

someone embarked on the task of translating them but never finished the job. Both space and clarity would have been well served by simply giving them all in English, or at least by maintaining consistency throughout.

These comparatively minor complaints do not detract from the overall appeal of the book, a rich and enjoyable compendium which will rapidly justify its place on the shelves of anyone with an interest in ancient medicine and is likely to yield new insights for even the most seasoned of scholars.

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**Peter Mansfield**, *The Long Road to Stockholm: The Story of Magnetic Resonance Imaging: An Autobiography* (Oxford: Oxford University Press, 2013), pp. X, 241, £25.00, hardback, ISBN: 978-0-19-966454.

Like ultrasound and computed tomography (CT) scanning, magnetic resonance imaging (MRI) is a potent expression of the centrality of visual technology in modern medicine. A full, definitive history of its invention has not yet been written, the best account so far being a very well-researched, but inevitably constrained, chapter in Stuart Blumes' *Insight and Industry*. In 2003, Peter Mansfield and Paul Lauterbur were jointly awarded the Nobel Prize for key contributions to its development. This was controversial in some quarters: Raymond Damadian felt so strongly that he should have been included in the award that he took out two-page advertisements in newspapers in the USA, UK and Sweden, stating his case. John Mallard in Aberdeen also felt that the contribution of his team should have been acknowledged, although he expressed his disappointment moderately and privately. So any material that sheds greater light on the background of the innovative imaging modality is of considerable potential interest as a resource for whoever takes up the historiographic challenge that MRI poses.

Mansfield's personal story is indeed extraordinary. Born in 1933 to a working-class family, he failed the 11+ examination and was educated in a Secondary Modern School, leaving at 15 with not a single O-level. Initially trained as a printer, he somehow managed to secure a post in the Rocket Propulsion Department, run by the Ministry of Supply, near Aylesbury. There, he gradually achieved the qualifications that enabled him to study physics at Queen Mary College in London, graduating in 1959 with first-class honours. This is as telling an indictment of academic selection at too early an age as it is possible to imagine, but Mansfield seems to bear no grudge. Nor does he seem bitter that his professional advancement was interrupted by National Service. The story of his interview with the deferment panel in 1952 is amusing: he was unable to convince the lady magistrate in charge of the proceedings of the importance of rocketry. She seemed to imagine fireworks and Guy Fawkes' night. As Mansfield wryly points out, if she had lived in London during the Second World War she would had a different view.

Mansfield spent most of his academic career at the University of Nottingham, where, remarkably, there were three separate teams of physicists working on nuclear resonance. Relations between the groups were tense, as were the relationships between the scientists, the University and the National Research Development Corporation. Mansfield uses his autobiography to explain some of his responses to this difficult situation. The physics of

nuclear resonance is described quite fully, but medical historians will not find much detail on the initial applications of the modality to human subjects. What there is, however, is fascinating. The earliest devices were so small that it was impossible to image objects larger than the little finger of a small hand. While due consideration was certainly given to safety issues, in the form of brave self-experimentation by Mansfield himself, it is noteworthy that the reason why some of the first whole-body images were of paediatric patients was that only children could fit into the scanning space.

Some readers may find the structure of this book unhelpful, alternating as it often does between personal and family minutiae and fairly heavy-duty physics. Certainly scholars will want to triangulate Mansfield's account against other sources. But I enjoyed an entertaining and engaging account of a remarkable life and career. And, as I say, anything that sheds light on history of MRI is to be warmly welcomed.

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**Peter Keating** and **Alberto Cambrosio**, *Cancer on Trial: Oncology as a New Style of Practice* (Chicago, IL: University of Chicago Press, 2012), pp. 424, \$40.00, hardback, ISBN: 9780226428918.

In the past decade the scholarship many of historians, sociologists and anthropologists has converged on the study of 'biomedicine'. The duo of historian Peter Keating and sociologist Alberto Cambrosio have been prolific contributors to this area, including a previous monograph, *Biomedical Platforms*. In their most recent work, they turn their attention to an exemplar of biomedical research: cancer chemotherapy clinical trials. Most historians of medicine assume that laboratory experiment and clinical observation are two different ways of developing knowledge about health and disease. Biomedicine, as these accounts define it, is characterised by the experimental study of these phenomena. In this view, clinical trials are a matter of routine testing. Historians of the randomised clinical trial (RCT), most notably the late Harry Marks, have emphasised the sociopolitical stakes in the promotion of statistics as an 'objective' means of testing drugs while accepting that trials were essentially concerned with the generation of facts.

Contrary to this view, Keating and Cambrosio argue that chemotherapy clinical trials should be understood as a new style of *biomedical practice* (p. 10). Clinical trials 'have become full-fledged experiments' capable of generating hypothesis (and answers) about cancer. In particular, the sheer scale of multicentre oncology clinical trials placed the biostatistical criteria of the RCT at the centre of not only fact generation but knowledge production. Keating and Cambrosio emphasise that this method of knowledge production is a hybrid characteristic of biomedicine: biological knowledge based upon statistical reasoning (pp. 20–32). In this new set of practices, statistics and protocols are as vital to knowledge production as laboratory techniques.

Keating and Cambrosio follow the development of chemotherapy clinical trial practices across institutional, professional and national borders. The development of oncology clinical trials began in 1945 and has passed through three major phases to reach the present. Following the first use of mustard-gas derivatives by pharmacologists at Yale, cooperative clinical trial groups emerged at many institutions for testing cancer chemotherapies, especially those against leukaemia. Under the patronage of the National