Book of the month

Cholera, Chloroform, and the Science of Medicine: a Life of John Snow

For anyone seeking contemporary themes and insights in the lessons of medical history, the work of Dr John Snow (1813–1858) provides a potent example. Yet his status as an international icon of medical, scientific and epidemiological method was hard won. Most of his contemporaries would have been amazed by the result of a 2003 poll, organized by a magazine for hospital doctors, voting him 'the greatest doctor of all time'. For Snow exemplifies the biblical adage that a prophet is without honour in his own country and house: the 19th century British medical establishment was in general fiercely opposed to his views. His somewhat curmudgeonly personality, his decision to specialize in the new and controversial technique of anaesthesia and his early death all militated against proper recognition of his contribution to medicine.

Snow's rise to iconic status is only in small part due to the pioneering anaesthetic work that occupied most of his later professional life. It is due far more to the use of his work as a case study in the emerging science of epidemiology during the 20th century. Recognition of the importance of Snow as an epidemiologist started in the schools of public health in the USA. In the traditional British manner of delayed acknowledgement of non-military heroes (particularly in science), this reputation was then reclaimed and taught here too, so that generations of doctors and scientists learned the story of the Broad Street pump and the cholera outbreak of 1854 in Soho. This belated recognition was strongest in London, where a lecturer in public health at the London School of Hygiene and Tropical Medicine, Dr Sidney Chave, was instrumental in persuading a Soho pub near the site of the pump to change its name to the 'John Snow' in 1954. Here at last was an association with undeniable British appeal and, since the 1950s, students at the LSHTM have visited the site to round off their epidemiological pursuits. In the 1990s, a visit to the public house provided the 'germ' for the John Snow Society as a more fitting way to commemorate this teetotal hero. The small group who founded the Society had only a slight idea of the reverence with which Snow was already held, not least amongst anaesthetists, but we soon learned and the Society now has over a thousand members world-wide, from all the 'Snow-related' disciplines. Now, too, an excellent and comprehensive account of Snow's work[1] has been produced, although I must sadly report that none of the authors appears to be a member of the John Snow Society; they have their own professorial group with the nickname of 'The Snowflakes'. It is, however, appropriate that this book was written in the USA, where the 'multiple legacies' of Snow were first acknowledged and much of the published analysis and interpretation of his work has originated.

The authors identify these multiple legacies as anaesthesia, epidemiology and cartography. The last is a recently claimed legacy, within the past decade, and a paradox is highlighted in the replacement of Snow's illustrative use of disease mapping by 'mythical caricatures of his methods and actions'. For the exponents of the graphic information system (GIS) technology, John Snow has become virtually a patron saint, despite the fact that modern GIS bears a greater resemblance to the methods of other mid-19th century workers in public health. Every new science needs a hero and Snow provides an accessible foundation myth. Yet the current work avoids hagiography. Often acclaimed as ahead of his time—heralding the germ theory, modern anaesthesia and the statistical techniques possible in our computer age—Snow was also a man of his time in making errors and drawing conclusions within the limits of the knowledge then available. A more serious consequence of the icon status is the 'fracturing of the unity of his work' which has inevitably followed the separate development of the specialties of anaesthesia and epidemiology: in the John Snow Society we have so far managed only one Blessèd Chloroform Lecture, in contrast to a regular series of Pump Handle Lectures that commemorate his epidemiological side. ('Blessed chloroform' was the expression confided by Queen Victoria to her diary after the birth of Prince Leopold, at which Snow applied his skills.) One of the greatest achievements of the book is that the authors represent different aspects of this fractured legacy, giving us at last an interdisciplinary and synthesized account.

The synthesis does not quite extend to bridging the differences in the Snow heritage on the two sides of the Atlantic, either in the interpretation of his work or in the way he is revered. Snow was a serious and intensely private man, a notably un-British hero: apart from a youthful prank with a firecracker in a church porch, not a whiff of scandal has been uncovered. Though the book is subtitled *A Life,* the emphasis is firmly on his work. Nevertheless, the lively American style makes this far from a dull read: to give just one example, Snow's investigation with others of candles infused with white arsenic (used for cheapness and brightness of the flame) is referred to as 'the poison candle caper'. Snow could be provocative, even mischievous, in his researches and contributions to meetings, despite his customary portrayal as stern and sombre, characterized by the gloomy sculpted head on the cover. The book is well

illustrated, annotated and indexed, including reference (albeit only in footnotes) to the invaluable detailed transcription of Snow's notebooks by the late Dr Richard Ellis and to the historical research on Snow's early life and practice by Dr Spence Galbraith, the latter inspired by research for one of the early Pump Handle Lectures.[2] On this side of the Atlantic, Galbraith helped to keep the spirit of Snow alive in the epidemiology of infection by selecting the Broad Street pump as the symbol for the Communicable Disease Surveillance Centre, an organization now united with non-infectious-disease epidemiology within the Health Protection Agency. Thus the fractured reputation of Snow within different specialties is being repaired in all quarters; and, as for the icon, we may yet see 'Snow—the movie'. If so, the painstaking account in this book will provide no excuse for inaccuracies, and directors could choose an opening scene from the description of a meeting of the British Medical Association in 1856, when Snow's work on cholera and water supplies received possibly the only 'Hear, hear!' during his lifetime. In the minutes of the meeting, Dr William Budd and others deplored 'that Dr Snow's great labours had been so completely unrecognised'. 'Hear, hear' to that and to this well researched tribute to a doctor with 'true genius for observation'.

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REFERENCES

1 Vinten-Johansen P, Brody H, Paneth N, Rachman S, Rip M. *Cholera, Chloroform, and the Science of Medicine: a Life of John Snow*. Oxford: Oxford University Press, 2003 [Pp 437, $49.95 h/b; ISBN 0-19-513544-X]

2 Galbraith S. *Dr John Snow: his Early Years*. London: The Royal Institute of Public Health, 2002

MONICA: Monograph and Multimedia Sourcebook

Editor: H Tunstall-Pedoe, for the WHO MONICA Project
244 pp Price CHF 45 (US$40.50)—Special price in developing countries, CHF 30.50 ISBN 92-4-156223-4 (p/b)
Geneva: World Health Organization, 2003

At a meeting in Bethesda in 1978, a group of investigators struggled to make sense of the observed decline in cardiovascular mortality in the USA and conceived a study that would go on to track cardiovascular risk factors and outcomes in 38 populations, in 21 countries, over 23 years. Now Hugh Tunstall-Pedoe has chronicled the history and achievements of this first global epidemiological study, the WHO MONICA Project, which has contributed so greatly to our understanding of the causes of cardiovascular disease and stroke. In particular, the findings have emphasized the importance of time lags between exposure and outcome, the imprecise association between traditional risk factors (such as blood pressure and cholesterol) and adverse cardiovascular outcomes, and the greater than expected evidence for the benefits of healthcare. As the project draws to a close (although the data collected will be subject to many further analyses in the years to come), this is a good time to take stock.

The book begins by tracing the development of the collaboration and proceeds to describe how the investigators sought to achieve standardized data collection. Then follow a description of each of the MONICA centres and abstracts of the most important papers arising from the project. The final section reviews the populations, their changing risk factors, and the main hypotheses tested, each illustrated by a set of high-quality graphics. The book comes with two CD-ROMs which contain a wealth of additional information, including the data collection manuals and 20% samples of data from each centre. It therefore provides not only an account of modern epidemiological history but also an important source of material for researchers in cardiovascular epidemiology.

In assembling this wealth of material, the editor has presented us with what is unashamedly, and quite justifiably, a celebration of this enormously complex project. Yet there are still large gaps in our knowledge and it is almost unimaginable that an enterprise on this scale will ever be conducted again. Before looking at the limitations of MONICA, one must pay tribute to the amazing feat of launching it at all. The long list of grants indicates just how much time the MONICA investigators must have spent raising funds. They were not always successful, as when they failed to secure European Union funding for what would have been a very important add-on study on nutrition. The MONICA Project succeeded only because of the dogged determination of a large number of people, from many countries, who were committed to a common vision and were able to follow it through.

It is easy to forget the challenges facing those involved in an international collaboration in the early 1980s. In a fascinating section on communications we are reminded that, although a few centres had telexes, fax machines were not yet available and international telephone calls were