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978-1-107-00522-8 - A History of the Electron: J. J. and G. P. Thomson

Jaume Navarro

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## A History of the Electron

Two landmarks in the history of physics are the discovery of the particulate nature of cathode rays (the electron) by J. J. Thomson in 1897, and the experimental demonstration by his son G. P. Thomson in 1927 that the electron exhibits the properties of a wave. Together, the Thomsons are two of the most significant figures in modern physics, both winning Nobel prizes for their work. This book presents the intellectual biographies of the father-and-son physicists, shedding new light on their combined understanding of the nature of electrons and, by extension, of the continuous nature of matter. It is the first text to explore J. J. Thomson's early and later work, as well as the role he played in G. P. Thomson's education as a physicist, and how he reacted to his son's discovery of electron diffraction. This fresh perspective will interest academic and graduate students working in the history of early twentieth-century physics.

JAUME NAVARRO is Ikerbasque Research Professor at Universidad del País Vasco/Euskal Herriko Unibertsitatea. He trained in physics, philosophy and the history of science, and has an international research record, having spent several years at the University of Cambridge, Imperial College London, the Max Planck Institute for the History of Science and the University of Exeter.

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To my parents, Rupert and Maria Teresa

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## Contents

### **Introduction 1**

#### **1 The early years in Manchester and Cambridge 6**

- 1.1 Manchester 6
- 1.2 Science in Manchester 8
- 1.3 Thomson's early days 12
- 1.4 Owens College 14
- 1.5 The Unseen Universe 18
- 1.6 Undergraduate in Cambridge 21
- 1.7 Second wrangler in the Mathematical Tripos 23

#### **2 J. J. Thomson's early work in Cambridge: a continuous and all-embracing physics 29**

- 2.1 In Cambridge as a graduate 29
- 2.2 Early experimental work at the Cavendish 31
- 2.3 The origins of the electromagnetic theory of matter 33
- 2.4 The vortex ring theory of the atom 36
- 2.5 Director of the Cavendish Laboratory 41
- 2.6 Third edition of Maxwell's *Treatise* 44
- 2.7 Mapping the domains of the physical sciences 46
- 2.8 A new tripos for engineering 51

#### **3 The ether and the corpuscle: from waves to particles 55**

- 3.1 Electric discharge in tubes 55
- 3.2 From discharge tubes to Faraday tubes 60
- 3.3 Tubes, electricity, and matter 67
- 3.4 Opening the Cavendish to new researchers 70

## viii Contents

- 3.5 The corpuscle: notes from a 'discovery' 73
- 3.6 Corpuscles and electrons 81
  
- 4 On creeds and policies: the corpuscular theory of matter 86**
- 4.1 What is an atom like? 86
- 4.2 A world of electrons 91
- 4.3 Psychic research 96
- 4.4 The collapse of a dream 99
- 4.5 The carriers of positive electricity 103
- 4.6 Cambridge as a playground: George Paget Thomson 109
  
- 5 Father and son. Old and new physics 114**
- 5.1 The nature of light 114
- 5.2 The early theory of the quantum 119
- 5.3 Britain and the quanta in 1913 124
- 5.4 A father-son collaboration 126
- 5.5 Physics at war 132
- 5.6 The electron in chemistry 137
  
- 6 The electron in Aberdeen: from particle to wave 143**
- 6.1 Professorship in Aberdeen 143
- 6.2 Electron diffraction 150
- 6.3 The father's interpretation 156
- 6.4 The son's reaction 160
- 6.5 Moving to London. Electron diffraction turns into an instrument 164
- 6.6 End of an epoch 166
  
  
- References* 171
- Index* 183