BOOK REVIEW

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As book reviewers, we try to be as positive about a book as we can be. Therefore, we regret to say that, for us, in reading neurologist Kevin Nelson’s recent book, we felt extremely challenged to find positive things to say. The good news is that Nelson wrote lucidly and tended to treat NDErs with respect and empathy. The bad news is that Nelson viewed NDEs from a very narrow perspective: that of mainstream neurology wherein the disposition is entirely materialist, that is, reducing all phenomena to physiological processes. Nelson did not make much of aspects of NDEs that render the phenomena so unique and special: those that seem to exceed the limits of what neurology can explain. In order not to be misled by this exclusion from Nelson’s discussion, a reader needs to come to this book with reasonably comprehensive knowledge of the vast literature on NDEs.

After a fairly long, 13-page Prologue, the book is divided into three parts: Part One: The Architecture, with three chapters; Part Two:

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At the Doorway, with four chapters; and Part Three: The Other Side, with one chapter and an Epilogue. The book finishes with Notes, References and Resources, Acknowledgments, and an Index. Altogether, the book comprises 326 pages filled with properly typefaced text and with appropriate pictures and diagrams.

As it should, the Prologue set the tone for the book. Although Nelson began with a sympathetic, personal anecdote about one of his patients—a Joe Hernandez who had a rather dramatic NDE—Nelson soon made it clear that his search was for only neurological, i.e. purely materialist, explanations of NDEs and other spiritual experiences. Quite telling in this regard was the following:

As is so often the case with science, I was not pondering these questions [about NDEs and other spiritual experiences] alone. Although neurologists were hesitant to study near-death or other spiritual experiences, unfortunately [emphasis added] that was not the case with specialists in other fields. I watched with both wry amusement and professional concern as cardiologists, radiologists, and cancer specialists speculated wildly about brain activity during near-death experiences. I was dismayed when their misuse of science led to what I knew were misunderstandings and myths: people returning from brain death miraculously intact, or near-death experiences that proved God exists and we are all headed for an afterlife. (Nelson, 2011, p. 5)

We disagree that the conclusions of cardiologists such as Michael Sabom (1982, 1998) and Pim van Lommel and colleagues (2001) who, unlike Nelson, have conducted extensive in-hospital NDE studies, and of others such as radiation oncologist Jeffrey Long (2010) who has conducted extensive internet survey of NDErs internationally, can accurately be grouped together and labeled as “wild speculation.” As a result of these and other of Nelson’s word choices, including invoking the word “myth” with its implications of non-rationality and referring to “amusement” in reading the extensive work of respected and dedicated professionals, we found Nelson’s tone to be disrespectful, dismissive, and exclusionary—as if he alone were qualified to draw conclusions about brain functioning—rather than professionally respectful albeit disagreeing. We had perceived a similarly condescending tone in Nelson’s response to Alex Tsakiris’s questions in the Skeptico.com podcast available at http://www.skeptiko.com/kevin-nelson-skeptical-of-near-death-experience-accounts/.

Thus, Nelson apparently considers non-materialist approaches to understanding to be scientifically unfounded and irrational. In failing to acknowledge materialism as one philosophical position and that
non-materialist approaches could be *reasonable* rivals of materialism, and in failing to acknowledge the data pointing to the limits of materialist models to explain the full range of NDE phenomena (Greyson, Kelly, & Kelly, 2009), we found Nelson’s attitude to be essentially dogmatic. We found it ironic that he, who characterized other professionals as having misused science, himself misused it in this most fundamental way.

On page 10, Nelson summarized the conclusion of his and his colleagues’ work: “*All these key features of the near-death experience*”—the blending of waking and dreaming consciousness, the experience of light and of out-of-body sensations, the experience of consciousness with physical inability to move, and production of “stunningly imaginative narratives,”—“could be traced to REM” (p. 10)—REM being the phase of sleep characterized by rapid eye movement and associated with plotted, emotional dreams. Based on a statement on p. 10, it appears Nelson realized that his work and conclusions would not be readily accepted. However, we were surprised to read the sentence that followed:

> Although I knew our research [into NDEs] was provocative, I was stunned at the furor it created in the popular press. It seems we want to know, but we do not trust what anyone else says about our most personal spiritual experiences. (Nelson, 2011, p. 10)

What surprised us about the second sentence was that elsewhere throughout the book, Nelson seemed to show genuine empathy for NDErs, but here, his own mindset seemed to render him incapable of understanding how NDErs and NDE researchers could find serious fault with, and strenuously object to, his methods and conclusion. Aside from their issues with his research methods and conclusions, other NDE researchers have found that most NDErs—who, like most people, remember their dreams at least occasionally—have been quite clear that their NDEs were neither dreams nor dreamlike but were as real as waking consciousness or even “realer than real.” Whereas dreams are easily forgotten and waking experiences are frequently misremembered over time, research has shown memories of NDEs remain vivid and unaltered over decades (Greyson, 2007). In addition, many cases of these subjectively real experiences included verifiable observations that, considering the position and condition of the NDEr’s physical body, should not have been possible yet were later corroborated as accurate (Holden, 2009). To jump ahead to the rest of the book, Nelson never addressed these results of multiple research pub-
lications but rather maintained a stance that associated NDEs with dreams which are, in his words, “not real” (Nelson, 2011, p. 10). Thus he also negated the basis of the profound meaningfulness NDErs have tended to derive from their NDEs. In any case, we found that Nelson seemed usually to consider NDErs with empathy and sometimes not.

By persisting in the substantial exclusion of existing published research, Nelson is helping to make his own prediction come true:

I expect my work to continue to generate controversy. On one hand, the link I have made between REM and the near-death experience upsets those who see such experiences as a revelation of the afterlife or proof of an underlying web of consciousness or the existence of God. For these people, my work puts near-death experiences uncomfortably close to dreams—in other words, experiences that are not real. On the other hand, my work also irks some die-hard atheists, because it inextricably links spirituality with what it means to be human and makes it an integral part of all of us, whether our reasoning brain likes it or not. (Nelson, 2011, p. 10)

As for the first part of his prediction, we most certainly consider his conclusions not only controversial but downright objectionable—not so much because we belong to the camp of the “uncritical believers,” which we do not—but because we belong to a third camp he did not address. That camp consists of non-dogmatic, open-minded researchers who believe that all evidence from at least the past 30 years should be taken into account and who, on the basis of that evidence, have found sufficient evidence to favor a dualistic world view—that consciousness and the brain are essentially independent though closely associated during physical life. Nelson clearly is not a dualist; throughout his book, he vehemently adhered to the monistic materialist paradigm while ignoring or dismissing out of hand any evidence that could bring into question or even directly contradict his world view.

As for the second part of Nelson’s prediction, to us it seems that he need not be too worried about “die-hard atheists,” when we see how the Dutch version of his book has been loudly welcomed by militant atheists such as anesthesiologist Gerald Woerlee, a sometimes-contributor to this Journal, and world-renowned neurobiologist Dick Swaab.

Nelson went on:

Our spiritual experiences have instinctual qualities, originating in the most primitive parts of our brains. They appear intertwined with the brain’s limbic structures, which produce feelings and emotions. My research sheds new light on the irrational, primal nature of spiritual experience and religion.
But I do not believe the primal brainstem and limbic system are the be all and end all of the spiritual. Although the basis for our spirituality can be primal, what we do with it is another matter. The future neuroscience of the spiritual may help us distinguish the primal roots of our spiritual impulses from the associations, imagery, and thoughts they induce in “higher” brain regions. We may finally begin to understand how the spiritual has shaped the cerebral cortex.

This book is only a beginning. The field of spirituality and the brain is in its inception. Each of us, on our own, must find spiritual meaning and value. This is one of our greatest burdens, but it is also one of our greatest opportunities. In the end, understanding the neurological foundation of spirituality is necessary for a contemporary understanding of what it means to be human. (Nelson, 2011, p. 11)

We wonder whether the side of the “believers” will be happy with Nelson’s ideas that spiritual experiences are actually no more than “primal and irrational” neurological processes that, at the same time, could be the basis of self-knowledge. We cannot imagine that anyone could find consolation, more or less transcendence and meaning, in this perspective. Nelson’s views remind us of comparable intellectual caprioles by Susan Blackmore who considered the materialist world view far more positive than a spiritual world view—in contradiction to the great majority of the people in this world who most definitely do not agree with her. For us this all boils down to closing one’s mind for the consequences of such a materialist world view. How can one find spirituality and meaning in reductive materialism, which, to give it a positive twist, may indeed add to a belief in a management of material reality, i.e., for materialists the one and only reality? But that’s about it. Hence, no transcendence, no hope, no deeper values, and no satisfactory answers to the fundamental question of immortality—at best perhaps the lifting of physical immortality. All there is, according to die-hard materialists: Life is intrinsically meaningless, humanity is nothing but a coincidental quirk of nature, and a person is nothing but a contingency. Anyone who cannot accept this “reality” is unfortunate—and not yet grown up, as one of us once heard an atheist wryly announce. We find it interesting that Eben Alexander, former Harvard Medical School faculty neurosurgeon who rather recently experienced NDEs during coma associated with bacterial meningitis, named his presentation at the 2011 conference of the International Association for Near-Death Studies (IANDS) “Childhood’s End,” because he now considers his many years as a materialist a kind of childhood from which, as a result of his NDEs, he has grown up. He now continues to acknowledge the value of scientific research on the brain and its asso-
ciation to consciousness while considering consciousness to be a much, much larger phenomenon than can be accounted for by brain function.

After reading the Prologue, we nearly gave up reading the rest of the book because we believed we knew what we would encounter. But to give Nelson a complete and fair hearing, we continued. For the remainder of this review, we address aspects of the book that struck us most. We will not comment on aspects involving pure neurology; we leave those aspects to other more qualified commentators such as perhaps neurosurgeon Alexander. We also won’t say much about Nelson’s theories on the connection between REM intrusion and NDEs, because Jeffrey Long and Janice Holden (2007) have already critiqued most adequately Nelson’s work in this regard—to which Nelson did not take the opportunity to respond in this book. However, we wish to add that we are open to the possibility of a connection between REM intrusion and some NDEs. Our objection is that Nelson gave the impression that REM-intrusion is fundamental to every NDE. To us it seems very unlikely, in the case of a very powerful, vivid, veridical NDE that occurs within a few seconds of a car crash, that the NDE could have had REM-intrusion as its basis.

In Chapter 1 Nelson tried to explain what a spiritual experience is. Completely in line with the mindset behind this book, he began with one very short sentence: “It happens in the brain” (p. 15), immediately followed by: “We may never understand everything about spiritual experiences: There are things about them that may not, in a philosophical sense, be knowable” (p. 15). We found in these two sentences a strange contradiction: If, indeed, spiritual experiences happen entirely in the brain (at least, as Nelson apparently sees it: reductive materialism), then it follows that there is no reason to believe that there is anything more that is beyond the brain and that cannot be known. The materialist worldview is incompatible with a spiritual world view in which there is more than a physical reality. But next Nelson threw all theories about the relation between brains and mind on one pile, as if there are no differences, whereas it is these differences that are very much at stake.

Another thing that struck us about this chapter was Nelson’s appreciation of the great psychologist William James. But it seems Nelson was not aware of this statement by James: “The brain’s role in the experience of consciousness is not a productive but is instead a permissive or transmissive role . . . Consciousness does not originate in this physical world, but exists already in another, transcendental sphere” (cited in van Lommel, 2010, p. 289). Once again, Nelson seemed to
acknowledge and address aspects of a topic that corresponded to or supported his argument while excluding aspects that did not.

In Chapter 3, it seems that Nelson did not grasp the “Hard Problem,” that is, the question of how the electrochemical processes of the brain could possibly produce the rich subjective experience of consciousness. Elsewhere he rejected out of hand cases of consciousness with flat EEG. Nelson indicated that the Self is an illusion and did not go into thousands of years of philosophical discussions about personal identity. Of course, this exclusion is related to his materialism, but, once again, his perspective seemed to preclude him from even acknowledging alternate viewpoints with a substantial basis in the professional literature.

In Chapter 4, Nelson became more concrete in his attempts to make non-materialist explanations redundant. His tactic was, from the outset, not to take seriously any evidence that argues against materialist explanations.

He also said that opponents of materialism always accept the truthfulness of the NDE. That stance does not characterize our impression from a thorough reading of the professional literature, nor does it characterize our own perspective. Although we do not accept materialism as a valid world view or ontological framework for scientific theorizing, we do endorse a rational, scholarly approach to NDEs which means, among other things, that we usually concentrate on NDEs with confirmed veridical aspects. However, we think that NDEs often seem a mix of extrasensory and dream-like elements and believe that this perspective holds for many serious NDE researchers.

For us the following feature was striking: Nelson saw Blackmore as a critical, open-minded researcher of claims about veridical experiences. Our impression is quite different, beginning with the fact that Blackmore has refrained from further studying NDEs since the early 1990s, as she has stated in an email to one of us (S. Blackmore, personal communication, April 7, 2003). Ever since then, she has played down any veridical NDE or OBE as well as any spiritual experience.

We were perhaps most shocked by Chapter 5. Nelson again explicitly stated that there is no evidence of an afterlife whatsoever; apparently he has never bothered to read the serious literature on that subject—and once again, perhaps another neuroscientist, Alexander, can teach him a lesson in this regard. In addition, Nelson asserted a curious dogmatic formulation: that during NDEs the brain is not at all dead but is “alive and conscious” (p. 132) certainly for at least 10 to 30 seconds which he considered enough time to produce a full-fledged
NDE. He even went so far as to state that such a brain may remain conscious for several minutes. Furthermore, in reaction to the seminal article by van Lomme et al. (2001), Nelson wrote:

“All patients had been clinically dead,” they wrote, “which was established mainly by Electrocardiogram records.” As a neurologist I was stunned. As we have seen, after blood flow stops, the brain goes along quite nicely for ten seconds or so. It is not dead. Only after that ten-second point does the brain begin to malfunction, but it still does not approach death for several minutes, even when it has zero blood flow. (Nelson, 2011, p. 132)

We consider this to be a shocking misrepresentation of van Lomme et al.’s article. We have asked van Lomme to address this matter directly, which he has done elsewhere in this Journal issue.

We considered Nelson’s presentation of the Pam Reynolds case to be equally distorted. Without any further corroboration he bluntly said, “There is no doubt in my mind that Pam awoke during surgery . . .” (p. 146)—which then explains (away) all of her veridical perceptions. In this regard Nelson echoed Woerlee (2011), with the important difference that Woerlee at least tried to provide a highly detailed physiological explanation—however thoroughly his explanation was refuted by Chris Carter (2011) and Stuart Hameroff (2011). Reynolds’ own brain surgeon, Robert Spetzler, has made it clear that Reynolds could not have been awake during the entire procedure (Smit, 2008). Nevertheless, Nelson, who was never involved in Reynolds’ case, asserted the conviction that she was.

We considered this a serious misrepresentation of facts and were, once again, tempted not to read on, but we persevered to this summary: “Near-death experiences work in the brain as a confluence of low blood flow to the eyes, fight-or-flight reactions, and the triggering of REM consciousness. Physiologically, that’s it” (Nelson, 2011, p. 218). Nelson then presented “Table 6: Contributions to near-death experience briefly encapsulated.” Following is each entry from the Table followed by our brief comments:

**Tunnel: Low blood flow to the eye’s retina.** An old explanation, clearly based on Blackmore (1993) that has already been challenged with very good arguments (Stone, 2010; van Lomme, 2010, p. 115). Despite the fact that Blackmore stated clearly that “I have not claimed that any of my work proves the Dying Brain Hypothesis” (Stone, 2010), skeptics such as Nelson continue to reference her hypothesis as a well-established theory.

In addition, regarding this and the following points, only a rela-
tively small percentage of all NDErs experience a tunnel. If a physiological mechanism, such as low blood flow, “causes” an NDE aspect, such as a tunnel, then it seems reasonable to expect that any NDEr who experienced low blood flow would report a tunnel experience as part of their NDE—but this is not the case. Nelson did not address this discrepancy.

Light: Ambient light and REM visual activation. Aside from the fact that only a relatively small percentage of all NDErs experience a light, this is an old explanation that can easily be challenged by careful study of the circumstances in which many NDEs take place.

Appearing “dead”: REM paralysis. We think this could be a factor in some cases. However, what NDErs typically experience is not paralysis but a realization that “Oh, so this is death,” for example after experiencing lucid consciousness that includes observing their own seemingly lifeless body from above during the OBE phase of the NDE.

Out-of-Body: Temporoparietal REM deactivation. What of the many cases with highly veridical elements that were subsequently verified (Holden, 2009) and that make the OBE/NDE so special and unique? Throughout this entire book, we found not a word on that well-published subject. Besides, Nelson ignored other aspects such as NDErs being aware of deceased people who, indeed, were deceased but of whose deaths the NDErs had absolutely no prior knowledge.

Life Review: Memories (Hippocampus) from fight-or-flight. Again: only a fairly small portion of NDErs experience such a review. Besides, what a life review—which usually occurs while the NDEr feels a subjective sense of profound calm and wellbeing and sense of being fully known and absolutely loved—has to do with “fight-or-flight” remains an enigma to us.

Bliss: Reward system. Not all NDErs have a blissful experience; some have distressing experiences that could not in any way be accurately characterized as rewarding (Bush, 2009).

Narrative Quality: REM dreaming and the limbic system. An abundant literature has differentiated REM dreams from NDEs. For example, whereas dreams usually involve distress of some kind, the great majority of NDEs have been pleasurable, often to the point of ecstacy; whereas dreams have no underlying pattern, NDEs have a pattern; whereas dreams are notoriously prone to being forgotten, even highly detailed NDEs are recalled virtually unchanged over decades; and whereas dreams rarely are followed by transformation, NDEs are followed by transformation of a particular nature that, thanks to NDE research, is now well documented.
In summary, we found this book to be presented as if from a fully informed perspective but actually to represent a partially informed— and sometimes misinformed—perspective based on the author’s pre-existing worldview. Nowhere is the International Association for Near-Death Studies (IANDS) mentioned. Only a few NDE researchers are mentioned, and then just briefly: Sabom, van Lommel (who is not even mentioned in the Index), and Greyson—the latter mainly because of Greyson’s NDE Scale, which Nelson discussed extensively and considered a reliable scientific tool but, nevertheless, undercut with the comment that “the principal weakness of the Greyson Scale is that the scale is not based on known brain physiology” (p. 281). Nelson never addressed most of Greyson’s extensive research nor that of other prominent researchers, including physicians such as Peter Fenwick, Sam Parnia, and Jeffrey Long; nurses such as Penny Sartori and Debbie James; and non-medical professionals such as Kenneth Ring, Janice Holden, Emily Kelly, and Edward Kelly. A now-standard work such as The Handbook of Near-Death Experiences: Thirty Years of Investigation (Holden, Greyson, & James, 2009) and another truly major work, Irreducible Mind (Kelly, Kelly, Crabtree, Gauld, & Grosso, 2007) are nowhere to be found in Nelson’s very long References and Resources lists.

On a more positive note, we repeat that in contrast to other materialist researchers, Nelson tended to treat NDErs with sympathy. And we endorse the scientific appropriateness of his investigating a possible connection between REM and NDE—although we find fault with both his methods and conclusions in this regard.

All in all, we cannot agree with reviewers who have praised this book. Rather, we found that the book both neglected and misrepresented a vast NDE research literature, and it failed to acknowledge, more or less respond to, criticism of Nelson’s own research that had formed the basis for his book. Thus, to reviewers who hailed this book as a milestone in NDE research, our response is: Far from it.

References


