

BOOK REVIEW

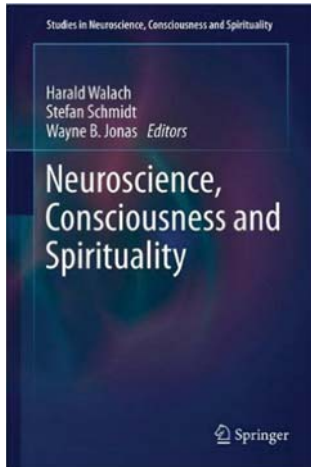
Neuroscience, Consciousness, and Spirituality edited by Harald Walach, Stephen Schmidt, and Wayne Jonas (Book 1 in *Series in Neuroscience, Consciousness, and Spirituality*). Springer 2011. 300 pp. \$173 (hardcover). ISBN 978-9400720787.

Neuroscience, Consciousness, and Spirituality is an outstanding, edited book addressing brain processes as they relate to the phenomenon of consciousness and also to various spiritual experiences. The book's chapters address essential issues with regard to this important intersection of future scholarship. The initial chapter provides a circumscription of the overall topics covered and also reviews important definitions of religion, spirituality, science, and consciousness. One of the unique aspects of this chapter, and many of those that follow, is a reflection on historical perspectives such as those developed by Francis Bacon, Franz Brentano, Rene Descartes, and Immanuel Kant. These references are important for putting many of the discussions into the appropriate context.

Several chapters address meditation and its effect on consciousness and the brain. Mindfulness is considered as well as more general spiritual practices including how rituals helped to advance the human species by supporting social groups and healing. The concept of healing practices is the focus of several chapters on rituals, meditation, Sufism, and the potential healing properties of the brain and consciousness itself.

There are two chapters with similar titles, with the first titled *Neuroscience and Spirituality: Findings and Consequences*, and the second one later in the book titled *Towards a Neuroscience of Spirituality*. Interestingly, the first chapter discusses a number of specific neuroscientific aspects of spirituality including neuroimaging and the importance of key structures such as the temporal lobes, limbic system, and prefrontal cortex. The latter chapter mentions little about the specific neuroscientific aspects of spirituality but rather tries to differentiate it from a neuroscience of psychology. Both chapters are complementary in engaging the topic, but might have been better connected in the book.

There is a chapter on the neurophysiological correlates in experienced meditators using electroencephalography. This chapter primarily presents a research study with methods and results, but also provides some interesting data in the context of the rest of the book. Another chapter specifically on brain



structure and meditation reviews a number of research studies regarding how specific brain regions are involved with meditation practices focusing primarily on structural changes. Another set of chapters addresses the important issues of consciousness. This includes a discussion of the “hard problem” of consciousness, that is, how consciousness might actually arise within the brain. This has been one of the great questions for both philosophy and science and may be a problem that persists far into the future. However, the chapters of this book help to frame the question and provide an integrative, multidisciplinary approach to resolving this question. Several chapters also explore the potential for consciousness to be nonlocal and extend beyond merely the neurophysiological processes of the brain. Whether consciousness has some ethereal quality that goes beyond the brain’s functions is unknown. However, the topic of spirituality and near-death experiences that appear to take a person’s consciousness beyond their brain provides important information about this problem. Such research may ultimately lead to a paradigm shift in science, consciousness studies, and philosophy. A new model of consciousness is eventually proposed that explores the various possibilities relating consciousness, spirituality, and the brain.

Overall, this is an important work that provides the reader with a great deal to think about and establishes the current state of the science for consciousness, the brain, and spirituality. One critique might be that there is an overall absence of the topic of “neurotheology” as a field already exploring many of these issues linking religious and spiritual phenomena with the brain and psychology. Perhaps the main criticism is that the chapters are not grouped together according to common topics, and so they are sometimes difficult to link together well. However, taken together, the chapters certainly provide a wide survey of this area of study and challenge the reader to consider the essential relationship between the brain, consciousness, and spirituality.

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