

Harald Walach, Stefan Schmidt, and Wayne B. Jonas: *Neuroscience, Consciousness and Spirituality* New York: Springer, 298 pp

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According to the foreword, “*Neuroscience, Consciousness and Spirituality* was born out of a vision to build bridges and get different disciplines to talk to each other” (p. v). The individual contributors to this book come from a variety of disciplines and include a set of international scholars. The chapters for the book were originally presented as papers at an invitational meeting held in Freiburg, Germany in 2008. Because of its interdisciplinary nature, this book has relevance for psychologists, philosophers, neuroscientists, theologians, and religious scholars and perhaps even theoretical physicists. In fact, without some basic understanding of these disciplines, the reader may become a bit bogged down as some of the contributors employ jargon that is specific to a discipline.

In general, the chapters are either reviews of the literature on a particular topic or employ extant literature to elucidate, develop, or speculate about constructs or models associated with the consciousness or spirituality and how they are interrelated with each other and/or how they are understood from the point of view of neuroscience. The flavor of this book is best illustrated by a brief description of each chapter.

In Chapter 1, Walach, one of the volume's editors, presents an introductory essay. In it, he provides definitions of spirituality and suggests several misconceptions regarding science. Science, he suggests is “most usefully seen as a communal effort of humanity to describe and understand the world and prevent error as much as possible through systematic inquiry” (p. 2). By contrast, he defines “spirituality as an experiential realization of connectedness with a reality beyond the immediate goals of the individual” (p. 6). He then points out some interesting parallels between science

and spirituality and concludes that what they have in common is our human attempt to make sense of our world.

Chapter 2, by Schmidt, also an editor of the book, provides an analysis of Eastern and Western views of mindfulness. The author compares and contrasts these two perspectives and gives the reader a nice overview of Buddhist mindfulness principles and then discusses the motivations behind mindfulness practices in the West. For example, he asserts that the intention behind traditional Eastern mindfulness practice is transformation, liberation, and compassion for all beings, whereas in the Western context, the intention includes more secular motivations such as time-out from daily stress, development of better coping mechanisms, or as a means of self-regulation. He concludes by suggesting that mindfulness practice is *transcultural* as “we are currently witnessing a process of mutual exchange, assimilation and transformation of spiritual approaches between East and West” (p. 37).

In Chapter 3, Rossano focuses on ritual. The author asserts that ritual is necessary for us to become human and suggests that as humans have evolved “that ritual... activities were not merely incidental to human evolution—they were fundamental to it. [Furthermore,] rituals of focused attention created the selective environment from which uniquely human cognition emerged” (pp. 39–40). This seems a questionable premise inasmuch as it is equally likely that human rituals emerged from the uniqueness of human cognition. Nonetheless, this is an interesting chapter, although it is not entirely clear how it relates to the other chapters of the book or for that matter to the book's theme in general.

In Chapter 4, Beauregard does a fine job of discussing neuroscience and spirituality. After defining what he means by religious, spiritual, and mystical experiences, he goes on to present a well-articulated discussion showing how these experiences are tied to specific regions of the brain. Somewhat in contrast to Beauregard's position, in Chapter 5,

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Jeanmonod suggests a more non-dualist view of consciousness borrowing constructs from quantum physics. He suggests that consciousness may be nonlocal and raises the question “Is consciousness really an emergent function of the brain?” (p. 76)

In Chapter 6, Walach and Romer use the ideas of generalized entanglement and complimentary from physics as they apply to consciousness. They examine the mind–body relationship by suggesting a model that is “ontologically monist in line with the general intuition of the natural sciences, and at the same time phenomenologically dualist, [and thus,] true to our own subjective experiences” (p. 81). In essence, they are drawing parallels with quantum phenomena and their juxtaposition with Newtonian laws. Which lens we employ depends on our purposes and point of view, but nonetheless, both lenses are simultaneously operable. In Chapter 7, these two authors continue with the same theme and discuss how generalized quantum theory can be applied to facilitate our understanding of neuroscience and consciousness studies.

Staying in the realm of theoretical physics, in Chapter 8, von Stillfried argues “that not only do all existing theoretical frameworks fail to give a coherent explanation of the relationship between consciousness and its neurobiological counterpart, but that such a framework is in fact *in principle* [italics in the original] impossible to conceive of rationally” (p. 111). He suggests that like the wave–particle duality in quantum physics that we must accept the paradox of subjective experience and neurobiological function. He concludes that we need to develop a science of inner epistemology drawing on ideas and methods earlier suggested by Tart (1986) and Braud and Anderson (1998).

In Chapter 9, Ott, Hozel, and Vaitl provide an excellent summary of the how meditative practices shape the brain. These authors provide a good summary of the research and describe the morphological changes to the brain associated with long-term meditative practice. In a similar vein, in Chapter 10, Hinterberger, Kolhs, Kamei, Fielding, and Walach present the results of their correlational research using EEG and fMRI to study “the neuronal, psychological and phenomenological commonalities of various meditation styles” (p. 129). They suggest that their research might lead a new taxonomy of meditative states. Although their results are interesting, the reader should keep in mind that they were not peer reviewed in the traditional sense.

In reading Chapter 11, one is immediately reminded of the work of Wallace (2007) and his call for a contemplative science. In this chapter, Schooler, Hunt, and Schooler develop an elaborate argument questioning material reductionism somewhat reminiscent of the recent work by Sheldrake (2012). They develop their argument from the basic premise that consciousness is a fundamental aspect of reality and that “nervous systems entail a nested hierarchy of distinct conscious observers” (p. 157). They assert a position of panpsychism, which suggests that all things experience some

degree of consciousness. Like Wallace, they stress the importance of subjective experience for understanding consciousness. While, by their own admission, their suggestions are speculative, they are, nonetheless, well thought out and raise some interesting questions regarding not only the existence of free will (something that accumulating data from neuroscience has begun to question (cf. Harris 2012)), but also some fundamental approaches to how we study consciousness. Their chapter is aptly titled, “Reconsidering the Metaphysics of Science from the Inside Out.”

In Chapter 12, Barendregt focuses on mindfulness meditation and its role in deconditioning the mind. The chapter emphasizes vipassana meditation and its role in how we perceive ourselves and our agency. The author speaks to the necessity of verifying the claims of mindfulness meditation not only through the personal experience of meditators, but also through scientific evaluation.

In Chapter 13, van Lommel provides a description and analysis of near death experiences. He asserts that these experiences provide a cogent argument to assume that our consciousness does not always coincide with our brain function. Like some of the earlier chapters in the book, van Lommel's piece makes a case for the nonlocality of consciousness and suggests that it should be considered “a fundamental property of the universe” (p. 220). The author makes the point that data support that clear consciousness can be experienced during cardiac arrests (and presumed near death experiences), which leads him to conclude that “in many respects consciousness as well as the function of the brain is still a great mystery” (p. 221), an important if obvious observation. If nothing else, this discussion of near death experiences makes us mindful of the importance of keeping an opened mind as we strive to learn more about consciousness.

Two of the remaining four chapters of the book use specific religious lenses. One by Lancaster examines Kabbalah and makes that case that kabbalistic literature is concurrent with the neural correlates of consciousness. Another by Hall provides insight into rapid healing experienced within the Sufi tradition of Islam. However, from the point of view of this reviewer, the data discussed are somewhat questionable.

Between these two chapters is one by Jonas, one of the volume editors, that examines the relationship between neuroscience and spirituality. He suggest that with the advances in neuroimaging techniques and our increasing understanding of psychological aspects of spirituality, that the time has come for the emergence of a field of study which he refers to as neurospirituality. He goes on to elucidate the difference between neuropsychology and neurospirituality. Essentially one goal of neurospirituality would be “to explore the neurological correlates of characteristics that spiritual traditions claim for the Divine” (p. 253). The second would be to examine neurological changes associated with spiritual healing practices.

In the final chapter, Forman attempts to draw conclusions based on the chapters in the book. What emerges is a model which he tags the Consciousness Field Model and which he sees as based on four principles which are reflections of the chapters of the book. These principles are:

1. Consciousness is a fundamental element of reality, like an additional dimension.
2. Consciousness is mediated by the brain, not excreted by it.
3. Consciousness is independent of brain function.
4. Our ability to connect with something larger may be the basic nature of the human being.

While it might be argued that these “principles” could more appropriately be seen as foci for further study, they do nonetheless reflect the themes of the book and provide some direction for scholars working in the field.

All and all, this book is an interesting read, although the editors would have done well to divide the book into sections with an introduction to each section. This would have made for a more coherent presentation, given the book some organizational structure and would have allowed the reader

to more easily see the interrelationship among the chapters. One other disappointing feature of this book, although a minor one, was the number of typos throughout. In the final analysis however, the editors have achieved their goal of stimulating dialogue aimed at better understanding the interrelationship among neuroscience, consciousness, and spirituality. Hopefully, other planned volumes in this series will do the same.

References

- Braud, W., & Anderson, R. (1998). *Transpersonal research methods for the social. Sciences: honoring human experience*. Thousand Oaks: Sage.
- Harris, S. (2012). *Free will*. New York: Simon and Schuster.
- Sheldrake, R. (2012). *Science set free: 10 paths to new discovery*. New York: Crown. Deepak. Chopra Books.
- Tart, C. T. (1986). Consciousness, altered states and worlds of experience. *Journal of Transpersonal Psychology*, 18, 159–170.
- Wallace, B. A. (2007). *Contemplative science*. New York: Columbia University Press.