

## BOOK REVIEWS

EXPLORING FRONTIERS OF THE MIND-BRAIN RELATIONSHIP edited by Alexander Moreira-Almeida and Franklin Santana Santos. New York: Springer, 2012. Pp. xxix + 243. \$129.00 (hardcover); \$79.95 (softcover); \$59.95 (e-book). ISBN 978-1-4614-0647-1

*Exploring Frontiers of the Mind-Brain Relationship* is an important contribution. It provides a balance of the purely physical analyses of consciousness with the psychobiological. In this way, it attempts to bridge mind philosophy with science. It empirically examines transcendent phenomena, such as mystical altered states, near-death experiences, end-of-life, mediumistic experiences, and past-life memories. Consequently, this book's 12 chapters confront the hard scientific dilemmas, and its cast of scientists should be commended. The book has a good mixture of 15 often well-known scientists and physicians from six countries, some prominent in the consciousness area, others solidly based in brain functioning, philosophy, history, and physics. It reflects the accumulated data of dozens of careful researchers over more than a century.

The book relies heavily, as it should, on the empirical findings of the neurosciences but also includes philosophical perspectives. It has four major sections:

1. The first is "Philosophy and History," where the book moves away from materialistic reductionism, arguing for alternative approaches. The first two chapters discuss the challenges of the mind-brain problems (Saulo de Freitas Araujo and then Robert Almeder). These chapters not surprisingly do not cover unified monism (which is so new its omission can be understood), but I think it could have covered appropriately panpsychism (mentioned later in the "Physics" section) and neutral monism. The third chapter in this section is "History," and Carlos S. Alvarado, as always, does an excellent job.
2. "Physics" is the next section. It reflects quantum brain biology perspectives and sees consciousness not as it is generally regarded, as an epiphenomenon of the brain. Chris Clarke links "No-collapse Physics with Consciousness," and Stuart Hameroff and Deepak Chopra discuss the "Quantum Soul." These are both topical and important areas. I would have liked to see such controversial areas as the Copenhagen interpretation of physics, entanglement, and the Aspect experiments and their follow-up discussed in detail. I think these would have been pertinent.
3. "Functional Neuroimaging," reflects neurophysiology. This is discussed in some detail, providing insights into the intricacies of the human brain as well as some of its limitations, including the brain as a computer model as well as functional neuroimaging, where scanning, plus much of the content and function of mind can be related to brain location or function. I think this is a narrow section, and I would have preferred it to cover specifically neuroimaging. Specifically discussed are the correlates of "Meditation and Mindfulness" (Jesse Edwards, Julio Peres, Daniel A. Monti, and Andrew B. Newberg), which appears to be significantly incomplete, and "Functional Neuroimaging" itself by Mario Beauregard. This section should cover far more than specifically neuroimaging. The Persinger temporal lobe work is cited, but inexplicably the Neppe (1983) and Palmer and Neppe (2003, 2004) work is not. I think this whole section on neuroscience is the weakest part of the book, because though much is cited, many key areas such as subjective paranormal experiences and phenomenology, and the frontal lobe work, appear to have been neglected. I would have expected to read more about the presentiment areas, including the contributions of the Standish Bastyr group (e.g., Richards et al., 2005), as well as Bierman and Radin's ideas (Radin, 2006).
4. "Human Experiences as Promising Lines of Investigation of Mind-Brain Relationship" is the fourth major section: It is a very variable section and possibly could just as easily been called "Survival." It is generally well done. These discussions allow perspectives for spirituality and for

the mystical, including such phenomena as near-death experiences, out-of-body experiences, and past-life memories, transcendence, and ostensibly nonlocal states. Specifically, “NDEs” (Peter Fenwick) and “Death, End of Life Experiences” (Franklin Santana Santos and Peter Fenwick) are two very interesting discussions, well-informed and with a well-developed balance of history, experience, and theorizing. “Mediumship and the Mind-Brain Relationship” (Alexander Moreira-Almeida) is a chapter I particularly liked, because Brazilian work in the area is so neglected in the English literature and key general dilemmas are raised. “Cases of the Reincarnation Type” follows. Author Erlendur Haraldsson’s perspective is, as always, thorough and knowledgeable, yet it reflects the outer edges of so-called “mind” in this volume.

The very short final 12th chapter by the editors, like the Preface, synthesizes information.

The ideas in the book are broad and range from Buddhist thought to William James’ filter. This book confronts the mind-brain controversies and challenges readers to reformulate their conclusions. It also is balanced, discussing the limitations and strengths of these approaches. Researchers and clinicians across many disciplines can appreciate this book, as its content comprises consciousness research, medicine, neuroscience, neuropsychiatry and behavioral neurology, parapsychology, philosophy, psychiatry, psychical research, psychology (cognitive, personality, and social), and quantum physics. It allows the reader to conceptualize some of the fundamental mysteries of consciousness, and it is this consciousness that has to be regarded as a key theme. The book is not esoteric; it is targeted to more than scientists, so the intelligent, interested layperson may benefit. One important conclusion is that our current materialism is too narrow, and that we can benefit from a top-down approach to consciousness.

The four perspectives are integrated into a broader strategy: In the first two sections, the editors show the philosophical and historical limitations of reductionistic materialism (which is the prevailing perspective for most scientists today) and then present some models in physics that allow for views of mind of nonreductionists. With the next step, in the later two sections, they provide some serious and challenging empirical data in the nonreductionist area. However, the book was not meant to be comprehensive and all-inclusive. Consequently, it did not present many alternative theoretical perspectives for mind, because its purpose was to open a legitimate dent in the mainstream materialistic view, thereby providing inroads for other works advancing alternative perspectives.

So how do I see this book? Clearly it is a significant contribution, but I confess disappointment, not at what it contains but what to me are significant omissions. There is an inadequate perspective of what mind truly is and where it fits into the finite and the infinite. The chapters are a hodge-podge of choices of certain directions, neglecting others. For example, why is the literature on electroencephalography neglected? And the references in general certainly do not reflect much of the literature in these areas. Finally, in today’s times, when indexes are so easy to do, the book is not sufficiently indexed.

The two editors are respected Brazilian scientists: Alexander Moreira-Almeida is a psychiatrist who has seriously confronted spirituality, and Franklin Santana Santos is a geriatrician with studies about death, dying, and palliative care. Robert Cloninger, a well-known psychiatrist, wrote the Foreword. The contributors, cited above next to their respective contributions, are generally well known. Several of them were recently involved in a symposium at the American Psychiatric Association meeting in May, 2013. This is not surprising as the book’s idea arose out of a symposium.

The book’s theme is well represented by Cloninger’s Foreword (pp. x–xi):

This book on the frontiers of mind-body relationships is a scholarly embodiment of creative and open-minded science. All open-minded people are clearly reminded that strict materialism is a specious and inadequate paradigm—the unhealthy and naked emperor of our scientific era. To restore balance to scientific inquiry, we need only recognize that the consciousness of human beings has a triune nature, one that has developed hierarchically over our long evolutionary history, including procedural learning of habits and skills in our early vertebrate ancestors, semantic learning of symbols and facts in anthropoid apes and early humans, and self-aware learning of narrative language, art, science, and spirituality in modern human beings.

The theme is also well represented by two quotations found in the Editors' Preface. The first is from Popper and Eccles (p. xiii):

There is a general tendency to overplay the scientific knowledge of the brain, which, regretfully, also is done by many scientists and scientific writers. For example, we are told that the brain "sees" lines, angles ... and that therefore we will soon be able to explain how a whole picture is "seen" .... But this statement is misleading. All that is known to happen in the brain is that neurons of the visual cortex are caused to fire trains of impulse in response to some specific visual input.

The second is from Thomas Kuhn (p. xvii):

Scientific revolutions did not triumph because the new paradigm was able to convert all skeptics and leaders of the opposition: The transfer of allegiance from paradigm to paradigm is a conversion experience that cannot be forced. Lifelong resistance, particularly from those whose productive careers have committed them to an older tradition of normal science, is ... an index to the nature of scientific research itself. The source of resistance is the assurance that the older paradigm will ultimately solve all its problems.

These exciting ideas put this book in the perspective it deserves. It is a challenge for the mediocre, who may see no further than their nose, and it is an entry into a new era of broader knowledge and consciousness.

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