PHYSICALISM, CHRISTIANITY AND THE NEAR-DEATH EXPERIENCE

AN ESSAY REVIEW OF *OUT-OF-BODY AND NEAR-DEATH EXPERIENCES: BRAIN-STATE PHENOMENA OR GLIMPSES OF IMMORTALITY?* BY MICHAEL MARSH[1]

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OBEs and NDEs are important phenomena pertinent to the debates about the mind–body relationship and the survival of consciousness beyond bodily death. The formal study of Near-Death Experiences started only in 1975 with Raymond Moody's ground-breaking book, *Life after Life* (Moody, 1975), but it has since mushroomed into a huge field of research that is now a subject of active interest in a wide range of disciplines, including Philosophy (e.g. Lund, 2009), Religious Studies (e.g. Fox, 2003), Anthropology (e.g. Shushan, 2009), Anomalistic Psychology (e.g. Cardeña et al., 2000, chap. 10), Parapsychology (e.g. Parker, 2001), Phenomenology (e.g. Murray et al., 2009), Cardiology (Parnia et al., 2001), Neuroscience (Greyson, 2007) and Counselling (Nouri, 2008).

Although many controversies remain, no viable orthodox explanations have been proposed (Greyson et al., 2009; van Lommel, 2010). Based on NDE studies there now seems to be good evidence suggestive of lucid consciousness during cardiac arrest, involving both veridical this-worldly OBEs (Cook et al., 1998; Holden, 2009) and 'other-realm experiences' with veridical components (Greyson, 2010). Most NDE researchers are now convinced that consciousness, identity, memory and perception can function while the body is clinically dead (Holden, 2010, p. 363)—the challenge to neuroscientific orthodoxy is "profound and inescapable" (Greyson et al., 2009, p. 234).

NDEs are complex phenomena, and analysing them requires competence in a variety of disciplines. In particular, it is valuable for such researchers to have skills that span the 'hard' sciences and the humanities. Given this context, one would be justified in anticipating that Michael Marsh's book would make an important contribution to the scholarly study of OBEs and NDEs. Marsh is a physician and as a mainstream biomedical researcher has published three books and more than 200 papers, and attained one full-time and four visiting professorships. Nearing retirement he undertook the present study as a DPhil thesis in Theology at Oxford (Magdalen). With his background and interests one could reasonably have expected from him a good grasp of the scientific method, medical science and religious experience, and hence an insightful treatment of NDEs, challenging as they do both conventional neuropsychiatry and dogmatic spirituality.

Unfortunately, however, Marsh comes to his investigation with two (*for him*) immovable philosophical commitments, and these appear to constrain his ability to regard the evidence dispassionately. Firstly, he believes, in a very

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orthodox Christian way, in salvation to an everlasting life. Secondly he is a physicalist, which means he regards the 'soul' as an emergent property of the physical body, thus ceasing to exist when the body dies. This interesting conjunction of ideas is not radical within Anglicanism (see, for example, Badham, 1998, p.119), but for Marsh it places severe constraints on how he can interpret putative evidence for OBEs and for survival.

Marsh equates the soul with "personality" (p.203), and this he considers to be emergent on, or to derive from, bodily functions and social conditioning (pp.203, 206). On this basis he considers the death of the body to mark the end of the soul "unless—in some way—salvaged by God" (p.203). The worthy can be confident of this salvage, for God, at the end of days, "will recreate us when renewing the entire cosmos" (p.209), which will be a one-off "cosmic event" resulting in "transformation, a resurrection into a new body" (pp.210–211). Since the soul is an aspect or property or function of a body, survival means, for Marsh, re-creation as a new body in "the world to come" (p.213).

It is clear that within Marsh's paradigm OBEs have to be some kind of hallucination, as all forms of substance dualism are ruled out *a priori*. Furthermore, there cannot be empirical evidence for the survival of human consciousness, since persons do not exist after they have died, and their replicas will not come into existence until after the end of the present world. The trouble with this prior position *as a system of beliefs* is that it led Marsh to determine an agenda at the outset, a fact which he acknowledges with disarming frankness. In his Introduction, he says:–

> My overriding task has been to seek another way of interpreting ECE [extra-corporeal experience] phenomenology apart from the prevailing view that it arises from moribund brains, thus allowing the 'inner person' to escape and sample the delights of the afterlife . . . it is clear that all OBE/NDE . . . are undergone in the final moments preceding the abrupt resumption of conscious-awareness. [p.xix]

and

> My overriding premise, therefore, is that OB/ND [out-of-body/near-death] phenomenology is not about the death of individuals nor about dying, moribund brains. On the contrary it is about a vigorous return to life and hence the re-appropriation by brains of their former functional competence, as the organ of conscious-awareness. [p.xx]

This agenda is philosophically and scientifically unfortunate. He assumes what needs to be proven, and explicitly sets out to preserve his beliefs no matter what the evidence shows. He also disregards the established evidence against his technical presumptions: it is clear that that OBEs and NDEs do not only occur as subjects recover from unconsciousness. Many OBEs and NDEs occur in the absence of physiological trauma (Kelly et al., 2007, chap.6; van Lommel, 2004), there are good reasons to think that the confusional state following cardiac arrest is unable to support the clear narrative content of NDEs (Fenwick & Fenwick, 2008, p.207), and there are good reasons, even aside from NDEs, to doubt that the brain is the "organ of conscious-awareness", both on philosophical grounds (Antonietti et al., 2008; Gillett & Loewer, 2001; Koons & Bealer, 2010) and empirical grounds (Greyson, 2010; Kelly et al., 2007; Lorber, 1965; Nahm, 2009; Nahm & Greyson, 2009). As for NDEs being about "sampling the delights of the afterlife", even a cursory examination of

the literature shows that many NDEs are not experiences of 'heavenly' realms but of harrowing ones, or of vague misty environs, or are mystical unitive experiences (Greyson, 1983, 2003; Greyson & Bush, 1992; Schwaninger et al., 2002), and that NDE researchers are fully cognisant of the complexity and diversity of these experiences (Atwater, 1994; Becker, 1991; Bush, 2009).

Having determined his assumptions and his agenda, Marsh sets about choosing NDE evidence to demolish in support of both. He starts by basing his "analysis" (which he rather grandly terms "my radical program" [p.xx]) on just *eight* books, none less than *12 years old* and produced by only *six authors* (Moody, Sabom, Ring, the Fenwicks and Grey)! The inadequacy of this is clear: NDE researchers have over the last 30 years produced hundreds of books, including more than 20 scholarly publications summarising research trends and findings (cf. Holden et al., 2009, p.5), and more than 600 papers in scholarly journals (ibid., p.9). These include more than 65 research studies conducted by more than 55 researchers or research teams, and involved nearly 3,500 NDErs (ibid., p.7). Marsh's chosen books are by no means marginal ones, but they are not representative of the current state of the art; the last twelve years of research, which Marsh ignores, have seen significant developments in case material, analysis and sophistication in the debate about the implications of these experiences for the philosophy of consciousness (see, for example, Holden et al., 2009; van Lommel, 2010).

Marsh's treatment of specific cases is perplexing. Noting (pp.123–124) that Sabom reports six cases of OBEs that included veridical perception of "specific focused details exclusive to their individual resuscitations" (Sabom, 1982, pp.83–115), he finds himself unimpressed. He wants to dismiss these cases because the observed details were "trivial", e.g. the shape of the defibrillator electrodes, or the dials and knobs on a machine, or a nurse's hairdo (p.124). And yet, some of the details *were* striking, and highly relevant to the percipient: for example, one patient correctly reported that the doctor she had been told would be performing the surgery was, in fact, only present and advising the doctor actually performing it (Sabom, 1982, pp.99–102); in another case, Sabom calls the patient's description of what his exposed heart looked like "a classic" (ibid., p.99). Marsh ignores these striking details, which contradict his contention that the details were all trivial. In any case, surely the salient point is that someone could report the actual details, not how unusual the details were?

Rather than looking at the evidence to evaluate what it might mean, Marsh criticizes it simply for not being possible in the light of his starting assumptions noted above. The celebrated Pam Reynolds case (Sabom, 1998) is dismissed as "most unimpressive and distinctly uninformative. It fails to offer any new insights or novel data pertinent to the field of ECE phenomenology" (p.26). He repeatedly dismisses interpretations of her experience as coincident with her anaesthesia or cardiac arrest, claiming it is "impossible, from any physiological perspective" and "absurd" and "without any warrant" (p.25). The Reynolds case is sometimes overrated, but it is a landmark case with many interesting features — it was given four pages of discussion in *Irreducible Mind* (Kelly et al., 2007, pp.392–394, 418–419), and was there identified as "[a] case which conspicuously exemplifies numerous features difficult to account for

in conventional psycho-physiological terms . . . [the] case is also particularly important because Sabom, a cardiologist, was able to obtain verification from attending medical personnel concerning some critical details of the operation that the patient reported observing during her experience" (ibid. p.392).

Marsh's attitude reflects his physicalistic position, stated in his Introduction and cited above (p.xx). As he goes on, he repeatedly claims that all ECEs must be cerebral in origin, simply on the grounds that the subjects *have memorie*s of them (pp.25, 53, 72, 78, 124, 206, 261). He appears oblivious to the deep philosophical problems attaching to conventional accounts of memory (Braude, 2002; Heil, 1978; Kelly et al., 2007, chap.4), the general evidence for veridical perceptions in OBEs (Kelly et al., 2007, chap.6) and the evidence for survival (Braude, 2003; Gauld, 1982). In fact he dismisses psychical research in general as having produced no evidence for psychical phenomena (p.65).

The fact that OBErs are unable to feel bodily sensations such as pain, while able to report awareness of what is going in elsewhere in the room, Marsh takes as evidence that the experience is not real (p.124). But surely, given that we have veridical cases, this *supports* the notion of an independently functioning mind, rather than undermining it? Lastly, he argues that:–

> Whatever the conscious state of these subjects, it is evident that some data necessarily had to enter their brains, otherwise they would not have been able to recall, from later memory in their real bodies and minds, what apparently did happen. Clearly, there were no dead brains. [ibid.]

But this just begs the question, and disregards important evidence. The apparent laying down of memories during cardiac arrest does not entail that doctors systematically misreport their patients' medical conditions. In any case the content of the memories deserves an explanation aside from their presence: how, for example, could these patients report the visual appearance of their exposed heart or spine from the vantage point physically available to them (Sabom, 1982, pp.99–100)?

Kenneth Ring and Sharon Cooper's important study (entitled *Mindsight*) of 31 reports of blind persons experiencing visual perception during OBEs and NDEs (1999) is dismissed as based on "the (mis)use of leading questions", "the uncritical acceptance by these interrogators of superficial statements and vague responses", and "these authors obviously confused visual sight with hallucinatory 'sight' actually experienced during ECE" (p.15). Marsh's view can be contrasted with that of Stuart Twemlow, who says in his review of *Mindsight* that "the authors have done a marvellous job of careful introspective phenomenological dissection of the reports. This study represents an excellent piece of qualitative research" (Twemlow, 2002). *Irreducible Mind* makes eleven references to Ring's research, including two to the *Mindsight* findings (Kelly et al., 2007, pp.389, 603), but in none of these is Ring's competence or methodology questioned. *Mindsight* is by no means perfect, but granted the inherent difficulties in this type of study, I think this research was carefully and well done, and dealt competently with the technical and philosophical issues at stake.

The snide tone of Marsh's comments quoted above is pervasive throughout the book. He appears to be propping up his agenda by this use of dismissive and emotive language: Moody is a "raconteur" (p.4), the Fenwicks are "the

man-and-wife team" (p.8), Ring and Cooper are "interrogators" (p.15). Pam Reynolds' body, at the conclusion of her NDE, is a "carcass" (p.15). More examples are evident in many of the quotes given below.

Marsh claims that as far as veridical reports are concerned, we have "thousands of OBE reports . . . but still no piece of convincing data on what can only be described as a most dismal and unpromising front" (p.125). This is a surprising conclusion, given the many published cases of unusual events being reported by cardiac arrest NDErs (Cook et al., 1998, pp.338–391, 399–401; Moody & Perry, 1988, pp.19–20; Morse & Perry, 1993, p.201; Ring & Cooper, 1999, pp.18–21, 71–72; Ring & Lawrence, 1993; Sharp, 1995, pp.3–16) and an analysis of more than a hundred cases of visual perception during cardiac arrest or prolonged respiratory arrest showing that 90% of them contain no errors at all (Holden, 2009, p.196). After complaining about the lack of evidence (*sic*), he then argues *against* research aimed at collecting such evidence:–

> My third objection . . . arises from unwarranted attempts to read off data from a resuscitative procedure, designed to restore a life hanging precariously in the balance . . . We should not require of personnel involved in heroic life-saving procedures to make additional, reliable and clear-headed observations irrelevant to the acute problem in hand, and only to be used to permit another set of retrospective 'investigators' to claim that mind exists outside the body. [p.125]

Finally, Marsh finds himself persuaded by his own incredulity regarding the alternative:–

> The issue of real existence outwith the brain . . . raises enormous, if not insuperable, neuro-physiological and philosophical challenges . . . for all these reasons, I do not consider the viewing of one's body, or of resuscitatory procedures being applied to it, as an appropriate veridical 'proof' that any subject's mind, soul or free consciousness has actually existed and coherently functioned in space. [pp.125–126]

This attitude is not only unscientific but overstates the philosophical challenges: there *are* philosophical positions that can accommodate NDEs in a naturalistic scheme (e.g. Griffin, 2000; Kelly, 2007; Rousseau, 2009, 2010a, 2010b, 2011).

Marsh's 'explanation' of OBEs/NDEs, developed over Chapters 4–9, hinges on dismissing/ignoring the veridical evidence as 'trivial', insisting that the ECEs always occur during the recovery period (because, *pace* Marsh, they cannot occur during deep anaesthesia or cardiac arrest), the (uncontroversial) evidence that subconscious drives or brain malfunctions can produce hallucinations, and the (contentious) assumption that all mental phenomena are produced by the brain. Not much here need detain us, for such arguments have long been debated in the NDE literature, and shown to be either *ad hoc* or inadequate (see Greyson et al., 2009, for an overview). Researchers familiar with the literature are unlikely to join Marsh when he congratulates himself for having "completely neutralized, if not eradicated, [the neuro-physiological challenge presented by NDEs] by my pursuit and deployment of in-depth neuro-physiological explanation and possibility" (p.262).

Having dismissed the extensive case literature and accompanying analyses, Marsh recommends to us a "realistic Christian eschatology" (p.211), involving the re-creation of the cosmos and the replication of the worthy dead after the

end of the present world. However, Marsh's model is the subject of familiar worries within the Philosophy of Religion, as it appears to be a logically flawed solution to puzzles about resurrection. For most Christians (as for Marsh) it is no longer doctrine that people's original bodies will be resurrected, because science has revealed that matter is continuously recycled in nature, so that individual persons will not have been the unique historical owners of their bodily materials. Philosophers have identified many acute problem cases, for example that of the cannibal who eats the first missionary he meets but is converted by the second one. It appears that the early missionary and the pious erstwhile cannibal cannot both be resurrected as whole persons. The 're-creation model', however, hardly resolves the resurrection conundrums. The argument goes that a supernatural replica of a natural person would have 'memories' that are exact duplicates of the authentic memories a natural person once had, and so would believe that it was the original person, and would believe that it was deserving of the rewards due to the original person. However, this would be a mistaken belief, and the rewards (or punishments) would be unearned, since the replica in fact did none of the relevant things. The receipt of concomitant rewards and punishments by the replica would reinforce its false beliefs, but could never authenticate them. If there is nothing more to people than their bodies (as Marsh advocates) then re-creation cannot count in any cogent sense as either salvation or survival. Not only that, but this model implies that the replica is intentionally and eternally deceived by God into believing that it was the authentic person. The model also impugns God's justice in that now authentic persons are never *actually* rewarded or punished for what they *did* do, while replicas are rewarded or punished without having ever done anything good or bad. Philosophers have suggested that perhaps God whisks away the brain (or even the whole body) at the moment of death, replacing it with a replica. A replica (or part replica) is then buried and the authentic body (or the crucial part of it) is saved. However, this means the grieving relatives are now the deceived ones, so the moral issues are not resolved. The problems with these scenarios run deep, as both philosophers and theologians have pointed out (L. Badham, 2001; P. Badham, 1998, p.122; Flew, 1972, pp.133–134; van Inwagen, 1990, pp.145–148; Lund, 2009, pp.32–35; Penelhum, 1970, chap.9).

Marsh contends that, compared with his re-creation scenario, "the corpus of reported ECE material lacks conviction and hardly offers serious perspectives on the afterlife from which newer insights and reflections might follow" (p.218). I leave readers to determine for themselves which perspective they find more persuasive.

In his closing chapter, Marsh takes NDE researchers to task for neglecting the positive transformative effect that NDEs, false as they allegedly are, have on those that have them, saying:–

> It is regrettable that post-ECE behaviour has been ignored, with so little recognition paid to its performance, against a misplaced enthusiasm for esoterically based, speculative interpretations oriented towards other-worldly states . . . There has been scarcely any appreciation of the implications or impact of the way in which subjects' lives are so radically turned about through ECEs, as a means for good or the promotion of inter-societal relationship. [p.263]

This allegation is simply incomprehensible. The transformative aspects of NDEs were noted at the outset by Moody (1975) and the results of the first systematic study were published soon after (Noyes, 1980). The research index provided by IANDS cites 133 articles on post-NDE changes in orientation to life and sense of self. For a recent review covering more than twenty major studies into this, see Noyes et al. (2009). Given this body of work, it is surprising to find Marsh railing against Ring and Grey for "tendentious" findings of a turn towards a more individually tailored spirituality and away from organised religion (p. 263). Against this backdrop, one can only wonder at Marsh claiming that he has a new and important idea here, one that, if only we would take his view on board, has

> the potential for a practical outcome of ECE, one outweighing any virtues that others find in a free-consciousness ascending to a fourth dimension, of promises of holographic wizardry, of the prospect of reincarnation in the hopelessness of endless biological recycling, or the finding of unity in some ill-defined 'cosmic brotherhood'.
>
> [p. 266]

However, for all that he would leverage people's post-NDE positive attitudes, he recommends having no truck with the origins of that transformation:–

> Final salvation comes with the development of relationships that are truly revealed, not in any ECE brain-based hallucinatory commerce with an illusory 'heaven' or so-called 'beings of light'. These neurally conjured beings, ill-defined in ontological status, epistemologically bereft of credible meaning, lack the credentials of the triune Persons revealed through prophet, scripture, tradition, and personal encounter.
>
> [p. 266]

Or so Marsh would have us believe. I would give more credence to his view if it rested on better scholarship, and would regard his advice with more sympathy if he showed more of the compassionate and respectful attitude to others he so admires in those whose NDEs he so disparages.

For persons interested in a more balanced view, I recommend as a good introduction to the subject Bruce Greyson's recent article "Cosmological Implications of Near-Death Experiences" (2011) available on-line at http://journalofcosmology.com/Consciousness129.html. For fair-minded and thorough book-length discussions, I recommend Pim van Lommel's excellent *Consciousness Beyond Life: The Science of the Near-Death Experience* (HarperOne, 2010) and Janice Holden and colleagues' edited volume *The Handbook of Near-Death Experiences: Thirty Years of Investigation* (Praeger: Holden et al., 2009).

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REFERENCES

Antonietti, A., Corradini, A. and Lowe, E. J. (eds.) (2008) *Psycho-Physical Dualism Today: An Interdisciplinary Approach*. New York: Lexington.

Atwater, P. M. H. (1994) *Beyond the Light: What isn't Being Said About Near-Death Experience*. New York: Avon Books.

Badham, L. (2001) Problems about the Resurrection of the Body. In Brown, S. C. (ed.) *Philosophy of Religion: An Introduction with Readings*, 133–136. Routledge.

Badham, P. (1998) *The Contemporary Challenge of Modernist Theology*. Cardiff: University of Wales Press.

Becker, C. B. (1991) Over my dead body there is an ideal utopia: comments on Kellehear's paper. *Journal of Near-Death Studies 10 (2),* 7–106.

Braude, S. E. (2002) *ESP and Psychokinesis: A Philosophical Examination (revised edition).* Universal Publishers.

Braude, S. E. (2003) *Immortal Remains: The Evidence for Life After Death.* Lanham Md.: Rowman & Littlefield.

Bush, N. E. (2009) Distressing Western near-death experiences. In Holden, J. M., Greyson, B. and James, D. (eds.) *The Handbook of Near-Death Experiences: Thirty Years of Investigation,* 63–86. Santa Barbara, CA: Praeger/ABC-CLIO.

Cardeña, E., Lynn, S. J. and Krippner, S. (eds.). (2000) *Varieties of Anomalous Experience: Examining the Scientific Evidence.* Washington DC: American Psychological Association.

Cook, E. W., Greyson, B. and Stevenson, I. (1998) Do any near-death experiences provide evidence for the survival of human personality after death? Relevant features and illustrative case reports. *Journal of Scientific Exploration 12 (3),* 337–406.

Fenwick, P. and Fenwick, E. (2008) *The Art of Dying: A Journey to Elsewhere.* London: Continuum.

Flew, A. (1972) Is there a case for bodied survival? *JASPR 66,* 129–144.

Fox, M. (2003) *Religion, Spirituality, and the Near-Death Experience.* London: Routledge.

Gauld, A. (1982) *Mediumship and Survival: A Century of Investigation.* London: Heinemann.

Gillett, C. and Loewer, B. (eds.). (2001) *Physicalism and Its Discontents.* Cambridge University Press.

Greyson, B. (1983) Near-death experiences and personal values. *American Journal of Psychiatry 140 (5),* 618–620.

Greyson, B. (2003) Incidence and correlates of near-death experiences in a cardiac care unit. *General Hospital Psychiatry 25 (4),* 269–276.

Greyson, B. (2007) DUPL near-death experiences: clinical implications. *Revista de Psiquiatria Clínica 34 suppl.1,* 116–125.

Greyson, B. (2010) Seeing dead people not known to have died: "Peak in Darien" experiences. *Anthropology and Humanism 35 (2),* 159–171.

Greyson, B. (2011) Cosmological implications of near-death experiences. *Journal of Cosmology 14.*

Greyson, B. and Bush, N. E. (1992) Distressing near-death experiences. *Psychiatry 55 (1),* 95–110.

Greyson, B., Kelly, E. W. and Kelly, E. F. (2009) Explanatory models for near-death experiences. In Holden, J. M., Greyson, B. and James, D. (eds.) *The Handbook of Near-Death Experiences: Thirty Years of Investigation,* 213–234. Santa Barbara, CA: Praeger/ABC-CLIO.

Griffin, D. R. (2000) *Religion and Scientific Naturalism: Overcoming the Conflicts.* NewYork: SUNY Press.

Heil, J. (1978) Traces of things past. *Philosophy of Science 45 (1),* 60–72.

Holden, J. M. (2009) Veridical perception in near-death experiences. In Holden, J. M., Greyson, B. and James, D. (eds.) *The Handbook of Near-Death Experiences: Thirty Years of Investigation,* 185–211. Santa Barbara, CA: Praeger/ABC-CLIO.

Holden, J. M. (2010) Response to "Is it rational to extrapolate from the presence of consciousness during a flat EEG to survival of consciousness after death?" *Journal of Near-Death Studies 29 (2),* 362–367.

Holden, J. M., Greyson, B. and James, D. (eds.) (2009) *The Handbook of Near-Death Experiences: Thirty Years of Investigation.* Santa Barbara, CA: Praeger/ABC-CLIO.

van Inwagen, P. (1990) *Material Beings.* Ithaca N.Y.: Cornell University Press.

Kelly, E. F. (2007) Toward a psychology for the 21st century. In Kelly, E. F., Kelly, E. W., Crabtree, A., Gauld, A., Grosso, M. and Greyson, B. (eds.) *Irreducible Mind: Toward a Psychology for the 21st Century*. Lanham Md.: Rowman & Littlefield.

Kelly, E. F., Kelly, E. W., Crabtree, A., Gauld, A., Grosso, M. and Greyson, B. (eds.) (2007) *Irreducible Mind: Toward a Psychology for the 21st Century*. Lanham Md.: Rowman & Littlefield.

Koons, R. C. and Bealer, G. (eds.) (2010) *The Waning of Materialism*. Oxford: OUP.

van Lommel, P. (2004) About the continuity of our consciousness. *Advances in Experimental Medicine and Biology 550*, 115–132.

van Lommel, P. (2010) *Consciousness Beyond Life: The Science of the Near-Death Experience*. New York: HarperOne.

Lorber, J. (1965) Hydranencephaly with normal development. *Journal of Developmental Medicine and Child Neurology 7*, 628–633.

Lund, D. H. (2009) *Persons, Souls and Death: A Philosophical Investigation of an Afterlife*. Jefferson N.C.: McFarland.

Moody, R. (1975) *Life after Life: The Investigation of a Phenomenon — Survival of Bodily Death*. Atlanta, GA: Mockingbird Books.

Moody, R. and Perry, P. (1988) *The Light Beyond*. Toronto: Bantam.

Morse, M. and Perry, P. (1993) *Transformed by the Light: The Powerful Effect of Near-Death Experiences on People's Lives*. London: Piatkus.

Murray, C. D., Wilde, D. and Murray, J. (2009) Finding Meaning in Near-death Experiences. In Murray, C. (ed.) *Psychological Scientific Perspectives on Out-of-Body and Near-Death Experiences*. New York: Nova Science Publishers.

Nahm, M. (2009) Terminal lucidity in people with mental illness and other mental disability: an overview and implications for possibly explanatory models. *Journal of Near-Death Studies 28 (2)*, 87–106.

Nahm, M. and Greyson, B. (2009) Terminal lucidity in patients with chronic schizophrenia and dementia: a survey of the literature. *The Journal of Nervous and Mental Disease 3 (12)*, 942.

Nouri, F. M. (2008) *Electromagnetic Aftereffects of Near-Death Experiences*. University of North Texas.

Noyes, R. (1980) Attitude change following near-death experiences. *Psychiatry 43 (3)*, 234–242.

Noyes, R., Fenwick, P., Holden, J. M. and Christian, S. R. (2009) Aftereffects of pleasurable Western adult near-death experiences. In Holden, J. M., Greyson, B. and James, D. (eds.) *The Handbook of Near-Death Experiences: Thirty Years of Investigation*, 41–62. Santa Barbara, CA: Praeger/ABC-CLIO.

Parker, A. (2001) What can cognitive psychology and parapsychology tell us about near-death experiences? *JSPR 65*, 225–240.

Parnia, S., Waller, D. G., Yeates, R. and Fenwick, P. (2001) A qualitative and quantitative study of the incidence, features and aetiology of near-death experiences in cardiac arrest survivors. *Resuscitation 48 (2)*, 149–156.

Penelhum, T. (1970) *Survival and Disembodied Existence*. London: Routledge & Kegan Paul.

Ring, K. and Cooper, S. (1999) *Mindsight: Near-Death and Out-of-Body Experiences in the Blind*. Palo Alto CA.: William James Center for Consciousness Studies.

Ring, K. and Lawrence, M. (1993) Further evidence for veridical perception during near-death experiences. *Journal of Near-Death Studies 11 (4)*, 223–229.

Rousseau, D. (2009) Beyond the irreducible mind. *Presented at the 33rd International Conference of the Society for Psychical Research, 4–6 Sept 2009*. University of Nottingham: SPR.

Rousseau, D. (2010a) Beyond dualism: insights and predictions from a new mind–body

model. *Presented at the Society for Psychical Research Study Day "Ordered Minds with Disordered Brains: From Evidence to Insight", 27 Nov 2010.* London, UK: SPR.

Rousseau, D. (2010b) If minds are not just brains, what might they be? *Gwen Tate Memorial Lecture, 7 October 2010.* London, UK: SPR.

Rousseau, D. (2011) Near-death experiences and the mind–body relationship: a systems-theoretical perspective. *Journal of Near-Death Studies 29 (3),* 399-435.

Sabom, M. (1982) *Recollections of Death: A Medical Investigation (1st edition*). New York: Harper & Row.

Sabom, M. (1998) *Light and Death: One Doctor's Fascinating Account of Near-Death Experiences*. Grand Rapids Mich.: Zondervan.

Schwaninger, J., Eisenberg, P. R., Schechtman, K. B. and Weiss, A. N. (2002) A prospective analysis of near-death experiences in cardiac arrest patients. *Journal of Near-Death Studies 20 (4),* 215–232.

Sharp, K. (1995) *After the Light: What I Discovered on the Other Side of Life that Can Change your World*. New York: William Morrow and Co.

Shushan, G. (2009) *Conceptions of the Afterlife in Early Civilizations: Universalism, Constructivism, and Near-Death Experience.* London: Continuum.

Twemlow, S. W. (2002) Book Review: *Mindsight: Near-Death and Out-of-Body Experiences in the Blind* by Kenneth Ring and Sharon Cooper. *Journal of Near-Death Studies 21 (1),* 43–46.