

## BOOK REVIEW

*Physics and Psychics: The Occult and the Sciences in Modern Britain*, by Richard Noakes (Cambridge: Cambridge University Press, 2019; pp. 403. £90).

This is Richard Noakes's long-awaited monograph on the relationship between the physical sciences and psychical research in Britain. Focusing largely on the 1870s to the 1930s, the work is the result of several stints of postdoctoral research in the history and philosophy of science conducted at the Universities of Cambridge, Leeds, Sheffield and Exeter. Those who have followed Noakes's journal publications over the past twenty years will find themselves in familiar territory. Four of the book's six chapters are partially based on previously published articles, completed with additional research and presented as part of a comprehensive overview.

Comprehensiveness is key to the book's rationale. That some prominent nineteenth-century scientists were deeply invested in the study of 'psychic' phenomena is well known, but we have lacked a comprehensive understanding of the bigger picture. Did the connection between physics and 'psychics' merely reflect the idiosyncratic interests of an influential few, or was it widespread among physical scientists? If widespread, what motivated chemists, physicists, electrical engineers and other physical scientists to take it up? These questions have remained unanswered by the flurry of recent publications on psychical research by historians of science, literature, esotericism and religion. Noakes argues that they can only be answered by painting a more nuanced picture of nineteenth-century physical science itself: one that pays attention not only to the theories and concepts of late Victorian physics, but to its emerging experimental practices, social networks and cultural contexts as well.

The book is introduced by the most complete and up-to-date state of research on the entangled histories of psychical research and natural science that this reviewer has read. Its rich footnotes are an excellent resource for scholars wishing to get up to speed quickly. Chapter One gives an historical background to the emergence of physics and psychics, by showing how research in magnetism and electricity developed in dialogue with the 'alternative sciences' of mesmerism and spiritualism, suggesting plausible connections between body, mind and physics. Chapter Two tackles the questions of how numerous the physical-psychical scientists really were and what motivated them. Chapters Three to Six are based on previous articles, and take a thematic, case-oriented approach: they cover the conceptual problems in physics that made psychics a promising line of inquiry (ch. 3), the opportunities for experimental innovation afforded by research in psychics (ch. 4), the question of expertise in such research (ch. 5), and how physical-psychical scientists eventually handled their disappointing lack of progress (ch. 6). The concluding chapter contains a brief discussion of later developments, in particular the revival of interest in psychics among a younger generation of countercultural physicists in the 1960s and 1970s.

The book's most original contribution comes in Chapter Two, where Noakes addresses the neglected question of how widespread the interest in physics and psychics really was and examines what might have motivated individual scientists. By going through the Society for Psychical Research's membership lists between 1882 and 1940, Noakes has identified more than seventy individuals active in some branch of physical science. These are listed with names, dates and bibliographical references in a table spanning seven pages (pp. 86–92). It appears that physical scientists consistently constituted around 10 per cent of the total SPR membership; by comparison, the share of life scientists never exceeded 3 per cent. Physical scientists were as numerous as psychologists in the early years, though the balance would tilt in the favour of psychology in the early twentieth century.

Identifying physical-psychical researchers outside of the SPR is fraught with greater difficulty. One valuable source is SPR members' correspondence with physicists outside the society. Noakes demonstrates that SPR physicists frequently communicated the latest in psychical research to interested physicists who for various reasons had chosen not to join the society. Noakes's survey of non-SPR physicists results in another table of seventy-five names (pp. 95–103), bringing the total to about 150 identified physical scientists with an interest in psychical research.

We do not get a full discussion of exactly how frequent psychical interest was in relation to the size of the physical science community as a whole. The UK is estimated to have had a total of 144 academic physicists in 1900, divided between faculty positions, assistants and research affiliates (P. Forman, J.L. Heilbron and S. Weart, 'Physics circa 1900: Personnel, Funding, and Productivity of the Academic Establishments', *Historical Studies in the Physical Sciences*, v [1975], p. 12). Noakes's more inclusive definition of 'physical science' complicates comparisons (it includes, for example, chemistry, astronomy and electrical engineering). Nevertheless, it seems safe to say that psychical research must have ranked among the commoner side-interests of British physical scientists at the turn of the century.

What then were the scientists' motivations for turning to psychical research? Noakes's survey suggests that they were varied indeed. Many first came to psychical research following the testimony of a trusted friend, relative or respected colleague. In fact, Noakes's account of how interest spread among British physicists can be likened to a sociocultural epidemic: once a clique of highly respected physicists took it seriously, others were bound to follow—in part as a ticket to the prestigious in-crowd, in part because of the sociability factor whereby credible stories of inexplicable phenomena get passed around at dinner parties and society meetings. The considerable class privilege associated with the early SPR would surely enhanced this dynamic.

But what made individual scientists stay engaged varied greatly. Some genuinely saw a chance to solve the conceptual chasms of matter and mind, others were after the experimental challenge. Some had religious motivations, or developed them after being involved for a while. But many were also motivated precisely by their scepticism and were quite content to leave the field as soon as they felt satisfied that the phenomena had been debunked.

On the whole we cannot see the turn to psychical research as a momentary lapse of reason on the part of late Victorian physicists. As Noakes argues in the conclusion, we should not be embarrassed or surprised by the interest

that leading physicists had in the occult: 'border phenomena' and novel experimental challenges were integral to, and exemplary of, the genuine uncertainties that riddled the so-called mechanistic-materialist worldview of nineteenth-century science. But Noakes's narrative also affords a reading where the class-based prestige system of Victorian science plays a more central role in the spread of psychics than is often granted. However this may be, the book will remain a standard reference for discussions of the topic for many years to come.

EGIL ASPREM

*Stockholm University, Sweden*

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