

in the sixteenth and seventeenth centuries. Much scholarly work has been done over the past few decades showing how knowledge of nature, including mathematics (closely related to both art and music, not to mention accountancy), fitted in as part of overall culture. The approach adopted in this volume appears to be veering away from that fruitful path.

The neglect in this volume of such significant recent historical work, mostly undertaken in Europe, may well be a consequence of its being published by the New York office of Cambridge University Press and because both the editors and twenty-five out of the thirty-four contributors are American (other volumes in the series are more representative of the geography of scholars). This is not merely a nationalistic point, but one that is crucial to the development of the history of science in America which was, and still is, heavily influenced by the positivistic legacy of George Sarton (1884–1956), widely taken to be the founder of the discipline in America. Referred to approvingly in the General Preface, Sarton also planned an eight-volume history of science inspired by the Cambridge Histories. At one level the Whig notion of progressive improvement over time, embodied in *The Cambridge modern history*, and the positivist idea of the development of society through its three stages have much in common. Such commonalities may account for the way in which they are both combined in the structure of this volume and also in some of the contributions. Yet, as I have indicated, there are other ways of doing history of science, some of which are illustrated here. But, as a whole, the volume does not, in my view, provide a proper representation of where we are in the history of science in the early modern period and a non-specialist would be well advised also to consult other texts.

Frank A J L James,
Royal Institution

Eilidh Garrett, Chris Galley, Nicola Shelton and Robert Woods (eds), *Infant mortality: a continuing social problem. A volume to mark the centenary of the 1906 publication of Infant mortality: a social problem by George Newman*, Aldershot, Ashgate, 2006, pp. xvii, 293, £55.00 (hardback 978-0-7546-4593-1).

As its sub-title states, this collection of essays is a cumulative reflection on the themes of George Newman, the first Chief Medical Officer to the Ministry of Health's 1906 seminal investigation into infant mortality. As the first part of the title suggests, however, it also aims to draw attention to how far his concerns as to the geographic and socio-economic differentials in infant mortality continue to be upheld with more detailed analysis. The contributions are uniformly high in quality, and form an admirably cohesive whole. Taken together, they provide a commentary on different aspects of Newman's work, contextualized by two chapters on Newman himself. Significant nuances are provided to his general conclusions, especially on the rural/urban division in infant mortality rates (IMRs). The book ends with several chapters with a modern and forward-looking stance, which highlight the need for ongoing concerns as to inequalities in infant health in modern Britain.

Newman's 1906 *Infant mortality: a social problem* was not a path-breaking analysis. Rather, as the first chapter by the editors and the second and third by Chris Galley and Robert Woods respectively point out, its strength came from its drawing together of writings and current thought on IMR. It was published at a time when infant mortality was becoming a high profile area of investigation, and it was immediately influential. Its main thrust was to identify ways in which infant mortality might be lowered; a pertinent concern given the persistently high death rate of the young compared with other age groups (although Newman's work actually appeared as it was beginning to enter its period of dramatic decline). He identified several

significant themes for infant survival which are taken up in the current book: the impact of local factors; the significance of infectious disease, in particular diarrhoea; the relevance of socio-economic status; and the importance of the mother's role.

The current book is strongest on the regional nature of infant mortality, and the way that it interacted with local environmental, employment and socio-economic conditions. In particular, Sam Sneddon (studying rural Lincolnshire), Tricia James (Northamptonshire), and Eilidh Garrett (Kilmarnock and Skye), uncover sub-regional nuances unappreciated by Newman. These studies show that the traditional high urban/low rural IMR regime has been over-emphasized, and that local female employment markets, access to healthcare officials and socio-economic status were all important. Richard Smith and Jim Oepen, in an impressive synthesis of previous and new work, also demonstrate that the relationship between the IMR and living standards "remains far from clear" (p. 65), that high IMRs have been found for affluent areas, and that certain trends in mortality have held true across social classes. Graham Mooney and Andrea Tanner highlight this discrepancy via the deprived and high mortality area of Notting Dale in Kensington. Here, projections of moral worth (especially of mothers) shaped the provision of welfare support for infants, although charity-supported crèches seem ultimately to have provided the means for mothers to continue working without compromising the health of their babies too much.

The least investigated aspect of Newman's thesis, although the most contentious for historians, is his emphasis on the role (and therefore blameability) of mothers in raising infants successfully. Although several authors note the impact of female employment (for example, Sneddon, James, and Mooney and Tanner), Alice Reid is the only one to overtly engage with the notion of maternal responsibility. She also most explicitly considers paths of causation; a topic left

somewhat glossed over in some of the other chapters. In her statistical study of health visitor records for early-twentieth-century Derbyshire, she stresses the significance of early visiting for the survival prospects of the most vulnerable infants, and also the role of health visitors in educating women in methods of artificial feeding (notoriously pernicious for infants) and in promoting delayed weaning. Newman's emphasis on the importance of female education is at least partially upheld, although the overtones of blame are clearly distasteful to all the authors who mention it.

The final section of the book engages with modern data, which considerably raises its impact. Chapters by Danny Dorling and Yvonne Kelly draw attention to ongoing differentials in access to resources, with a continued urban penalty still evident, and a north-south divide. Once again, the debate is moved on from Newman's standpoint, for example, introducing the impact of policy planning and ethnic differences on infant mortality. Nicola Shelton's concluding chapter sensitively reviews the need for further consideration of differentials in IMRs in modern Britain, and the ongoing significance of many of Newman's conclusions. All three chapters in this final section stress the potential for further reduction in IMRs.

While the book's clearest strength is its concentration on local regimes and the need to soften the weight given to the urban/rural divide in IMRs, it does achieve what it sets out to do on a more general level. All the chapters are contextualized by Newman's ideas, and offer a range of perspectives on how to move them forward. The role of developments in medical care and treatment is still relatively absent, as both Woods and Shelton note for Newman's own work, although Eric Hall and Michael Drake specifically take up his focus on diarrhoea as a killer of infants, and both they and Garrett do highlight the role of local medical officers on the picture we receive of mortality patterns. There is, however, a sensitive awareness of the significance of other factors Newman did not have the expertise or data to consider (including female

work patterns, problems of access to doctors and registration facilities, and local housing, education facilities and even weather). There is also a clear emphasis on modern policy applications and the need for ongoing reflection on how to improve IMRs. The combination of sophisticated local historical studies with reflections on modern applications raise this book's appeal, and give it significant interest value for historians, sociologists and social policy experts.

Alysa Levene,
Oxford Brookes University

Milton J Lewis, *Medicine and care of the dying: a modern history*, Oxford University Press, 2006, pp. 277, £19.99 (hardback 978-0-19-517548-6).

The aim of this book is to deepen our understanding of the relationship between medicine and the care of the dying through reference to its internal history, and by taking account of the broader context. Following an Introduction which deals with funding issues, the growth of government interest in health care, and the emergence of hospices, the book covers the rise of the religious and the medical; the rise of modern medicine; cancer as an example of the strengths and weaknesses of a research imperative; the diffusion of the theory and practice of palliative care; the emergence of effective methods of pain control; and the changing meaning of euthanasia. In a treatment that is both broad-ranging and detailed, Lewis looks at five countries: the United Kingdom; the United States; Canada; Australia; and New Zealand.

Backed up by twenty-three pages of tightly packed references, Lewis sets his history within the context of broader conflicts to do with the rise of medicine and the decline of religion, and within medicine itself, between on the one hand a research imperative, with its implicit goal of overcoming death, and on the other, a clinical one, to treat death as part of life, and make the process of dying as

tolerable as possible. Part of Lewis's argument is that central to this conflict is the rise of scientific medicine and the decline of religion; many Anglo-Saxon countries are marked by a moral and religious pluralism that breeds controversy over such issues as euthanasia. Lewis argues that modern medicine has put the cure of the body before the care of the body. The metaphysical heritage of dualism and reductionism has become more problematic in the modern age, but at the same time, knowledge has been increasing so rapidly that it has become more difficult to develop a unified secular world view. This arguably renders the search for meaning, on the part of the dying, very difficult.

Nevertheless, despite this central thesis, in other respects the book is less successful, covering so many different issues, and reading a bit like a literature review. With the five different countries providing case-studies, it is almost impossible for the reader to retain a grasp of what is going on in each, or to have a sense of what an overall comparison might mean. The 'Observations' that end each chapter are tantalizingly brief, so that one opportunity to focus on a more sustained assessment is lost. Some sections, on the rise of scientific and hospital medicine, and on the history of surgery, are very general indeed, while others, on the development of cancer services in Britain and the United States, and on palliative care in Australia, offer a rather descriptive narrative.

Towards the end, Lewis again points to conflicts, between those who view the body as a machine and those who see human beings as being more than their biology; between those termed "transhumanists" and "bioconservatives" (p. 228). He locates the development of palliative medicine in terms of an internal reaction to the failure of medicine to offer a compassionate response to the dying, but also with regard to a broader individualism. But again the book moves to the arguments of other writers, pointing simply to an "untidy coexistence" of conflicting ideas (p. 234). Readers interested in issues as diverse as the development of