

**Exploring Frontiers of the Mind–Brain Relationship** edited by Alexander Moreira-Almeida and Franklin Santana Santos. New York: Springer, 2012. xxix + 243 pp. \$129.00. ISBN 9781461406464.

The paradigm shift in physics that came with the establishment of quantum mechanics in the last century has implications for all the sciences, but that fact has been remarkably slow to sink in, perhaps in part because physicists themselves have not been able to agree on what it means. The one thing that seems incontrovertible is that quantum reality is qualitatively different from the everyday, observable macro-reality in which we commonly operate. At the level of the latter, Newtonian mechanics works well and supports a materialistic perspective, but underlying our quotidian world is a strange probabilistic sub-atomic world in which particles are waves and waves are particles and nothing is definite until it is viewed by an observer (or so some claim).

Perhaps it is not an observer, but *something* is causing wave functions to collapse and convert probabilities into actualities. Could that something be consciousness? That is the \$64,000,000 question. If the answer is yes, does that imply a kind of substance dualism, consciousness and matter as co-equal constituents of the universe, neither reducible to the other? Or could consciousness be primary and ultimate reality non-dual in the Indian sense? Physicist Henry Stapp (2009) considers these questions and concludes not only that the orthodox von Neumann interpretation of quantum mechanics points toward consciousness as primary (and ultimate reality as non-dual) but also that there is nothing in modern physics that rules out the possibility that our personal consciousness survives bodily death. That, he says, is an empirical question which cannot be settled by appeal to “a presumed incompatibility of such phenomena [i.e. phenomena which suggest survival] with our contemporary understanding of the workings of nature.”

In *Exploring Frontiers of the Mind–Brain Relationship*, Alexander Moreira-Almeida and Franklin Santana Santos have given us a set of papers that address a range of mind/body issues. The collection is an outgrowth of a symposium of the same title held at the University of São Paulo (Brazil) in 2010 and is published in Springer’s *Mindfulness in Behavioral Health* series. It includes 11 chapters arranged in four parts: Philosophy and History; Physics; Functional Neuroimaging; and Human Experiences as Promising Lines of Investigation of Mind–Brain Relationship, with a Preface and a Conclusion by the editors and a Foreword by psychiatrist and geneticist C. Robert Cloninger. The chapters are designed to be read independently, but the earlier ones build toward the later so that there is an overarching

thesis as well (p. xix). Many of the contributors are luminaries in the fields on which they report, and the book is aimed principally at academics and clinicians. Its strengths are its interdisciplinary approach, its appreciation of the spiritual dimensions of consciousness, and its balance of laboratory and field research findings. It does not shy away from the survival question but confronts it head-on with empirically based chapters on near-death experiences, end-of-life phenomena, mental mediumship, and cases of the reincarnation type, exactly the sort of material Stapp believed was needed to arrive at an answer.

The first chapter, by Brazilian philosopher Saulo de Freitas Araujo, is entitled “Materialism’s Eternal Return: Recurrent Patterns of Materialistic Explanations of Mental Phenomena.” Araujo observes that although materialism often is equated with science, the scientific method is about hypothesis testing. Materialistic scientists do not offer a way to prove their materialistic assumptions right or wrong but simply accept them as givens, so their position really is a metaphysical one and their materialism is promissory (Popper). Araujo shows how the rhetorical strategies used by materialistic neuroscientists today have been deployed since the 18th century periodically in support of similar views. U.S. philosopher Robert Almeder next considers “The Major Objections from Reductive Materialism Against Belief in the Existence of Cartesian Mind–Body Dualism.” The defense of Cartesian dualism is curious, given that other dualisms face fewer conceptual challenges (see Rousseau 2012:54 for a concise review). In “Psychic Phenomena and the Mind–Body Problem: Historical Notes on a Neglected Conceptual Tradition,” U.S. historian of parapsychology Carlos Alvarado documents the contributions made to the discussion of mind/body dualism by those who have studied psychic phenomena such as ESP, apparitions, and mediumistic communications.

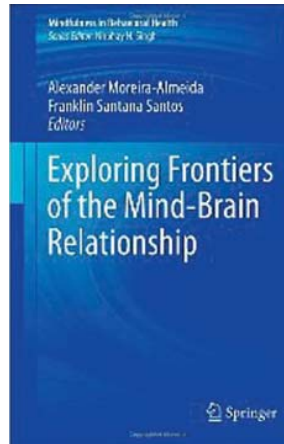
These three chapters compose Part I of the book. If they seem to signal a dualistic approach to the mind/body problem, that expectation is decisively dispelled in the two chapters of Part II. In “No-Collapse Physics and Consciousness,” British physicist Chris Clarke presents an interpretation of quantum mechanics diametrically opposed to the standard one Stapp endorses. Building on the heterodox speculations of Sir Roger Penrose, he suggests essentially that the wave function collapses on its own, without the involvement of consciousness. In “The ‘Quantum Soul’: A Scientific Hypothesis,” U.S. physicians Stuart Hameroff (who has collaborated with Penrose on several papers) and Deepak Chopra suggest that consciousness originates at the point at which quantum activity scales up to the level of classical mechanics and biological systems. The “soul” in this conception is reduced to “quantum information” (p. 90). The authors believe that their

model can explain out-of-body and near-death experiences “and conceivably an after-life” (p. 86). “A dualist perspective,” they write, “may not be necessary” (p. 90).

Part III, however, returns us to dualism. These two chapters are the first directed to clinicians. “The Neurobiological Correlates of Meditation and Mindfulness” by U.S. medical student Jesse Edwards, Brazilian psychologist Julio Peres, and U.S. physicians Daniel Monti and Andrew Newberg is a detailed and seemingly comprehensive review of the research domain. Although materialistic neuroscientists take this sort of data as proof that the brain produces consciousness, the authors see it in terms of “reciprocal interactions between the mind and body” (p. 107). This point of view is developed further in the following paper, “Functional Neuroimaging Studies of Emotional Self-Regulation and Spiritual Experience,” by Canadian neuroscientist Mario Beauregard. That we are able to intentionally regulate our emotional states shows that we are more than our brains, Beauregard submits. He summarizes the findings to date in this promising area, in which he has played a leading role. He extends his discussion to mystical experience but, regrettably, does no more than note the quantum neuroscience he has been a party to developing along with Stapp and neuropsychologist Jeffrey Schwartz (Schwartz, Stapp, & Beauregard 2005).

Part IV takes up case studies of phenomena that imply a separation of mind and body and suggest that some aspect of the human being may survive bodily death. None of the four chapters explicitly address Hameroff and Chopra’s quantum soul model, but readers who have come through the book from the beginning will reach them with it in mind and it seems appropriate to assess them in relation to it.

British physician Peter Fenwick asks “Can Near-Death Experiences Contribute to the Debate on Consciousness?” The literature on the near-death experience (NDE) has become so large and varied that reviewing it adequately in a brief space is nigh impossible and Fenwick is right to narrow his focus to the theoretical question, but even so this chapter is superficial in its coverage and specialists will find it more irritating than illuminating. Fenwick concludes that NDEs provide less support for mind/body dualism than for a field theory consciousness within a “transcendent reality” (pp. 160–161), although the two positions are not entirely incompatible (it is



all in how one looks at the problem, a Hindu would say). The next chapter, which Fenwick co-authored with book co-editor, Brazilian physician, and geriatric specialist Franklin Santana Santos, is a discursive review of end-of-life issues, aimed at medical-care workers. It does not take a stand on the mind–body question. Neither of these chapters offer anything inconsistent with the quantum soul model, as I understand it.

“Research on Mediumship and the Mind–Brain Relationship” by Brazilian psychiatrist and book co-editor Alexander Moreira-Almeida furnishes a good introduction to mediumship studies, ranging over both historical and contemporary sources. Moreira-Almeida argues in favor of mind–body dualism and survival, implicitly challenging the quantum soul model. I agree with much that he says. However, I must take issue with his handling of the Sumitra case as one of mediumship (p. 201). Sumitra fell ill and appeared to die, but revived with a different personality who called herself Shiva (Stevenson, Pasricha, & McLean-Rice 1989). Sumitra never returned and Shiva continued to possess Sumitra’s body until the end of her life (Mills & Dhiman 2011). One might call this a case of possession, although the possession is not mediumistic. It might best be characterized as “permanent possession” or “replacement reincarnation” (Matlock 2011:801).

We now come to the final substantive chapter, “Cases of the Reincarnation Type and the Mind–Brain Relationship,” by Icelandic psychologist Erlendur Haraldsson, one of the most accomplished field researchers in parapsychology. Haraldsson has studied more than 100 reincarnation-type cases, mostly in Sri Lanka and Lebanon, but this contribution is a disappointment. Instead of providing a general introduction to or overview of reincarnation studies such as Moreira-Almeida supplies for mediumship, Haraldsson emphasizes his own work. He describes four cases (all reported elsewhere) at length. While these serve to show the reader what this research is about, they give a very incomplete resume of the findings of reincarnation studies over the last half century (see Matlock 2011, and for an older but more comprehensive review Matlock 1990).

Haraldsson makes the important point that reincarnation-type cases consist of more than claims to have lived before. They include birthmarks and phobias related to the previous persons’ deaths. However, birthmarks are but one example of a large class of physical features, including birth defects and internal diseases, that appear to be transmitted from one life to another in these cases. Phobias, similarly, belong to a large class of behavioral traits linking the subject and the previous person, especially striking where there are differences of sex, caste, religion, or ethnicity. There are other recurrent features also, such as announcing dreams, which Haraldsson mentions

but effectively downplays. Moreover, I see no need to surrender to the materialists on the issue of memory (pp. 215, 229). There is a good deal of evidence that memory is not in fact stored in the brain, and neuroscientists such as Penfield have repeatedly challenged the materialistic view that it is (Kelly et al. 2007).

I have given special attention to the deficiencies of this chapter because of its place in the book. Several authors mention reincarnation in relation to the mind–brain dilemma and the book builds anticipation for it. This chapter could (and in my view should) have addressed some key issues more thoroughly and directly. Even more than mediumship, reincarnation puts the quantum soul model to the test. The behavioral and physical features of reincarnation-type cases suggest that conventional ideas of “mind” in relation to “body” may be too constrained. It may be better to think in terms of an animistic spirit/body dualism (Matlock 2011) than a mind-body dualism. “Intermission memories,” accounts of events between lives (Sharma & Tucker 2004), pick up where NDEs leave off, and like announcing dreams suggest an active role for a discarnate agent in effecting reincarnation (Matlock 2011). The quantum soul model does not anticipate and appears ill-equipped for the notion of discarnate agency, but, significantly, directed attention plays a central role in the quantum world and its interface with neural systems in the orthodox interpretation of quantum mechanics (Schwartz, Stapp, & Beauregard 2005). We may be closer than we realize to a quantum biological theory of survival and reincarnation, but this is more likely to be based on the orthodox interpretation of Stapp (2009) and Schwartz, Stapp, and Beauregard (2005) than the speculations of Penrose, Clarke, Hameroff, and Chopra.

The editors address dualism in their Conclusion. They appear to think that their book is an argument for dualism and that it presents a non-reductionistic theory of mind (p. 234). They do not seem to appreciate—or in any event do not acknowledge—that Clarke’s model is not dualistic and that Hameroff and Chopra’s idea that consciousness originates at the transition between the quantum and classical realms is as reductionistic as the standard materialistic view that consciousness is an epiphenomenon of brain activity. Had they wanted to advance an interactional dualistic thesis, the editors would have been better off going with Stapp for the physics contribution and allowed Stapp and Beauregard to explore further the principles laid out by Schwartz, Stapp, and Beauregard (2005). At a minimum, it would have been useful to have had this point of view aired, to give the reader an alternative to the quantum soul model.

This book is admirable in conception and valuable in bringing together data and perspectives that are not normally found between the same covers.

As in many edited volumes, the contributions are uneven, and there is an unacknowledged tension between dualism and reductionism, albeit reductionism of a post-modern sort. The editors might have done more to overcome these shortcomings. They could have exercised more control over content, and they could have addressed the tension between dualism and reductionism in their introductory and concluding chapters. Had they done the latter, the book would have become more explicitly a dialogue between different points of view, and possibly more successful. But I do not want to leave the impression that this is a bad book. It is not bad, though it could have been better.

The book is printed on acid-free paper and nicely bound, but its small print is conducive to eye strain, the index is light and poorly constructed, and there are an astonishing number of grammatical, spelling, and formatting errors in the text, and incomplete citations in the reference lists. Buyers have the right to expect more for the price.

**JAMES G. MATLOCK**

*jim.matlock@atlanticuniv.edu*

### References

- Kelly, E. F., Kelly, E. W., Crabtree, A., Gauld, A., Grosso, M., & Greyson, B. (2007). *Irreducible Mind: Toward a Psychology for the 21st Century*. Lanham, MD: Rowman & Littlefield.
- Matlock, J. G. (1990). Past life memory case studies. In S. Krippner, Editor, *Advances in Parapsychological Research, Volume 6*, Jefferson, NC: McFarland, pp. 184–267.
- Matlock, J. G. (2011). Ian Stevenson's *Twenty Cases Suggestive of Reincarnation*: An historical review and assessment. *Journal of Scientific Exploration*, 25(4), 789–820.
- Mills, A., & Dhiman, K. (2011). Shiva returned in the body of Sumitra: A posthumous longitudinal study of the significance of the Shiva/Sumitra case of the possession type. *Proceedings of the Society for Psychical Research*, 59(223), 145–193.
- Rousseau, D. (2012). The implications of near-death experiences for research into the survival of consciousness. *Journal of Scientific Exploration*, 26(1), 43–80.
- Schwartz, J. M., Stapp, H. P., & Beauregard, M. (2005). Quantum physics in neuroscience and psychology: A neurophysical model of mind–brain interaction. *Philosophical Transactions of the Royal Society B*. doi:10.1098/rstb.2004.1598.  
<http://www-physics.lbl.gov/~stapp/PTRS.pdf>
- Sharma, P., & Tucker, J. (2004). Cases of the reincarnation type with memories of the intermission between lives. *Journal of Near-Death Studies*, 23, 101–118.
- Stapp, H. P. (2009). Compatibility of contemporary physical theory with personality survival. <http://www-physics.lbl.gov/~stapp/Compatibility.pdf>
- Stevenson, I., Pasricha, S., & McLean-Rice, N. (1989). A case of the possession type in India with evidence of paranormal knowledge. *Journal of Scientific Exploration*, 3, 81–101.