

Parapsychology and the Nervous System

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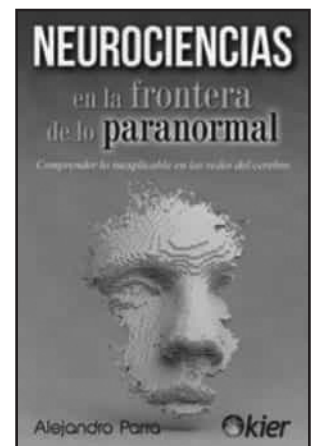
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A review of *Neurociencias en la Frontera con lo Paranormal: Comprender lo Inexplicable en las Redes del Cerebro* [Neurosciences at the frontier of the paranormal: Understanding the unexplained in the brain networks] by Alejandro Parra. Kier, 2019. Pp. 173 pp. (paperback). \$680 (Argentinian pesos). ISBN 978-950-17-2995-5

In the past some publications have explored the various interfaces between neuroscience and parapsychology (e.g., Krippner & Friedman, 2010; Williams, 2015). The book reviewed here, by Argentinian psychologist Alejandro Parra, is the latest overview of neuroscientific ideas and research as they apply to the field of parapsychology. In Parra's words, his purpose in the book is to "present readers the pioneer and contemporary efforts to explore the mind through emerging neurobiological theoretical models and technologies" (p. 13; all translations are by the reviewer).

The first three chapters are devoted to basic concepts related to neuroscience, including aspects of its history, and parapsychology. I was glad to see mention of Hans Berger and Ferdinando Cazzamalli, representatives of ideas that telepathy was caused by emissions of electromagnetic radiations from the brain. This, it is important to remember, has a longer history (Alvarado, 2015). In the third chapter Parra presents selective summaries of psi tests in relation to electroencephalography (EEG) and other measures, including pre-sentiment studies. He does not think there is much consistency in the results of the early EEG studies with unselected participants using forced-choice ESP tests, and concludes, commenting about research with psychics, that they "seem to point to differential structures and functioning in the brains of the psychics as compared to those of other persons" (p. 72). But, in addition to the lack of specific information in the statement, it is not clear if there are consistent results, at least not from this summary.

The chapter about psychokinesis (PK) has no discussion about relevant experiments relating the phenomenon to the functioning of the nervous system, but interesting research by Dean Radin is mentioned. In addition, poltergeists are discussed in relation to epilepsy, an idea promoted by William G. Roll (1977), but Parra argues that the studies supporting such relation have not produced clear results.



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Other topics discussed are near-death and out-of-body experiences (NDEs, OBEs). The author writes: "Studies about NDEs challenge our current concepts about consciousness and its relation to cerebral function, and their conclusions are important for medical sciences because this idea of consciousness as a non-local phenomenon could generate a great change in the current paradigm" (p. 116). OBEs are discussed paying attention to the recent work of researchers postulating that the experience has a neurological origin and does not represent the exteriorization of consciousness many experiencers believe in. Parra concludes: "The tools of cognitive neuroscience for the study of the OBE are insufficient to elaborate new theories. Although currently these theories are still in diapers, the anomalous experiences present paradoxes whose definitive solution could only be reached through a multidisciplinary approach" (pp. 124-125).

The rest of the book is about apparitions, mediums, and possession. Parra writes about mediums:

When, where, and how is information communicated to the medium's brain? To communicate their experiences, or interpretations of the experience, mediums must talk or write, which requires the coordinated control of the motor, premotor, and supplementary cortexes of the extensive nets of language of the brain to express, in turn, complex representations of meaning and belief. Consequently, there must be an extensive chain (or net) of underlying neuronal activity for each affirmation that is communicated by this means. In the last instance, this pattern of activity is generated through the information source and by the causal mechanism that links this *agent* with the medium (p. 148).

This is an interesting speculation, and one consistent with the idea that ESP manifests via the resources of the organism, among them imagery, memory, and motor and verbal processes. But it may be argued that there will be little progress as long as we do not learn more about this information source and the means of access to it.

In the last chapter, presented as an epilogue, Parra argues that the neuroscientific approach may help us "normalize" parapsychological phenomena. This makes sense assuming we find consistent relations between psychic phenomena and the workings of the nervous system. To some extent it may be argued that such a normalization process has been happening for a while with the psychological exploration of ESP and other phenomena, as seen in Myers's (1903) discussions of sensory and motor automatisms, and, more recently, in the theoretical work of James Carpenter (2012). Parra also hopes for the more practical goal that the neuroscience approach will allow us to control the phenomena we study, and that it will help us to better understand consciousness. But he is well aware of how much we do not know and places his hopes in future interdisciplinary developments. Parra's interest in neuroscience is not a reductionistic one. Earlier in the book he states that consciousness is in non-local space, and is not limited to the brain (p. 125). The brain, he writes, seems to allow for the expression of consciousness, but does not produce it, a topic he returns to in the final chapter.

Overall, positive aspects of the book include summaries of modern research in parapsychology that is not generally known to the general public. Similarly, there is useful information about the value of neuroscientific approaches. Unfortunately, there are several problems with the content of the book as well. Perhaps the main one lies in the omission of relevant work. This includes the literature of ESP and

the brain hemispheres (conveniently reviewed by Williams, 2015), laboratory PK studies (e.g., Giroladini, 1991), attempts to relate temporal lobe symptomatology to spontaneous psychic experiences (e.g., Neppe, 1983), EEG and mediumship (Bastos et al., 2016), and ESP and the frontal lobes (Freedman et al., 2018). Also lacking is the use of important modern publications to defend the independence of the mind from the nervous system, such as the monumental work *Irreducible Mind* (Kelly et al., 2007). Closely related to this is the author's neglect of important published criticisms of particular studies. This is the case on the evidence for the relation between epilepsy and poltergeists (Martínez-Taboas & Alvarado, 1981), and claims about neurological explanations of OBEs (e.g., Neppe, 2002).

One hopes that a second edition of the book will include this missing information. In the meantime, readers of *Neurociencias en la Frontera con lo Paranormal* may want to supplement their study of this topic with more comprehensive reviews of the relevant literature that have been published before (Krippner & Friedman, 2010; Williams, 2015).

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