

REIMAGINING THE SOUL: AFTERLIFE IN THE AGE OF MATTER by Douglas Stokes. Jefferson, NC: McFarland, 2014. Pp. viii + 206 (paperback). ISBN 978-0-7864-7707-4.

Experimental psychologist Douglas Stokes tells us in his preface that his book “explores conceptions of the soul and the afterlife that are consistent with the findings of modern science.” He discusses many different conceptions of the afterlife, with the goal of determining which may be actually true.

I found much in this book that is admirable. The author demonstrates vast erudition, discussing relevant topics as diverse as cosmology, quantum mechanics, parapsychology, philosophy of mind, and the world’s religions. Stokes makes it clear from the outset that he rejects the doctrine of eliminative materialism:

Modern scientists and philosophers appear to be finally abandoning the untenable position of radical, eliminative materialism like proverbial rats leaving a sinking ship.... However, some modern scientists and philosophers, such as Daniel Dennett, Susan Blackmore, Thomas Metzinger, Paul Churchland, his wife Patricia Churchland, and Bruce Hood, deny the very existence of continuing selves, or Cartesian theaters, as these self-proclaimed “skeptics” disparagingly call them. (Perhaps these writers are not conscious beings, which might explain the quality of their “thought” processes.) . . .

To most people the existence of a continuing self is immediately given and cannot be doubted. Any theory that denies the existence of any centers of consciousness is quite simply wrong. (pp. 5, 20)

Stokes also displays a good grasp of modern physics, noting that: “Since the emergence of quantum mechanics early in the last century, the brain is no longer viewed as a deterministic system” and seemingly agrees with the implication that “only indeterministic systems are associated with consciousness, as conscious minds would be of no use to a mechanistic system” (p. 63).

He correctly describes how modern physics has had little impact on the thinking of materialistic philosophers such as those mentioned above, and he shows historical insight, noting that “The tenacity with which some scientists resist the idea of an autonomous realm of mind is perhaps understandable in the light of history.... Any mention of an immaterial soul may give rise to fears in many scientists of a descent back into religious irrationalism (and a consequent lack of funding)” (p. 47).

Stokes states in his introduction that the central arguments of his book “will not depend on parapsychological evidence such as hauntings, claimed memories of previous lives, and ostensible messages from the dead provided by mediums or in dreams, as these findings are not accepted by mainstream scientists” (p. 5). Claims similar to this—“most scientists are skeptical,” “rejected by mainstream science,” etc.—are made repeatedly throughout this book (I counted eight times) as an excuse to dismiss what seems to me as the most relevant evidence that could be brought to bear on the question of survival, and they lend a curious conformist timidity to the author’s writing. I will have more to say about this later.

Instead, Stokes reviews materialism, idealism, and dualism, considers them briefly in terms of physics and neuroscience, and settles on the doctrine of panpsychism—the idea that consciousness pervades the universe and may be possessed by entities as tiny as an electron:

Panpsychism finesses the intractable philosophical problem of accounting for how consciousness could arise from insensate matter. It didn’t. It was there all along. It was there at the Creation (i.e. Big Bang) and perhaps even before that (as part of whatever collective mind or agent set up the current laws of physics and then somehow caused an explosion to make them so). (p. 64)

But Stokes rejects the idea of personal survival:

A mountain of evidence amassed by neuroscientists over the past few decades demonstrates the fundamental dependence of memories and personality traits on the state of the physical brain. In view of these findings, it is unlikely that the mind would be able to survive death with its memories and personality intact. It is more likely that the mind survives death as a center of pure consciousness. (p. 6)

As mentioned, this book covers a wide variety of topics, discussing physics one moment, biology, philosophy or religion the next. And therein lies the problem with this book: Many of the subjects—including those which in my opinion are most central to the issues—are given only a brief, superficial examination. Evidence is dismissed without a fair hearing, and conclusions are arrived at prematurely.

Memories, Personality, and the Brain

At six points in the book Stokes repeats claims to the effect that memory and personality are intimately associated with brain activity, and so the conclusion is drawn that they cannot exist without such activity. No one doubts that the activity of mind is intimately associated with the activity of the brain, but correlation is not causation, and so the real question is the nature of such association—that is, whether the relationship is one of production or of transmission-reception, and of filtering.

Stokes also states in several places that the association between states of mind and brain is due to recent advances in the field of neuroscience. But in fact, except for the appeals of modern writers to the terminology of neuroscience, the arguments advanced in favor of the dependence of the mental on the physical—such as the effects of disease and brain damage on mental activity, and that memories seem to be stored in the brain—are essentially the same as those advanced 20 centuries ago by the Roman poet Lucretius.

But does the evidence really indicate that memories are stored in the brain? Neuroscientists have tried for decades to locate the sites of memory traces within the brain. The usual process has been to train animals to perform some task and then cut out parts of their brains to find out where the memories are stored. But even after large chunks of their brains have been removed—in some experiments up to 60%—the unfortunate animals can often remember what they were trained to do. Even experiments on invertebrates such as the octopus have failed to locate specific memory traces, leading one researcher to conclude that “memory seems to be both everywhere and nowhere in particular” (Boycott, 1965, p. 44).

There is, however, much evidence that *changes* can occur in the brains of animals as a consequence of learning. This consideration has been used in an experiment with chicks in an attempt to localize memory traces in the brain laid down during the learning process. Nerve cells in a particular region of the brain showed greater growth and development in chicks that had learned to perform a simple task, but when the brain region associated with the learning process was removed a day after they were trained, the chicks could still remember what they had learned. The cells that had experienced greater growth and development during the learning process were not necessary for the memory retention. The hypothetical memory traces remain elusive. (Sheldrake, 1988, p. 165)

The utter failure to find the memory traces in the brain has led to the untestable hypothesis that memory is stored “both everywhere and nowhere in particular.” Indeed, this hypothesis was invented to explain the failure, as under the conventional assumption memories *must* be stored in the brain. But in the absence of direct evidence, it remains more faith than fact.

But there is another possibility: Memories may not be stored in the brain, any more than TV shows are stored in the components of your TV. Biologist Rupert Sheldrake writes:

But what about the fact that memories can be lost as a result of brain damage? Some types of damage in specific areas of the brain can result in specific kinds of impairment: for example, the loss of the ability to recognize faces after damage to the secondary visual cortex of the right hemisphere. A sufferer may fail to recognize the faces even of his wife and children, even though he can still recognize them by their voices and in other ways. Does this not prove that the relevant memories were stored inside the damaged tissues? By no means. Think again of the TV analogy. Damage to some parts of the circuitry can lead to loss or distortion of picture; damage to other parts can make the set lose the ability to produce sound; damage to the tuning circuit can lead to loss of the ability to receive one or more channels. But this does not prove that the pictures, sounds, and entire programs are stored inside the damaged components. (Sheldrake, 1991, p. 116)

This interpretation makes it much easier to understand the fact that lost abilities often return; patients often recover partially or completely from brain damage even though the damaged regions of the brain do not regenerate.

The appropriate patterns of activity come into operation somewhere else in the brain. This is almost impossible to understand if programs are “hard-wired” into the nervous system; but memories may be stored in fields, which can move their regions of activity and reorganize themselves in a way that fixed material structures cannot.

Hans-Lukas Teuber, a cognitive psychologist who has extensively analyzed brain damage in war veterans, writes that “one is struck, before anything else, with the enormous resiliency of cerebral functions in the majority of instances. This far-reaching restitution of function remains, in my view, essentially unexplained” (Teuber, 1975, p. 160).

This view is echoed by neuroscientist E. R. John, who writes that in general, after traumatic head injury, “memories and skills return at a rapid rate during the first six months, with recovery sustained at a lower rate for up to four months. Defects in cognitive functions caused by brain injury due to penetrating wounds are characterized by an enormous resiliency of function in the great majority of cases, ultimately leading to little or no detectable defect” (John, 1982, p. 251).

So, contrary to what Stokes would have us believe, it is by no means clear from the evidence that memories are stored in the brain and so must be permanently lost in the absence of a properly functioning brain. It should be clear from the above that a consideration of only the neurophysiological evidence leaves us at an impasse with regard to the question of whether consciousness, complete with memories and personality, continues to exist after the death of the material brain. The question can only be resolved in a rational manner by a consideration of other forms of evidence.

Other Lines of Evidence

Stokes would no doubt dismiss the possibility that memories are not stored in the brain on the grounds that such a possibility is “not accepted by mainstream scientists.” He provides an almost infuriatingly shallow treatment of the evidence for personal survival from near-death experiences (NDEs) and mediumship and then uses this same excuse to dismiss such evidence.

The NDE provides evidence that the mind, complete with memories, may exist in the absence of a properly functioning brain. Experiencers frequently report not only normal, but also *enhanced* consciousness and perception, often seemingly occurring at times during which there is every medical reason to believe that their brains were either severely impaired or entirely nonfunctioning. Yet Stokes devotes a mere 2 ½ pages to the NDE, casually concluding that “Various neurophysiological causes for such hallucinations have been proposed, including seizures to the temporal lobes of the brain, lack of oxygen to the brain, the release of endorphins in the brain, and the random firing of cells in the visual cortex” (pp. 120–121). Yet I wrote a 300-page book on the NDE (Carter, 2010b), in which I examined all proposed counterexplanations and concluded that not a single one stood up to detailed and critical examination.

This is not the proper forum for a detailed review of the evidence, and so I will only include a quote from cardiologist and NDE researcher Pim van Lommel, mentioned in my book, and taken from an article in the medical journal *Lancet*.

With lack of evidence for any other theories for NDE, the thus far assumed, but never proven, concept that consciousness and memories are localised in the brain should be discussed. How could a clear consciousness outside one’s body be experienced at the moment that the brain no longer functions during a period of clinical death with flat EEG? Also, in cardiac arrest the EEG usually becomes flat in most cases within about 10 s from onset of syncope [fainting]. Furthermore, blind people have described veridical perception during out-of-body experiences at the time of this experience. NDE pushes at the limits of medical ideas about the range of human consciousness and the mind-brain relation. (van Lommel, van Wees, Meyers, & Elfferich, 2001, p. 2044)

Stokes devotes three pages to mental mediumship, before dismissing it all on the grounds that “No mainstream scientists and even very few parapsychologists take mental mediumship seriously... due to the counterexplanations of sensory cues, fraud, ‘cold reading’ techniques, and the possible ability of mediums to gather information

about deceased persons through psi” (p. 129). However, I wrote a 369-page book on this topic (Carter, 2010a) and discovered that this is simply not true: Many “mainstream scientists” past and present have taken mental mediumship very seriously, from the renowned physicist Sir Oliver Lodge to the contemporary Nobel laureate Brian Josephson—unless of course Stokes simply classifies any scientist who takes mediumship seriously as “not mainstream” by definition! And, in my book I carefully considered all of the above counterexplanations, and I found that in the best cases not a single one stood up to detailed and critical examination.

Again, this is not the proper forum for a detailed review of the evidence, and so I will only briefly mention one case. It was investigated by the ruthless skeptic Richard Hodgson and concerned the mental medium Leonora Piper of Boston. Hodgson had her trailed by detectives and found nothing suspicious, and she was brought to London, where she knew no one, to be examined, and she performed as well as in Boston.

The case that convinced Hodgson of communication between the living and deceased concerned his friend George Pellew, a friend of Hodgson who died suddenly at age 32. Pellew gave every indication of communicating directly through Mrs. Piper’s voice, and sometimes through automatic writing. Out of 150 sitters who attended séances with Piper during that time, he recognized by name 29 of the 30 that Pellew had known in life (the sole exception was a young woman who had been a child when the living Pellew had last seen her). He conversed with each of these individuals in the appropriate manner and showed an intimate knowledge of his supposed past relationships with them.

Hodgson concluded:

The continual manifestation of this personality—so different from Phinuit or other communicators—with its own reservoir of memories, with its swift appreciation of any reference to friends of GP, with its “give and take” in little incidental conversations with myself, has helped largely in producing a conviction of the actual presence of the GP personality, which it would be quite impossible to impart by any mere enumeration of verifiable statements. (Hodgson, 1897–1898, p. 328)

There is simply no rational justification to dismiss evidence such as this, merely because it is not accepted by “mainstream science” —whatever that means. The history of science is full of phenomena that were rejected by mainstream scientists out of prejudice or ignorance, including meteorites, continental drift, and the prevention of infection by the washing of hands before surgery. Indeed, science has on many occasions progressed precisely due to the questioning of mainstream beliefs. If science is to be a rational enterprise, then arguments should stand or fall on their own merits, and considerations of fashion and ideology should play no role in the evaluation of evidence.

The Transmission Model

After briefly discussing then summarily dismissing the empirical evidence in support of personal survival, Stokes devotes a single page to the transmission model of mind-brain interaction—the idea that the brain works as a two-way receiver-transmitter between mind and body. This idea has been supported and endorsed by a variety of scientists and philosophers, including William James, Karl Popper, physicists Evan Harris Walker and Henry Stapp, neuroscientists Gary Schwartz and Mario Beauregard, and Nobel Laureate Sir John Eccles, the latter describing the two-way interaction between brain and mind with “brain receiving from conscious mind in a willed action and in turn transmitting to mind in a conscious experience” (Eccles, 1970, p. 58). Stokes, however, will have none of this, and writes:

While this “transmission” model may be entertained through philosophical gymnastics, so too can the theory that the brain does not even exist. However, when one objectively (or even intuitively) considers the preponderance of the empirical evidence amassed during the last quarter century, it is very difficult to believe in the transmission theory. If this were a prizefight and I the transmission theory, I would certainly echo the sagacious words made famous long ago by the great boxer Robert Duran: *No mas*. (p. 158)

Duran was widely condemned by boxing fans and experts for throwing in the towel too early, and so if this were a prizefight and *I* the transmission theory, I would certainly not repeat Duran’s mistake. And certainly not with

the impressive group of neuroscientists, physicists, physicians, and philosophers who would be in my corner.

What makes Stokes' defeatism even more remarkable is the utter timidity with which opponents of the transmission model defend their views. Consider this startling admission from philosopher of mind William Lycan:

Being a philosopher, of course I would like to think that my stance is rational, held not just instinctively and scientifically.... But I do not think that, though I used to. The standard objections to dualism are not very convincing; if one really manages to be a dualist in the first place, one should not be much impressed by them. My purpose in this paper is to hold my own feet to the fire and admit that I do not proportion my belief to the evidence. (Lycan, 2009, p. 551)

Philosopher of mind John Searle has also candidly suggested that the motivation behind acceptance of the production model is more emotional than rational:

Acceptance of the current views is motivated not so much by an independent conviction of their truth as by a terror of what are apparently the only alternatives. That is, the choice we are tacitly presented with is between a "scientific" approach, as represented by one or another of the current versions of "materialism," and an "antiscientific" approach, as represented by Cartesianism or some other traditional religious conception of the mind. (Searle, 1994, pp. 3-4)

Personal survival is both a theoretical and an empirical possibility. The statement that consciousness, along with memories and personality, may survive the death of the brain is not self-contradictory, nor is it in conflict with any of the laws or facts of science as currently understood. Concerning the compatibility of modern science with personal survival, physicist Henry Stapp has written:

Strong doubts about personality survival based *solely* on the belief that postmortem survival is incompatible with the laws of physics are unfounded. Rational science-based opinion on this question must be based on the content and quality of the empirical data, not on a presumed incompatibility of such phenomena with our contemporary understanding of the workings of nature. (Stapp, 2010).

The issue of whether personal survival is a fact can only be decided by conceiving of the various possible relationships between mind and body (what Stokes presumably means by "philosophical gymnastics"), by determining what sorts of evidence would tend to corroborate the various possibilities, and then by critically examining the evidence without prejudice one way or the other to decide which of the possibilities provides the best fit with *all* of the evidence. Shallow treatment followed by cavalier dismissal of evidence indicating personal survival is not enough to put the transmission theory on the ropes.

Stokes seems to realize this, for he then delivers what he clearly considers a knock-out punch:

By the end of the second millennium, it had been amply demonstrated that one's cognitive and affective life is intimately dependent on brain activity. A twist of a scalpel in one's hippocampus, and one loses the ability to store new episodic memories. How then, with their hippocampi long since decomposed, can the dead regale us with tales of their adventures in the afterlife? Remove his amygdala, and a violent maniac is turned into a docile creature. How then can a restless spirit, torn not only from its amygdala but its entire brain, terrorize us from beyond the grave to avenge some past injury? It is simply no longer possible to maintain that the personality is independent of the brain or that the brain is simply the conduit through which the soul speaks, rather than the generator of the personality. How, if a mind cannot maintain its memories once the brain has entered the ravages of Alzheimer's, could it remember its adventures on earth when the entire cerebrum has been reabsorbed into the dust? (p. 158)

But this is not the KO Stokes thinks it is, when we consider Alzheimer's cases such as the following:

An elderly woman never speaks, no longer recognizes her loved ones when they come to visit, and shows no expression. By the looks of her, she is a human vegetable. And she's been this way for over a year. Her brain's cerebral cortex and hippocampus—necessary for memory, thought, language, and normal consciousness—are severely shrunk. Her brain bears little resemblance to a healthy one.

Yet something utterly astonishing is about to happen. As reported by both the nursing staff of her care unit and her family members: “Unexpectedly, she calls her daughter and thanks her for everything. She has a phone conversation with her grandchildren, exchanges kindness and warmth. She says farewell and shortly thereafter dies.” (Betty, 2014)

This case comes from the database of Professor Alexander Batthyany, a professor of cognitive science at the University of Vienna. Batthyany is currently running a large-scale study on the phenomenon known as *terminal lucidity*, in which severely brain-damaged patients who have been incoherent for years suddenly seem to return to normal functioning, with memories and personality fully intact, usually in the last minutes or hours of their earthly lives.

Batthyany's preliminary results, presented at the recent IANDS Congress, suggests that normal cognition, or lucidity, does return in spite of a severely-damaged brain, in about 5–10% of Alzheimer's cases. And only when death is very near.

This percentage may although be higher, as Batthyany's research shows that episodes are brief — between 30 minutes and 2 hours—and so are easy to miss. These reports give Batthyany the impression that the mind is hidden behind and constrained by a damaged brain, remarking “Much like the moon eclipses the sun, the brain eclipses the self” (Maclsaac, 2014).

How the mind manages to communicate in an unimpaired manner once free from the restrictions of a damaged brain is of course mysterious—but no more so, Batthyany says, than communication through it (Betty, 2014).

Neuro-psychiatrists Michael Nahm and Bruce Greyson describe the devastating effects of Alzheimer's on the brain:

Several forms of dementia, notably Alzheimer's disease, are largely caused by degeneration and irreversible degradation of the cerebral cortex and the hippocampus, resulting among other symptoms in confusion, disorientation, and memory loss. It is unclear how severely demented patients can sometimes recognize their family members and remember their lives again shortly before death, suggesting that the memories in these cases had been rendered inaccessible but not entirely deleted. (Nahm & Greyson, 2009, p. 944)

Reports of terminal lucidity date back to ancient times, but there is no shortage of such cases from the modern era. Nahm and Greyson describe how:

A woman aged 92 who had been diagnosed with Alzheimer's disease for 9 years and did not recognize close family members, including her son, recognized them again 24 hours before she died. Moreover, she knew how old she was and where she was, which she had not known for many years (Nahm & Greyson, 2009, p. 943)

Nahm, Greyson, Kelly, and Haraldsson describe two more cases of Alzheimer's:

An elderly woman who suffered from the illness for 15 years and was cared for by her daughter. The woman was unresponsive for years and showed no sign of recognizing her daughter or anybody else. However, a few minutes before she died, she started a normal conversation with her daughter, an experience for which the daughter was unprepared and which left her utterly confused.

The second Alzheimer's case was remarkably similar. In this case it was a woman's grandmother who had neither talked nor reacted to family members for a number of years until the week before she died, when she suddenly started chatting with the granddaughter, asking about the status of various family members and

giving her granddaughter advice. Her granddaughter reported that “it was like talking to Rip Van Winkle.” (Nahm, Greyson, Kelly, & Haraldsson, 2012, p. 3)

And cases of terminal lucidity are not limited to the late stages of Alzheimer’s disease but also occur in brain cancer (Nahm et al., 2011, p. 2) and meningitis (Osis & Haraldsson, 1977, p. 131)

Comments on Terminal Lucidity

These cases, only a fraction of those found in the literature, clearly indicate that memories and personality may indeed be recovered and accessed after severe, incapacitating brain damage. What reason could there be for Stokes to devote only a single short paragraph to this phenomenon? Merely because it contradicts his conclusions? As noted above, near death experiencers have often reported that their entire life histories flashed before their eyes in incredible detail, suggesting that one purpose of the brain is to filter out memories not necessary for day-to-day existence. If so, then brains clogged with the plaque of Alzheimer’s and brains with other forms of damage may in fact be damaged filters, blocking access even to memories that are necessary for day-to-day existence. Experiences such as those described above make no sense according to “mainstream” neuroscientific opinion, but they make perfect sense if the purpose of the brain is to selectively inhibit consciousness and memory to those thoughts and memories of utilitarian value to the organism. These experiences can be interpreted as the activity of mind disengaged, or in the process of disengaging, from the restrictions of a material brain.

The transmission model can explain everything the production model explains, such as the effect of drugs and brain injury on the mind. For any change in brain functioning, such as that resulting from intoxication or a stroke, should be expected to affect its capacity as a receiver-transmitter just as certainly as its capacity as a producer.

In my opinion, the author’s conclusions are entirely unsupported by an in-depth critical evaluation of all the evidence. What Stokes refers to as “the fundamental dependence of memories and personality traits on the state of the physical brain” seems more accurately to be the fundamental dependence *of the expression* of memories and personality traits on the state of the physical brain. Given the extensive evidence from biology, medicine, near death experiences, mediumship, and terminal lucidity, which side then should declare *No mas?*

Conclusion

The main flaw in this book would seem to be the author’s persistently stated reluctance to take certain lines of evidence seriously, merely because “the mainstream scientific community has largely rejected (and more often simply ignored) research suggesting that one might survive death with some portion of one’s personality intact.” It would therefore seem fitting to end this review with a quote from physicist-philosopher Nick Herbert:

In this materialistic age, dualists are often accused of smuggling outmoded religious beliefs back into science, of introducing superfluous spiritual forces into biology, and of venerating an invisible “ghost in the machine.” However, our utter ignorance concerning the real origins of human consciousness marks such criticism more a matter of taste than of logical thinking. At this stage of mind science, dualism is not irrational, merely somewhat unfashionable (Herbert, 1993, p. 10).

References

- Betty, S. (2014). When Alzheimer’s victims suddenly “perk up” just before death—what’s going on? Retrieved from http://www.huffingtonpost.com/stafford-betty/the-miracle-of-terminal-l_b_5863492.html?utm_hp_ref=email_share.
- Boycott, B. B. (1965). Learning in the octopus. *Scientific American*, 212, 42–50.
- Carter, C. (2010a). *Science and the afterlife experience*. Rochester, VT: InnerTraditions.
- Carter, C. (2010b). *Science and the near-death experience*. Rochester, VT: InnerTraditions.
- Herbert, N. (1993). *Elemental mind: Human consciousness and the new physics*. New York, NY: Penguin Books.
- Hodgson, R. (1897-1898). A further record of observations of certain phenomena of trance. *Proceedings of the Society for Psychical Research*, 13, 285–582.

- John, E. R. (1982). Multipotentiality: A theory of recovery of function after brain injury. In J. Orbach (Ed.), *Neuropsychology after Lashley* (pp. 247–271). Hillsdale, NJ: Lawrence Erlbaum.
- Lycan, W. G. (2009). Giving dualism its due. *Australasian Journal of Philosophy*, 87, 551–563.
- Maclsaac, T. (2014). Do Alzheimer's, dementia prove the soul doesn't exist?" Retrieved from <http://www.theepochtimes.com/n3/930465-do-alzheimers-dementia-prove-the-soul-doesnt-exist/>
- Nahm, M. (2009). Terminal lucidity in people with mental illness and other mental disability: An overview. *Journal of Near-Death Studies*, 28, 87–106
- Nahm, M., & Greyson, B. (2009). Terminal lucidity in patients with chronic schizophrenia and dementia: A survey of the literature. *Journal of Nervous and Mental Disease*, 197, 942–944.
- Nahm, M., Greyson, B., Kelly, E. W., & Haraldsson, E. (2012). Terminal lucidity: A review and a case collection. *Archives of Gerontology and Geriatrics*, 55, 138–142.
- Osis, K., & Haraldsson, E. (1977). *At the hour of death*. New York, NY: Avon.
- Searle, J. R. (1994). *The rediscovery of the mind*. Cambridge, MA: MIT Press.
- Sheldrake, R. (1988). *The presence of the past*. New York, NY: Times Books.
- Sheldrake, R. (1991). *The rebirth of nature*. New York, NY: Bantam Books.
- Stapp, H. (2010). Compatibility of contemporary physical theory with personality survival. Retrieved from www.physics.lbl.gov/~stapp/Compatibility.pdf.
- Teuber, H-L. (1975). Recovery of function after brain injury in man. In R. Porter & D. Fitzsimons (Eds.), *Outcome of severe damage to the central nervous system* (pp. 159–190.) Amsterdam, The Netherlands: Elsevier.
- van Lommel, P., van Wees, R., Meyers, V., & Elfferich, I. (2001). Near-death experience in survivors of cardiac arrest: A prospective study in The Netherlands. *Lancet*, 358, 2039–2045.

CHRIS CARTER

2 Halkirk Bay
Winnipeg, MB, Canada, R2K 2V7
webslinger_999@yahoo.com