

Much Ado about (Practically) Nothing: A History of the Noble Gases. David E. Fisher, Oxford University Press, Oxford, UK, and New York, 2010, x + 259 pp, ISBN 978-0-19-539396-5, \$24.95.

In the first chapter, David Fisher explains that his “book is an attempt to portray the most important aspects of the story” of the noble gases, “along with an account of my fifty years with the gases and people met along the way.” He also emphasizes that the account is “readable (i.e., jargonless).” This is no way prepares the reader for the quirky mix that follows.

For one thing, the dominant story line is really Fisher’s work with the noble gases, with an emphasis on how this work shaped a somewhat erratic career that began at Brookhaven National Laboratory and ended up at the University of Miami with stops at Oak Ridge and Cornell University along the way. The focus here is at least as much on Fisher and the ups and down of his career as it is on the history of the noble gases.

I hasten to say that the focus on a scientist’s research career adds a useful dimension to the narrative. As a historian of science I was particularly interested in Fisher’s initial attempts in the late 1950s to explore the nuclear structure of a wide variety of noble gas isotopes. First he tried using Brookhaven’s Cosmotron to irradiate targets and a mass spectrometer to make the measurements. When that did not work, he decided to “turn it around and use meteorites to study the nuclear reactors I was interested in: instead of putting an iron target in the Cosmotron, we could use the iron meteorites that had been irradiated out in space.” (p 16) Although that did not work, he ended up being able to use what was known about the nuclear reactions to discover something about the history of the meteorites. In the course of this story, Fisher provides many details about what it is really like to work in a lab, the fact that equipment does not work as advertised, that there is a pecking order for who gets to use a large instrument, that nature is tricky, and the research life full of disappointment as well as exhilaration.

I initially thought this might be a good book for use in the classroom, especially since the personal narrative is broken by a collection of witty and entertaining historical anecdotes about various discoveries related to the noble gases. These stories echo the theme that research life is unpredictable and do a good job of illustrating how understanding comes thanks to happenstance as well as persistence, intelligence, and hard work. But as I read on I began to wonder whether this was really a book for students. For one thing, the narrative shifts back and forth from subject to subject and between tales of the noble gases and Fisher’s career in a manner that I fear would be confusing to them. In addition, the somewhat disjointed narrative tends to let out Fisher’s inner smart-aleck. For example, in the midst of telling the story of argon, he notes the initial contributions made by Joseph Priestley, who contradicted Aristotle’s notion of air. This prompts the aside that Aristotle “was wrong in just about everything, from the movements of the stars to the seat of human consciousness, but two thousand years later he was still The Man.” (p 19) In fact, Fisher, though not wrong about everything, is frequently wrong about episodes in the history of noble gases not directly connected to his own experience. For example, Fisher incorrectly states that Priestley was not controversial in England before the French Revolution and that Joseph Black conducted experiments “on Priestley’s fixed air” (p 22) when in fact Black isolated and named fixed air before Priestley worked on it. Some of the descriptions of Fisher’s career are also unsuitable for students; for example his ugly tenure fight at Cornell that included a slur on his wife (which he is quick to dispel), an account that names names and seems to be aimed at settling scores.

On the other hand, who says every book has to be a textbook? All in all I think this book will appeal to historians of science, chemists, and others interested in learning a bit about the noble gases and a lot about Fisher’s eventful career and eccentric but entertaining view of research and the research life.

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