

Ernest Rutherford and the Birth of Modern Physics

Matthew Wright. 2025. Oratia Books. ISBN 978-1-99-004268-3

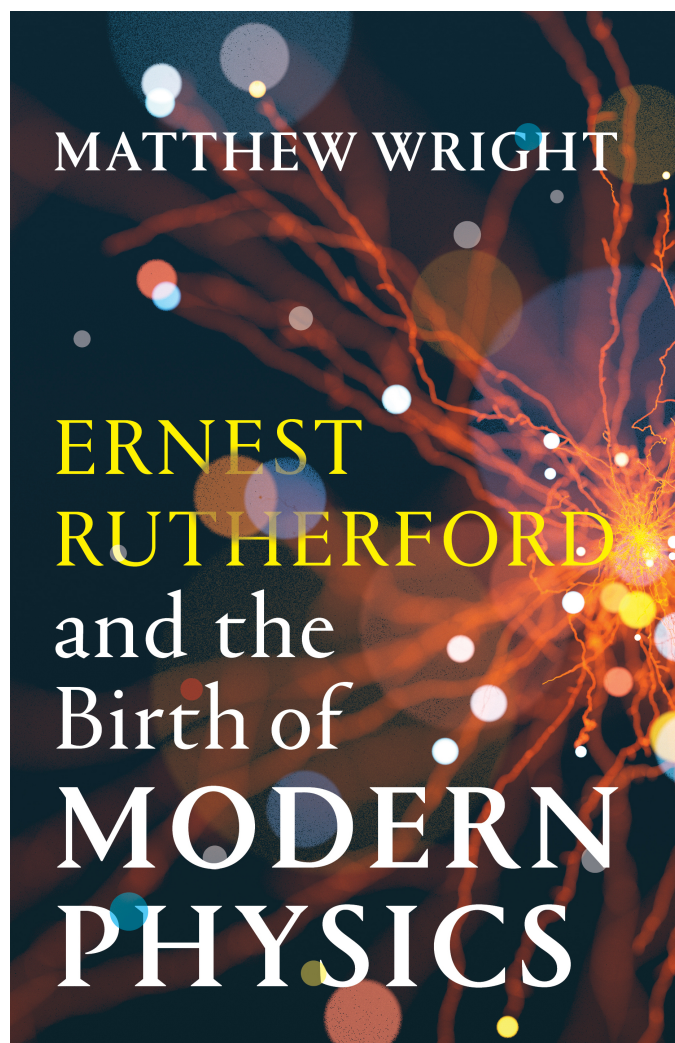
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As I settle in to commit ‘pen’ to ‘paper’ on this review I feel it is necessary to say that I came to this book with high hopes, and low expectations. In the past I frequently read this genre, contextualising scientific discoveries through the lives of the discoverer(s) – although recently I have found that this type of book has lost its charm. At least in part, this is due to the maturing of my thoughts and understanding of science and how science is done as I have embarked on my own research career. Too often in these books scientific breakthroughs are presented as the work of a genius in solitude, driven through their deific ability to view evidence with an objective lens of complete purity – a perspective that now feels overly simplistic. So it’s fair to say that I had my reservations before even opening the book. Would ‘2025 me’ be able to put this aside and give the book a fair review given the baggage I was carrying?

To my great relief, I was only a few pages in when I felt the tension dissipate as I read the words *“For all the conceits of science as an objective pursuit, those involved were real people who lived real lives”*. Wright manages to balance the indisputable genius of Ernest Rutherford with the context of the people, collaborations and competitions that enabled the great discoveries we associate with him and his ilk. We get to fully celebrate the melding of many minds, and contributions building up to the moments of clarity that advanced the world into the modern understanding of matter.

Right from the beginning of the book I found myself thinking with great regularity *‘Oh! I didn’t know Rutherford was involved in that’*, to such a degree that I started to question just how I could possibly know anything about the subject, while remaining quite naïve to the history behind it. From that perspective alone, this book is an excellent read. If you know nothing more about Rutherford than his existence as the man on the hundred dollar note, and some nebulous idea about ‘splitting the atom’, strap in! The reader gets a careful and methodical journey through Rutherford’s life and work, through the lens of the discoveries he was involved in while at the same time gaining an introduction to particle physics, atomic structure and how understanding of these nascent fields rapidly expanded through the late 19th and early 20th centuries. Key concepts



are provided in clear and plain language, assisted by diagrams, so readers should not feel that an understanding of the science is a prerequisite. This is simultaneously the story of a man’s life and some of the most tremendous scientific advancements the world has witnessed.

Wright has been thorough, building a picture of who Rutherford was from his earliest days to his death at the end of a fruitful career. Care is taken to contextualise different phases of his life with world events and cultural vignettes, although it was the first of these that caught me by surprise.

Ben was provided with an advance copy of the book for the purposes of this review, and has no previous relationship with either the author or publisher.

As an image of colonial Nelson is constructed, setting the scene for Rutherford's birth and childhood, we're presented with a potted history that completely omits Māori–Crown relations. Perhaps I'm nit-picking, but this really stood out to me, as much as anything in the book.

This is an ambitious book, as any attempt to build a biographical sketch of such a significant figure will inevitably be. Balancing the fairly 'black and white' nature of the science content, with more nuanced and fuzzy descriptions of people, their relationships and their nature, without the author's voice intruding too obviously must be difficult. While there were brief moments in which I chuckled wryly to myself as I felt like Wright might be steering me towards a conclusion, in general I thought it was a fairly light touch.

If pop-science is a genre you enjoy, you are interested to learn more about one of New Zealand's most accomplished scientists, or you're thirsting for an introduction to the science that defines the world around us, *Ernest Rutherford and the Birth of Modern Physics* provides an enjoyable and approachable read.