offers a look behind the scenes of the practices and politics of science. He does emphasize the importance of an institutional context: the twentieth-century American university system with its strict division between the life sciences and medicine. In Carlson's view this enabled American biology, unencumbered by older traditions, to develop reductionist experimental approaches and become top in the field internationally. A deeper exploration of this thesis might have been profitable. As Evelyn Fox Keller has suggested, in classical genetics the gene became *the*, and not *a* basis for life. In this sense we could view classical genetics more profitably as the winning of *some*, and not *the* facts.

By erecting strict boundaries between science and the public sphere, the author limits the significance of his exercise. This is particularly evident in the last part of the volume, where he briefly discusses some of the ways in which geneticists took up positions in public arenas: the eugenics movement, Lysenkoism, the Cold War radiation controversy. He laments how science became unscientifically applied to public controversies. However, this argument fails to address rather important historical questions about the genesis and dynamics of these seminal public movements and controversies, and limits our understanding of the participants in these controversies. For instance, to the participants in the eugenics movement the boundaries between science and public affairs were obviously not as clear-cut as is presented in the author's perspective.

Carlson justifiably writes that classical genetics has had a profound effect in shaping our understanding of life (p. 2). But the reductionist perspective of classical genetics has from its beginning been in competition with other, more flexible concepts of heredity, as well as with environmental ideologies. This competition has never had a final outcome. What exactly the effect of classical genetics on our understanding of life has been, not only in the life sciences but also in medicine and the public domain, is an important new area of historical research, but falls outside the scope of Carlson's perspective.

Despite these limitations Carlson's volume presents a welcome addition to the still small body of historical literature dealing with genetics and its implications for the life sciences.

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Milo Keynes, A W F Edwards, and **Robert Peel** (eds), *A century of Mendelism in human genetics: proceedings of a symposium organised by the Galton Institute and held at the Royal Society of Medicine, London, 2001*, Boca Raton and London, CRC Press, 2004, pp. ix, 161, US$84.95 (hardback 0-415-32960-4).

This book has an attractive title for anyone interested in historical aspects of human genetics, but when I saw from the subtitle that it represented the proceedings of a symposium held three years earlier, I began to have doubts, which close reading unfortunately confirmed.

Most of the chapters in the later section (genetics after 1950) are short and may have been good lectures, but are not historical in approach or content, and add little new or relevant for a published volume. The earlier part though, is more consistently interesting. The chapters by Michael Bulmer on Galton's law of ancestral inheritance and that on the biometricians and Mendelians by Eileen Magnello contain material that will certainly interest historians and are fully referenced. Newton Morton's chapter on linkage and allelic association, placed in the post-1950 section, gives a valuable account from the perspective of someone involved throughout the past fifty years, and dovetails well with the chapter by Anthony Edwards, entitled 'Mendelism and man', covering the period up to the Second World War. While informally structured, this chapter contains a number of valuable insights on the beginnings of genetic linkage studies in man, which were new to me at least, and which could form the starting point for further study. The same is true for the comments on the Medical Research Council Human Genetics committee, another unexplored area historically.

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In summary, this book as a whole is patchy in quality and content, by comparison with the standards of previous volumes issued by the Galton Institute. The several valuable chapters might have been better placed and more accessible as review papers in journals since they will not be read by many who would find them interesting. The conference organizers should perhaps have been content to have held a useful conference, or to have planned a more coherent book from the outset.

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Thomas H Weller, *Growing pathogens in tissue cultures: fifty years in academic tropical medicine, pediatrics, and virology*, Science History Publications for Boston Medical Library, 2004, pp. xi, 291 (hardback 0-88135-380-9).

Readers of this autobiography are likely to be virologists and historians of virology and biology who will already be familiar with the biomedical achievements of Thomas H Weller—and he is not a man to hide his light under the proverbial bushel. The tissue culture method developed by John F Enders, Frederick C Robbins and Weller, which was subsequently used for the propagation of polio virus, was indeed a great step forward in experimental virology; and it ultimately proved to be of decisive importance for the development, by Jonas Salk and by Albert Sabin, of polio vaccines in the 1950s.

Less well known is what Weller calls 'My Growing Role in Academic Tropical Medicine'(p. 181), which covers his years of teaching comparative pathology and tropical medicine in a new Department of Tropical Public Health established at the Harvard School of Public Health, where in 1954 he became Strong Professor and Chair of Tropical Medicine. Shortly afterwards Weller received, jointly with Enders and Robbins, that year's Nobel Prize in Physiology or Medicine for their ''discovery of the ability of the poliomyelitis viruses to grow in tissue cultures'' (p. 91).

Leading up to the final results with polio viruses, Weller describes early work with isolation of a number of other viruses of importance by tissue culture techniques, from human tissue culture in flasks, to the roller-tube techniques eventually chosen. The viruses studied included the varicella-zoster virus, the rubella virus, and the human cytomegaloviruses and their congenital effects. Then, in 1947, Coxsackie viruses became important to Weller's story during an outbreak in Boston of an ''unusual febrile and very painful illness''. In a rare historical reference to early events, the reader is told that ''The illness had been described in Iceland by Jón Finsen in 1856 under the term 'pleurodynia' and later acquired other descriptive names that included 'devil's grip' and 'epidemic benign dry pleurisy' '' (p. 46). Apart from mention of Finsen's name, references here are mostly to American names and work, with no attention paid to other early work across the Atlantic—nor even to an outbreak in the USA, in June 1888, around Charlottesville and the University of Virginia.

Those missing historical facts are listed in the classic work *Den Bornholmske Syge myalgia epidemica*, by Ejnar Sylvest, written following an outbreak of the disease in Denmark only fifteen years before the one in Boston, and published in Copenhagen in both Danish (1933) and English (1934). Weller's section on the study concludes with a characteristic paragraph: ''Looking back at our studies on epidemic pleurodynia, it is clear that if we had used suckling mice that were two days old instead of ten days old, we would have isolated the Coxsackie viruses before Dalldorf [1948], and they would now have a different name. A difference of eight days resulted in failure. Our work, however, stands as the first virologic and immunologic studies on an epidemic of pleurodynia'' (p. 48). Here and elsewhere, the author is very keen on priority issues.

Not surprisingly, the work on polio viruses and the award of the 1954 Nobel Prize in Physiology or Medicine form a central part of this autobiography. Weller's reflections on the accompanying ceremonies in Stockholm and associated events elsewhere, and even Vatican

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