

Physics and Psychics

This is the first systematic exploration of the intriguing connections between Victorian physical sciences and the study of the controversial phenomena broadly classified as psychic, occult and paranormal. These phenomena included animal magnetism, spirit-rapping, telekinesis and telepathy. Richard Noakes shows that psychic phenomena interested far more Victorian scientists than we have previously assumed, challenging the view of these scientists as individuals clinging rigidly to a materialistic worldview. Physicists, chemists and other physical scientists studied psychic phenomena for a host of scientific, philosophical, religious and emotional reasons, and many saw such investigations as exciting new extensions to their theoretical and experimental researches. While these attempted extensions were largely unsuccessful, they laid the foundations of modern-day explorations of the connections between physics and psychic phenomena. This revelatory study challenges our view of the history of physics and deepens our understanding of the relationships between science and the occult, and science and religion.

Richard Noakes is a leading historian of nineteenth- and twentieth-century sciences and technology at the University of Exeter. He is the co-editor of *From Newton to Hawking: A History of Cambridge University's Lucasian Professors of Mathematics* (2003) and the co-author of *Science in the Nineteenth Century Periodical: Reading the Magazine of Nature* (2004).

SCIENCE IN HISTORY

Series Editors

Simon J. Schaffer, University of Cambridge

James A. Secord, University of Cambridge

Science in History is a major series of ambitious books on the history of the sciences from the mid-eighteenth century through the mid-twentieth century, highlighting work that interprets the sciences from perspectives drawn from across the discipline of history. The focus on the major epoch of global economic, industrial and social transformations is intended to encourage the use of sophisticated historical models to make sense of the ways in which the sciences have developed and changed. The series encourages the exploration of a wide range of scientific traditions and the interrelations between them. It particularly welcomes work that takes seriously the material practices of the sciences and is broad in geographical scope.

Physics and Psychics

The Occult and the Sciences in Modern Britain

Richard Noakes

University of Exeter



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
978-1-107-18854-9 — Physics and Psychics
Richard Noakes
Frontmatter
[More Information](#)

CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom
One Liberty Plaza, 20th Floor, New York, NY 10006, USA
477 Williamstown Road, Port Melbourne, VIC 3207, Australia
314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,
New Delhi – 110025, India
79 Anson Road, #06–04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781107188549
DOI: 10.1017/9781316882436

© Richard Noakes 2019

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2019

Printed in the United Kingdom by TJ International Ltd. Padstow Cornwall

A catalogue record for this publication is available from the British Library.

ISBN 978-1-107-18854-9 Hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Cambridge University Press
978-1-107-18854-9 — Physics and Psychics
Richard Noakes
Frontmatter
[More Information](#)

For Abigail, Emily, Jill and Valerie

Contents

<i>List of Figures and Tables</i>	page ix
<i>Acknowledgements</i>	xi
<i>List of Abbreviations</i>	xv
Introduction	1
1 New Imponderables, New Sciences	21
Animal Magnetism as Physics	24
The Oddity of Od	33
Outdoing the Electric Telegraph	43
‘Scientific Men’ and Spiritualism	51
Extending the Boundaries of Physics	61
2 A Survey of Physical–Psychical Scientists	76
Inventing Psychical Research	77
Identifying Physical–Psychical Scientists	84
Connecting Physical–Psychical Scientists	105
Gold Mine of Science, Handmaid to Faith	119
Changing Attitudes to Psychical Investigation	129
3 Physical Theories and Psychical Effects	137
Removing Scientific Stumbling Blocks	138
Challenging Materiality	149
Dim Analogies	159
Maxwellian Psychics	167
Doubts and Criticisms	180
4 Psychical Investigation as Experimental Physics	185
From Psychic Force to the Radiometer	188
Tying Mediums with Electricity	203
Magnetic Sense or Nonsense?	215
Physical as Psychological Laboratories	226
Wanting Opportunities?	234
5 Expertise in Physics and Psychics	238
Scouring Spiritualists and Scientists	243
Tricky Instruments of Psychics	250
	vii

viii	Contents	
	Tricky Instruments of Physics	260
	Psychical Researchers and Conjurors	267
	N-rays and Psychical Expertise	274
6	Modernising Physics and Psychics	281
	Busy Men	284
	Applied Psychical Research	291
	Lodge's Etherial Body	299
	Interpreting Lodge's Physics and Psychics	308
	Interwar Transitions	320
	Conclusion	328
	<i>Bibliography</i>	339
	<i>Index</i>	383

Figures and Tables

Figures

0.1	<i>The City's</i> semi-satirical portrait of the late-nineteenth-century telegraph and telephone businesses	<i>page 3</i>
1.1	The rays of animal magnetism	26
1.2	The luminous manifestations of 'od'	36
1.3	A typical late-Victorian seance	46
1.4	John Tyndall at the Royal Institution	63
1.5	The transatlantic cable breaking in 1865	66
1.6	A standard late-nineteenth-century compound spectroscope	69
2.1	The thought-reading craze in late-Victorian Britain	80
2.2	The physical laboratory at University College Bristol	110
2.3	Arthur Chattock's drawings of telepathy experiments	111
3.1	Cromwell Varley's electrical discharge apparatus	151
3.2	William Crookes's 'radiant matter' apparatus	153
3.3	William Barrett's representation of the sensitive flame	163
4.1	William Crookes's 'phonautograph' for registering psychic force	196
4.2	William Crookes's 'double' photograph of Florence Cook and 'Katie King'	210
4.3	<i>The Medium and Daybreak's</i> account of William Crookes's electrical test of Annie Eva Fay	211
4.4	Silvanus Thompson inside his apparatus for studying the physiological effect of an alternating magnetic field	225
4.5	Julien Ochorowicz and Charles Ségard in a Eusapia Palladino seance	228
4.6	Benjamin Davies's drawing of an experimental seance room in University College Liverpool's physics laboratory	232
5.1	<i>A New York American</i> satire on Oliver Lodge's investigation of Eusapia Palladino	259
5.2	A handbill for one of John Nevil Maskelyne and George Cooke's late-Victorian stage entertainments	270

x List of Figures and Tables

- | | | |
|-----|--|-----|
| 6.1 | A <i>Punch</i> cartoon of Oliver Lodge | 309 |
| 6.2 | The ‘Thought Recorder’ in the <i>Electrical Experimenter</i> | 316 |

Tables

- | | | |
|-----|--|----|
| 2.1 | Physical–psychical scientists in the SPR, 1882–C.1940 | 86 |
| 2.2 | Physical–psychical scientists outside the SPR, C.1850–1940 | 95 |

Acknowledgements

A book that has taken as long to write as this one necessarily incurs many debts. The oldest one is to Simon Schaffer, who supervised the doctoral dissertation that is now a very distant ancestor of the present work. Without his encouragement, encyclopaedic knowledge and often terrifying ability to suggest more sophisticated historical interpretations, *Physics and Psychics* would have been a far poorer work. There were times when Simon's predictions of the likely contents of obscure historical sources were so accurate that I half suspected he possessed some of the psychic abilities on which this book is focussed!

Over the past two decades, I have been enormously privileged to be able to discuss the ideas of this book with many scholars whose advice, encouragement and works have helped me in more ways than they know: Will Ashworth, Bill Brock, Graeme Gooday, Linda Henderson, the late Jeff Hughes, Bruce Hunt, Rob Iliffe, Myles Jackson, Frank James, Bernard Lightman, Jim Moore, Iwan Rhys Morus, Jaume Navarro, Graham Richards, Jim Secord, Crosbie Smith, Andreas Sommer, Matt Stanley, Andy Warwick, the late Alison Winter and David Wilson. Graeme Gooday and Jim Moore kindly read portions of the book manuscript, while Jim Secord read the whole work. I am so very grateful to all three of them, as well as the anonymous reader for the final manuscript, for their criticisms and suggestions.

As a postgraduate student and postdoctoral research fellow in the Department of History and Philosophy of Science, Cambridge (in 1992–8 and 2002–7 respectively), my historical knowledge and understanding benefited from exchanges with so many individuals, including Jim Bennett, Bob Brain, the late John Forrester, Arne Hessenbruch, Emese Lafferton, Otto Sibum, Richard Staley and Jennifer Tucker. Trevor Pinch and Sven Widmalm were visiting fellows during my time at Cambridge and their comments on my work were invaluable and reassuring. One former Cambridge colleague – Kevin Knox – needs to be singled out because our collaboration on a history of Cambridge

xii Acknowledgements

University's Lucasian professors of mathematics taught me as much about good prose style as incisive historical analysis.

From 1999 to 2002 I was a Leverhulme Postdoctoral Research Fellow on the 'Science in the Nineteenth Century Periodical' project at the Universities of Leeds and Sheffield. I am so grateful to project members Sam Alberti, Geoffrey Cantor, Gowan Dawson, Graeme Gooday, Louise Henson, Sally Shuttleworth and Jon Topham for stimulating my thoughts on questions of popularisation, publication and readership that underpins much of what follows. The periodicals project also brought me into contact with Ruth Barton, John Christie, Peter Kjaergaard, Jack Morrell and Roger Smith and I thank them all for prompting me to rethink many of my ideas.

My understanding of psychical research has benefited from exchanges with and welcome criticism from scholars active in this field, including Mary Rose Barrington, Bernard Carr and John Poynton. At the University of Exeter, Kristofer Allerfeldt, Jonathan Barry, Alan Booth, Tim Cooper, Jason Hall, Lucy Hilliar, Andrew Thorpe and Nicola Whyte have offered much encouragement and advice over the years. Before his untimely passing, another Exeter colleague, Nicholas Goodrick-Clarke, shared with me so much of his profound knowledge of Western Esotericism and the ancestors of psychical research. For allowing me to rehearse many lines of argument developed in this book, I also thank the numerous Exeter students who took my undergraduate course on Victorian occultism.

From 2002 to 2007 a British Academy–Royal Society Postdoctoral Fellowship in the History of Science enabled me to complete a significant amount of underlying research, while three periods of leave granted by the University of Exeter in 2010, 2014 and 2016 gave me the time to write. I want to express my heartfelt thanks to all three institutions for their considerable generosity and patience.

I have relied heavily on the wisdom, kindness and patience of numerous archivists and librarians, all of whom have gone beyond the bounds of duty in tracking down obscure materials and answering a plethora of questions. I would like to record my particular thanks to Anne Barrett at the Archives of Imperial College London; Helen Fisher and Christine Penney at the Cadbury Research Library, University of Birmingham; Susan Liberator at Ohio State University Library; Dan Mitchell at University College London Library's Special Collections; Leslie Price at the College of Psychic Studies; Jon Cable and Tim Procter at the Institution of Engineering and Technology; and Godfrey Waller and the late Peter Meadows at Cambridge University Library. In cataloguing Cambridge's SPR archive, Peter Meadows's service to the history of psychical research is immeasurable.

For their help in my search for copyright holders I thank Oliver A. W. Lodge and Philip Somervail (two of Oliver Lodge's great-grandsons) and Anita and Gwendoline Morgan.

For permission to quote from unpublished material in their collections I would like to thank the Sixth Baron Rayleigh; the Archives of Imperial College London; Boston Public Library and Rare Books; the British Library; Cadbury Research Library, University of Birmingham; Christine Fournier d'Albe; Indiana State Library, Rare Books and Manuscripts Division; the Institution of Engineering and Technology Archives; Knebworth House Archive; the Master and Fellows of Trinity College Cambridge; Niels Bohr Library and Archives, American Institute of Physics; Princeton University Library, Department of Rare Books and Special Collections; the Royal Dublin Society Library and Archives; the Royal Society Archives; the Science Museum Group Collection; Senate House Library, University of London; the Society for Psychical Research; the Syndics of Cambridge University Library; University College London Library Services, Special Collections; the United States Air Force Academy, McDermott Library; and the Wellcome Collection.

For permission to reproduce published and unpublished material in their collections I thank the Bodleian Libraries, University of Oxford; the Bill Douglas Centre, University of Exeter; Getty Images; Leeds University Library, Special Collections; Ohio State University; the National Library of Wales; the Royal Society Archives; Friederike Schriever; Andreas Sommer; the Syndics of Cambridge University Library; Telegraph Museum, Porthcurno; and the University of Bristol Library, Special Collections. I have endeavoured to identify and contact holders of the copyright of published and unpublished material used in this book and welcome any information enabling me to correct any omissions or errors in such copyright acknowledgements.

I am delighted to record my gratitude to Cambridge University Press again. My commissioning editor Lucy Rhymer has been a tremendous source of encouragement and enthusiasm, without which the bulk of the writing for the book would have been far harder to complete. My sincere thanks go to both anonymous readers of the original proposal, the series editors Simon Schaffer and Jim Secord, and to Ruth Boyes and Lisa Carter for shepherding the manuscript through the final stages. For their superb work in copy-editing and indexing I would also like to thank Catherine Dunn and Rob Sale respectively.

Portions of this book rework material that has been published in journals and essay collections: Noakes, 'World of the Infinitely Little' (part of Chapter 3); Noakes, 'Telegraphy is an Occult Art' (part of Chapter 4); Noakes, 'The Bridge which is Between Physical and Psychological Research'

xiv Acknowledgements

(parts of Chapters 3 and 4); Noakes, ‘Haunted Thoughts of a Careful Experimentalist’ (part of Chapter 5); and Noakes, ‘Making Space for the Soul’ (part of Chapter 6).

My greatest debt, however, is to my wife Jill, who has lived with and suffered from this book for vastly longer than she anticipated. I’m appalled to report that when we first met, I was ‘finishing’ a book that would subsequently try her patience beyond measure and give her good grounds to think that there was a third person in our marriage. I promise her that the next book will be not be a Herculean labour for either of us. This book is dedicated to her, my mother Valerie and my daughters Abigail and Emily.

Abbreviations

ARW-BL	Alfred Russel Wallace Papers, British Library (Add. 46439)
BD-NLW	Benjamin Davies Papers, National Library of Wales
GC-BL	Ghost Club Archive, British Library (Add. MSS 52258–52273)
JJT-CUL	J. J. Thomson Papers, Cambridge University Library (Add. 7654)
JSPR	<i>Journal of the Society for Psychical Research</i>
OJL-SPR	Oliver Lodge Papers, Society for Psychical Research Archive, Cambridge University Library (SPR.MS 35)
OJL-UCL	Oliver Lodge Papers, University College London (MS Add. 89)
PSPR	<i>Proceedings of the Society for Psychical Research</i>
RDS	Royal Dublin Society
R-USAF	Papers of John William Strutt (Third Baron Rayleigh) and Robert John Strutt (Fourth Baron Rayleigh), United States Air Force Academy, McDermott Library, Colorado Springs, Colorado (MS.63)
SPR	Society for Psychical Research
SPT-IC	Silvanus Philips Thompson Papers, Archives of Imperial College London
WFB-RS	William Fletcher Barrett Papers, Royal Society Archives (MS/377)
WFB-SPR	William Fletcher Barrett Papers, Society for Psychical Research Archive, Cambridge University Library (SPR. MS 3)