unreasonable to expect that a history of endocrine surgery would indicate to what extent the innovations of the leading surgeons were applied by their humbler colleagues, and with what effect. Difficult though it may be to ascertain the facts, it is surely part of the remit of the historian of medical progress to assess the impact that the advances he describes have had on the sum-total of human suffering.

Another class of person whose contribution to surgical progress is seldom acknowledged is that of the patients who were the subjects of these historic operations. They are not often mentioned even by name, but Welbourn is to be commended for including photographs of Marie Bichsel before and after Theodore Kocher had removed her thyroid, and of her sister who did not have the operation; for these two photographs—without the need for any further comment—demonstrate unequivocally that removal of the human thyroid causes myxoedema. But there must be many other patients who by submitting to untried procedures have advanced medical knowledge, whose existence scarcely gets a mention in this and other similar works of history. Yet, as my father (Wilfred Trotter) once remarked at the commemoration of another pioneering operation, they “have borne more substantial witness than has yet been produced by any philosopher or any theologian that all suffering is not in vain”.

Although one may regret the omission of other actors who have played their part in the history of endocrine surgery, it cannot be denied that the enterprising surgeons who devised and performed the seminal operations are the star performers. Welbourn recognizes that readers would like to know more about these men, and has attempted to satisfy their curiosity both by a biographical appendix, and by large numbers of black-and-white photographs; but neither of these manoeuvres provides much real insight into personality. In the biographical notes, most of the participants are allotted only two lines, describing when they were born and died, and where they worked. Some of the leading performers get a few more lines, but these are mostly devoted to their appointments and technical accomplishments; thus the only hint of the charismatic personality which so dazzled Victor Horsley’s contemporaries is the curt statement that he was “of artistic family”. Similarly, the large numbers of passport-size photographs which appear after each chapter do little more than provide evidence that their subjects were once alive.

I have tried to indicate that there are several respects in which Welbourn might have stepped back a little further from the purely technical aspects of his subject, and taken a wider view of it than he has elected to do. But within his chosen remit he has written what is likely to be the definitive account of how surgeons in the leading centres have progressively improved the treatment of endocrine disorders.

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Histories of specific diseases rarely attract historians. Only the great infections—smallpox, plague, cholera, and tuberculosis—have received substantial attention. The complex social reactions which they provoked have intrigued many able scholars, and the historical records of these diseases, fuller than those for many less spectacular afflictions, have facilitated the study of their epidemic history and of their impact on historical communities.

The scientific histories even of the great infections, however, remain largely unwritten; for the most part it is their social history which has excited interest. There is a divorce between these two approaches within the history of medicine which medical historians often seem reluctant to bridge. A closer integration of the scientific with the social would enhance the vitality of medical history as a discipline, and would permit new perspectives on the social significance of science as well as a better understanding of man’s relations with the natural world.

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In particular, the modern histories of specific diseases offer ideal ground for a union of diverging sub-disciplines, and Victoria Harden's immensely readable and scholarly monograph on Rocky Mountain spotted fever elegantly demonstrates that a successful integration is possible. Beginning with the disease itself—a virulent, seasonal, and unpredictable affliction of the Bitterroot Valley in Montana—she traces the modern evolution of the biomedical sciences in America, without ever losing sight of the popular beliefs and fears, and the local economic pressures, which gave meaning to the efforts of the scientists involved in spotted fever research. Her task is perhaps made easier because spotted fever was first identified as a specific infection in the last years of the nineteenth century, and initially seemed to occur in virulent form only in the Bitterroot. Harden's lucid prose and breadth of perspective contribute much to the quality of this book, but the precise geographical location of her core subject and its defined historical span facilitate a cogent account. Her example might prove harder to follow in the case of other diseases.

Rocky Mountain spotted fever is one of a large group of spotted fevers of varying degrees of severity which occur throughout the world. Generally tick-borne, and caused by the micro-organisms known as *rickettsiae* (which also cause typhus), these fevers are diseases of nature: their cycles of transmission involve man only accidentally. The Rocky Mountain variety was responsible for fewer than two dozen cases a year, but its dramatic symptoms and high fatality rates (up to 70 per cent of cases) made it a serious problem in an area anxious to expand its apple-growing industry and nascent tourism. It was demand from within the Bitterroot that kept research going, with often precarious funding, in the early decades of this century.

The steps by which some control over the disease was achieved followed closely on developments in other areas of medical research. The discovery of arthropod vectors in the field of tropical medicine led the earliest scientific investigators of the Bitterroot's problem to the tick vector; work on typhus vaccines in the mid-1920s inspired the development of the first spotted fever vaccine (by a laborious and dangerous process of crushing infected ticks in salt solution); research on filterable viruses in the 1930s made possible new methods of preparing vaccine; the antibiotic revolution of the 1940s produced drugs effective against several *rickettsial* diseases.

Spotted fever research did not initiate great scientific discoveries; rather it benefited from them. In this book, unusually, we see how laboratory discoveries spread through widening research fields to influence practical measures of disease control and the lives of ordinary people.

Few disease histories are finite, as Harden reminds us. After twenty years' quiescence, Rocky Mountain spotted fever reappeared as a public health problem in the 1970s, when increased army training activity and a growing leisure industry brought more and more people into its native habitat, and new foci of the disease appeared in other areas. American medical researchers are still working to resolve the problems of diagnosis, therapy, and prevention presented by spotted fever. All who are wary of scientific medical history should read this book: it tells a fascinating story.

Anne Hardy, Wellcome Institute


This is a welcome addition to the steadily growing list of modern studies of the world's most deadly influenza pandemic, as it must be one of the most complete and thoroughly-documented to appear in recent years. It is, however, Howard Phillips's doctoral thesis put into print, without any attempt at revision or updating. This means that the bibliography is already seven years out of date, and opportunities for comparison with recent work in Canada, Australia, New Zealand, and Sweden are missed. For a thesis, the treatment of influenza as a disease is extremely cursory; the absence of any reference to Edgar Hope-Simpson's articles or new work...