).

Where I part company from Blackmore, however, and where other investigators generally sympathetic to a neurological treatment of the NDE would too, is in what kind of explanatory status to accord to these models. For me, there is a fundamental ontological ambiguity about the neurological approach to the NDE that must be acknowledged. Simply put, it is this: does the brain state associated with the onset of an NDE *explain* the experience or does it merely *afford access* to it? In other words, to explicate the latter possibility, does the brain state Blackmore posits for the NDE give rise to an awareness of a self-existent transcendental order that would be occluded from us when we are in our normal waking state of consciousness? Blackmore of course would answer with an emphatic “no,” and would and must deny that there is any such transcendental domain at all.

But many, like myself, would disagree with her—as would most NDErs—and would, at the very least, be forced to leave the matter an open, and ultimately unresolvable, question.

For example, the writer Richard Heinberg, has commented:

The right temporal lobe appears to be the place in the brain where religious experiences are registered. Does that mean that ecstatic visions are ultimately a form of hallucination—or is the brain once again merely mapping a reality beyond itself? Perhaps the right temporal lobe is a gateway into a realm from which most of us are ordinarily cut off. (Heinberg, 1992, p. 3)

And another student of extraordinary states of consciousness and shamanism, the Welsh writer Paul Devereux, has seen even more clearly into the indeterminism of this issue:

The modern mind likes to feel sure whether or not it is dealing with a neurological construct or a neurological window into another reality. It will, alas, have to live with the ambiguity, because there is as yet no way of truly deciding between the two possibilities. . . . Whether the vision . . . is a neurological imprint or an actual glimpse into another level of reality hardly matters: the *experience* is what counts; it is that which has the power. (Devereux, 1992, pp. 110 and 113)

Even those who, like Blackmore, have articulated their own neurological models of the NDE, are aware of the explanatory limits of such formulations. For instance, after presenting his own neurological framework for understanding the NDE, the French physician Jean-Pierre Jourdan felt compelled to note:

The hypotheses I propose concern certain characteristics of brain function that could *allow* a non-ordinary experience and could possibly help us understand some of their long-term effects; but I do not claim that they explain the experience itself. Unusual perceptions, difficulty telling others about one's experience, and deep changes in one's concept of space and time during non-ordinary experiences suggest that they are perceived without the usual cortical tools of perception and cognition. In numerous cases, the acquisition of information supposedly unobtainable rules out any hypothesis that these experiences are hallucinations or purely neurological phenomena. (Jourdan, 1994, pp. 197-198; italics added)

Finally, I should mention that some neuroscientists who could be expected to be fully sympathetic to Blackmore's position nevertheless shy away from her uncompromising reductionism. Michael Persinger, for instance, whose research Blackmore cites, is one who has explicitly denied that specifying the neurological basis for NDEs necessar-

ily calls their validity into question (Persinger, 1994), and elsewhere has written:

I do not perceive a conflict with those researchers who believe NDEs are real rather than artifacts of the brain's construction. . . . If indeed structure dictates function, then the type of microstructural changes correlated with the NDE could forever alter the NDErs' detection of what comprises reality. For the transient changes that occur during an NDE might allow the brief detection of information that has been traditionally regarded as parapsychological. (Persinger, 1989, pp. 237-238)

Frankly, I find this kind of professional diffidence admirable, and I rather deplore the lack of it in Blackmore's book in this regard. She treats an open question as if it were a closed case, and makes the unwary reader assume that a neurological treatment of the NDE is, in principle, tantamount to a full explanation for the phenomenon. It is not. It is only a perspective, and like others, it has its uses. But it can make no claim to replacing those other perspectives, even if it should prove right in all its particulars. It can only illuminate some of the mysteries of the NDE—and for this we should be grateful—but it will not and cannot be the final answer to the mystery of the NDE itself.

Just as there is an air of dogmatism in the way Blackmore approaches neurological questions about NDEs, so there are also other features of her book where there seems to be a premature closing of the doors on matters having to do with the empirical correlates of the phenomenon. Take, for instance, her consideration of the paranormal concomitants of the NDE, to which she devotes a chapter. As we already have seen, Blackmore cannot easily accommodate paranormal events given her approach and philosophical commitments, though, to her credit, she has been fair enough to concede elsewhere that there is some evidence on behalf of psi that she and other critics cannot yet explain away (Blackmore, 1992, p. 169); and at the end of this book candidly states that "If the evidence changes in the future and truly convincing paranormal events are documented then certainly the theory I have proposed will have to be overthrown" (p. 262). Accordingly, in this chapter—with the amusing if somewhat snide title of "But I Saw the Color of Her Dress"—Blackmore does her utmost to call into question all of the evidence pertaining to possible veridical perceptions during NDEs. In this connection, she reviews reports of such claims ranging from Sabom's pioneering study (Sabom, 1982) to the now famous and often told incident originally

described by Kimberly Clark (1984) concerning the sighting of a tennis shoe on the ledge of a hospital by a migrant worker who could not possibly have seen it there.

Blackmore ends the chapter by apparently exposing as myth the stories that have circulated that blind persons have also reported being able to see during their NDEs. Instead of accepting these accounts at face value, as many people would be inclined to do, Blackmore suggests alternative interpretations based on such factors as prior knowledge, fantasy, blind luck (pun intended) and sensory-cuing, any or some combination of which would enable experiencers to construct or reconstruct a plausible scenario of their situation while close to death. Interestingly, the late D. Scott Rogo, in his book on NDEs (1989, pp. 179-192), considered many of these same factors in connection with his discussion of the sensory cuing hypothesis, and reached a conclusion opposite to that of Blackmore. In cases where these factors are improbable, it is always possible to question the authenticity or reliability of the original report, and Blackmore is correct that some cases when checked out, don't.

However thick the clouds of doubt about these stories and however cogent the reader may find Blackmore's alternative interpretations, further studies since the time of the composition of her book appear to undermine her position. For example, Madelaine Lawrence and I have recently presented several more cases of the "improbable shoe" variety (Ring and Lawrence, 1993) and have provided some evidence of external corroboration of these alleged perceptions in each instance. But more than that, together with Sharon Cooper I have recently launched a major study of NDEs in the blind, which was a special target of Blackmore's skeptical pen. Although we have so far interviewed only nineteen such persons for our study, the findings are already clear beyond dispute. Blind persons, even the congenitally blind, do indeed, almost without exception, claim to see during their NDEs. And what they report seeing are things of this world, such as their physical bodies or items of clothing, as well as visions of "the next world" (if I may use that phrase for convenience, and merely descriptively, not ontologically). We will be attempting, of course, to provide a measure of external corroboration for these apparently eyeless perceptions that the blind assert they have had while close to death.

Such data, especially those supported by independent witnesses, would obviously constitute a challenge for Blackmore's position, since they would appear to provide the basis for a strong claim for the

objectivity of NDEs. And what this would imply is of course what most contemporary scientists and philosophers, and certainly Blackmore herself, would be loath to consider: namely, that there is some conscious aspect of ourselves that can indeed separate itself from the body under conditions of extremity and not in any way be limited by the handicaps of the physical body. Doubtless such a finding, if upheld and replicated, would spur an immediate search for alternative explanations, as the ugly specter of a seemingly safely interred mind/body dualism might threaten once again to rise up and disturb the sleep of today's monist majority. In any event, it will be interesting and instructive to see how Blackmore will respond to the data on NDEs in the blind when our study is published.

Parenthetically, some of these cases may also raise questions about Blackmore's tunnel theory since a few of our interviewees have described going through a tunnel as a part of their experience. Blackmore acknowledges, however, that blind persons should be able to have such an experience as long as their blindness is of cortical origin (p. 90). Whether or not this is the case for our tunnel travelers is still to be determined, but our data will in any case be relevant to some of Blackmore's many testable propositions from her theory.

And more such studies of alleged out-of-body perceptions are already in the pipeline or are actually underway. For example, Janice Holden is planning a major investigation along these lines in a large Dallas hospital, while another such study is currently being conducted by my colleague, Madelaine Lawrence, at Hartford Hospital. Additionally, a team of researchers in the Netherlands, headed by Pim van Lommel (personal communication, May 15, 1993), has been working on an extensive research project concerned with NDEs and involving hundreds of respondents, and they, too, will be examining their cases for evidence of such perceptions. Of course, the findings from these studies are not yet available, but they, too, will prove relevant to Blackmore's position, one way or the other. At least it is reassuring to know that within a relatively short time we should have a fresh abundance of data to draw on whenever we wish to evaluate avowals of the kind "but I saw the color of her dress."

The chapter on paranormal aspects of NDEs also helps to bring into relief another more general shortcoming of Blackmore's book that might be attributed to her own self-confessed intellectual predilections: its selectivity. For example, anyone who sifts through the now voluminous NDE literature will find many studies and stories of apparent paranormal knowledge during or following an NDE

(Atwater, 1988; Farr, 1993; Grey, 1985; Greyson, 1983; Kohr, 1983; Morse and Perry, 1992; Ring, 1984a; Sutherland, 1992/1995, 1993), quite apart from the material bearing on claims of veridical perceptions we have just considered. Some of these are quite astonishing, such as reports of NDErs who allege that during their encounter with death they saw and correctly recognized (deceased) siblings they never knew they had, or examples of apparent precognitive knowledge of future events that later took place.

I am not maintaining, of course, that such statements can always be independently verified, but the fact that they are so widespread among NDErs, to say nothing of the more extensive body of research on paranormal correlates of NDEs itself, makes it seem very curious that Blackmore essentially ignores this entire domain of data. Instead, she contents herself with repeated assertions that merely deny paranormality or just chalks up apparent instances of it to temporal lobe instability.

And it is not just with respect to paranormal aspects of NDEs that Blackmore is revealingly selective. Another instance is that, whereas she gives a great deal of attention to the tunnel phenomenon (which she acknowledges is not even a feature that is especially connected with NDEs *per se*), she devotes surprisingly little, relatively speaking, to the light. Of course, as a scientist Blackmore is concerned to assay an explanation for the light reported by NDErs, but an explanation limited to why certain colors are perceived during the experience hardly does justice to the subjective sense of the phenomenon itself!

Certainly from the standpoint of the overwhelming majority of persons reporting this aspect of the NDE, their encounter with the light is the very essence and most important element of their experience, "the heart of the body" of the NDE, we might say. But for the most part, other than in a *pro forma* fashion, Blackmore's treatment of this crucial feature of the NDE gives little indication of the power of this light to confer upon the individual a sense of total knowledge, absolute acceptance, unconditional love and complete perfection, nor does it fully acknowledge the feeling that the encounter with the light may be for many NDErs an ontologically shattering experience of "ultimate reality" (a term that Blackmore would find meaningless, anyway, and which she is at pains in her seventh chapter absolutely to deny).

It is this kind of treatment of the NDE, in fact, that will probably anger or even repel many readers of her book, especially NDErs

themselves, for the perspective that Blackmore takes throughout her book is unremittingly that of the scientist who seeks to analyze and explain the phenomenon by examining its various components, and not one who enters empathetically into the subjective nature of the NDE. It is commendable that Blackmore, unlike other critics of NDEs whose knowledge is largely limited to what they have read on the subject, has taken the trouble to interview NDErs (though she never states exactly how many she has talked with) and collected other cases through the mail. But I doubt that most readers will feel that she has done much more with these testimonies than to pass them through her own skeptical filters in order to use them for her admittedly tendentious aims. As a result, she gives us a book where the scattered remains of the NDE are all laid out for us to see but where the NDEr himself or herself is largely absent.

Nevertheless, it is important that these criticisms not obscure the real and considerable virtues of Blackmore's book, which become increasingly evident as she makes her way toward her conclusions. Throughout her book, as the reader will become aware, she has been laying the basis for a merger of philosophical materialism, cognitive psychology, modern neuroscience, and Buddhist thought on the nature of the self, and by the time her book closes, she has succeeded in bringing these strands together in a most compelling manner. Instead of an independent soul or personality that survives death, for example, Blackmore argues that all there is are mental models for such a self, which are in turn a construction of the human brain, and which will dissolve like so many sugar cubes in water when the brain itself ceases to function at death. Thus, brain-generated models of self and reality are the sum of what we believe and may hold dear, but there is absolutely no reason to think they will persist after death. Moreover, what happens during the NDE is that these models of self and reality begin to unravel, and it suddenly becomes clear, in a moment of dawning undeniable realization, that there never was a permanent, separate self at all. To quote Blackmore directly,

There was only a mental model that said there was one. . . . My conclusion is that the NDE brings about a breakdown of the model of the self along with the breakdown of the brain's model processes. In this way it can cut right through the illusion that we are separate selves. It becomes obvious that "I" never did exist and so there is no one to die. (pp. 254 and 259)

This is a conclusion that, as Blackmore herself understands, few persons, especially those who are partial to the NDE, will welcome

and most will want to reject vehemently. But this may be mere prejudice based on many centuries of the Western tradition that has inculcated and caused us to hold fast to the idea of an independent soul that survives death. As Buddhism teaches, however, and as some current thought in neuroscience and cognitive psychology would contend, this ingrained, unthinking conception of self may be in error. Blackmore's book will make every openminded reader reflect uncomfortably on this matter, and, to me, this is perhaps its most significant contribution to our understanding of the NDE and its implications. Certainly it is what distinguishes it from all other skeptical treatments of the NDE I have so far encountered.

Does that mean that I buy Blackmore's Buddhist-tinged hermeneutics of the NDE? Not necessarily. Although I myself have long been sympathetic to Buddhism itself, I think that her reading of NDEs in this respect is forced. For instance, Blackmore claims that the sense of self begins to dissolve under the impact of the NDE. That may be true in some cases, but for the most part, I found that NDErs maintain that their feelings of personal identity tend to persist during their experience (Ring, 1984b). This is a finding that has been upheld by other researchers, too. In one recent study of NDErs by Regina Hoffman, for example, it was found that "individual experiencers repeatedly emphasized that the self-identity within the experience was a familiar and entire 'me' "(Hoffman, 1993, p. 214).

Another problem I see is that Blackmore wants to attribute all the transformative effects of NDEs to the breakdown of the self-system. But there is no independent evidence whatever that this is what mediates these widely acknowledged changes, and Blackmore herself offers none. The fact is, no one knows exactly what factors are responsible for which effects or even if there is a single underlying cause, such as kundalini, for the transformative pattern following NDEs. We are at least beginning to get some research directed to this issue, such as that of Emilio Tiberi (1993), which emphasizes the emotional component of NDEs, but we are still very far from anything approaching a definitive understanding of the dynamics involved. Here, then, Blackmore has merely advanced her own opinion on the matter, but it seems based largely on considerations having to do with her wish to present a logically consistent explanation for this aspect of NDEs.

And then of course even a moment's reflection on Buddhist thought would be sufficient to remind us that this is a tradition based on an elaborate afterdeath model, as indicated, for example, in the familiar

Tibetan Book of the Dead (Fremantle and Trungpa, 1975). In this connection, it is instructive to note how a Tibetan teacher of this tradition, such as Sogyal Rinpoche (1992), treats the NDE and its implications for life after death. Indeed, a greater contrast can scarcely be imagined between the Rinpoche's book and Blackmore's in this respect!

I point this out only to make it obvious that there is nothing inherent in the Buddhist canon that would lead inevitably to Blackmore's conclusions about the survival question, and much that would contravene it. It is of course the Buddhist teachings on the nature of the self and on impermanence that lend themselves best to the thesis Blackmore wishes to defend with respect to the NDE. Even so, it is debatable how convincing a case she has made in this regard. What we find in this book instead is just how convinced Blackmore herself is that she is right.

But her readers can make this judgment for themselves. To give Blackmore her due, she has written a courageous book, and one must respect her greatly for that. It takes guts to write a book one knows will cause many readers to rise up in fury and that strikes with such an iron fist against some of our most cherished notions about ourselves and our prospective immortality. But Blackmore didn't write this book to become popular. She wrote it to kindle debate on the NDE, to offer a new and radically different way of understanding this phenomenon, and to stimulate new lines of research so as to put her own and others' theories to the test. In all these respects, she has, in my opinion, succeeded admirably. That is why, for all its shortcomings, I regard *Dying to Live* as one of the truly seminal contributions to near-death studies, and recommend that every person with a serious interest in the NDE make sure to read it and grapple with the challenges that the author has posed so provocatively for us.

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