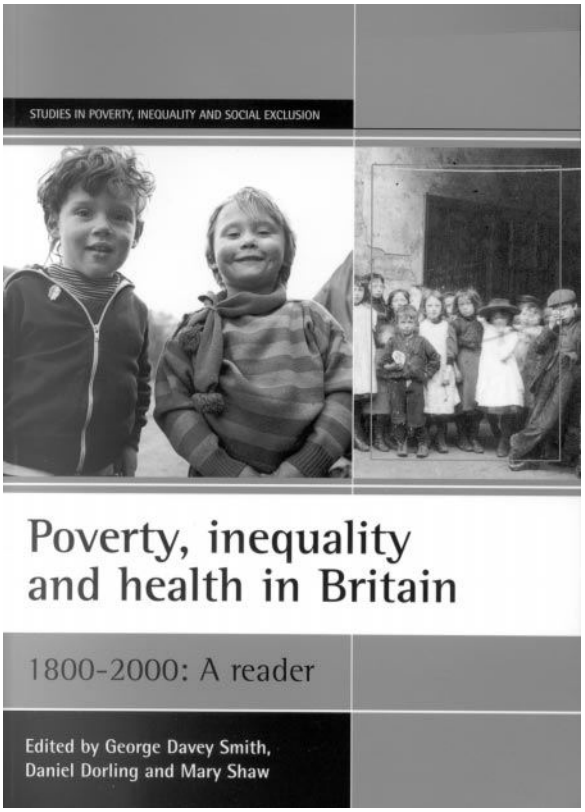
Poverty, Inequality And Health In Britain, 1800–2000: A Reader. *George Davey Smith, Daniel Dorling, Mary Shaw (eds). Bristol: The Policy Press, 2001, pp. 384, £55.00 (HB). ISBN: 1-86134-328-0; £15.99 (PB). ISBN: 1-86134-211-X.*



The editors of this volume are to be congratulated on the quality of the selections from classics texts on poverty, inequality and health in Britain during the nineteenth and twentieth centuries. They have ranged widely both in time and subject matter, including material from Malthus, Farr, Chadwick, Engels, Mayhew, Marx, Rowntree, Booth, Pember Reeves, Greenwood, McGonigle, Boyd-Orr, Beveridge, Titmuss, Morris, Abel-Smith, Townsend, and the recent Black and Acheson Reports.

The book has focussed both on the history of poverty and its effect on health and mortality. The authors quote widely from statistical studies as well as narrative descriptions of poverty from social surveys and other sources. For example, they cite Collis and Greenwood's influential work on the health of the industrial worker, detailing the effects of poverty and overcrowding on tuberculosis mortality during the early twentieth century. The selections on poverty often stand in their own right, and evoke an appropriate sympathy for the poor and their plight in grappling with extreme poverty. Some of the most effective sections of the book on poverty are selections from relatively unknown working class authors, such as Robert Roberts and Robert Tressell.

It is only possible to convey the flavour of this writing by quoting from the text of the book. Tressell worked as a painter and decorator in Hastings at the beginning of the twentieth century and described in his autobiographical novel the following scene:

> 'The woman did not reply at once. She was bending down over the cradle arranging the coverings which the restless movements of the child had disordered. She was crying silently, unnoticed by her husband. For months past—in fact ever since the child was born—she had been existing without sufficient food. If Easton (her husband) was unemployed they had to stint themselves so as to avoid getting further into debt than was absolutely necessary. When he was working they had to go short in order to pay what they owed; but of what there was Easton himself, without knowing it, always had the greater share. If he was at work she would pack into his dinner basket overnight the best there was in the house. When he was out of work she often pretended, as she gave him his meals, that she had hers while he was out. And all the time the baby was draining her life away and work was never done. She felt very weak and weary as she crouched there crying furtively and trying not to let him see.'

Inevitably, such poverty and maternal malnutrition led to poor health, not only for mothers but also for their children, an association which has been emphasized by Barker and others in their work on infant growth and later adult disease. This research necessarily leads to the study of historical conditions, and Davey Smith, Dorling and Shaw are pioneers in bringing the relevance of historical evidence to the attention of epidemiologists and other medical researchers, with their work on Booth's poverty map and its links to twentieth century patterns of adult disease mortality.

However, there are problems with some of the assumptions made by Davey Smith, Dorling and Shaw. At one point they write that 'the association between poverty and ill-health has been apparent across the two centuries with which we are concerned'. This was certainly true of the twentieth century, but there is increasing evidence that it was not true of the nineteenth. Historically, there was no simple relationship between poverty and mortality before the twentieth century. The editors of the present volume have quoted nineteenth century evidence which has long been discredited. For example, they quote Chadwick, Engels and Titmuss on the relationship between social class and expectation of life in the nineteenth century, based on average age at death detailed in various records. Neisson, Farr and others pointed out that this method was fundamentally flawed, as it did not allow for variations in the age structure of populations at risk.

Neisson and other Victorian actuaries concluded from insurance, friendly society and civil registration data that adult mortality was actually higher amongst middle class groups than it was amongst working class populations. For example, they found that mortality amongst clerks and schoolteachers was higher than that amongst manual workers. This difference only disappeared in the twentieth century with the emergence of the classical social class gradient.

Neisson and others believed that the 'inverse' social class adult mortality gradient was due to the healthier lives lived by manual workers, particularly those engaged in active outdoor occupations. However, it is possible that the explanation for higher middle class adult mortality was partly a function of patterns of infectious disease. There is some evidence that the middle classes managed to avoid certain diseases in childhood, and certainly they

went to great pains to avoid plague, smallpox and other contagious diseases, frequently fleeing from areas where these diseases were rife. As a result, middle class families probably caught some of these diseases—such as smallpox—later in adolescence and adulthood, increasing their levels of adult mortality.

Farr and other writers on nineteenth century mortality were certainly aware of the importance of disease environment in shaping levels of mortality. Davey Smith and colleagues quote Farr to this effect as follows: '(Those living in low-mortality healthy districts) generally follow agricultural pursuits; and they are scattered thinly over the country, often on high ground, so that the impurities which they produce are dispersed and diluted in the air and water. They do not breathe each others' exhalations in theatres and churches. They do not drink water sullied by impurities.'

There is a consensus emerging amongst historical demographers that geographical location was probably more important than social class in influencing mortality in the nineteenth century. Generally, rural areas were much healthier than urban ones, and this only really changed at the end of the nineteenth and beginning of the twentieth century. This was probably linked to the 'epidemiological transition', with infectious diseases being replaced by degenerative ones. The historical evidence is that poverty did not significantly affect infectious disease mortality, but did have a major impact on mortality from degenerative diseases, explaining why it had so much more impact on mortality in the twentieth than in the nineteenth century.

These patterns of historical transition mean that epidemiologists have to be very careful in their use of historical data. For example, Davey Smith *et al.*'s work on the correlation between Booth's poverty map and twentieth century adult mortality assumes that late nineteenth century poverty was associated with poor health, and yet recent research has found a lack of a correlation between the poverty colour-coding of streets and levels of infant mortality in one of Booth's London districts, although there may well be an association with child mortality. This new work is based on copies of civil birth and death registers, many of which have survived and been deposited in county record offices, allowing epidemiological and demographic research for both the nineteenth and twentieth centuries.

The above reservations about the present volume should not however detract from the success that the editors have in demonstrating the relevance of historical evidence to a wider account of epidemiology. Many epidemiologists wish to create a timeless body of generalizations independent of historical variation, but the editors have alerted us to the importance of medical history for a complete understanding of epidemiological reality. The selections contained in the book abundantly and effectively illustrate a wide body of work both on poverty and its effect on health and mortality in the twentieth century.

PETER RAZZELL

Ecological Integrity: Integrating Environment, Conservation and Health. *D Pimentel, L Westra, RF Noss (eds). Washington DC: Island Press, 2000, pp. 428, £55.00 (HB). ISBN: 1-55963-8-079; £27.95 (PB). ISBN: 1-55963-8-087.*

This book brings together and synthesizes the work to date of the Global Integrity Project, which was started in 1992. The aims of the project, as stated on the back cover of the book, have been *'... to examine the combined problems of threatened and unequal human well-being, degradation of the ecosphere, and unsustainable economies'*. The biographies of the contributors to this edited volume highlight that the project has brought together specialists from the fields of ecology and related biological/environmental sciences, economics, philosophy, epidemiology, ethics and law. Between them the contributors have an equally broad experience of academia, industry, governmental and non-governmental organizations. This bodes well for a project and book that aim to take a transdisciplinary approach to the issues concerned.

I would emphasize now that this is not simply a book that describes which and how environmental factors affect human health today. The whole approach of the book is to focus on definition, measurement and effects of 'ecological integrity' and its loss, in the context of which the impacts on human health are considered.

The book has a straightforward structure, similar to that of many edited collections, and is amenable to 'dipping in' to chapters of interest. Indeed it may be quite difficult to plough through the book in its entirety. However, I would recommend against health specialists simply heading straight for the chapters that deal explicitly with human health, without some consideration of the remaining content of the book. The book tries to show that human health not only responds to the state of ecological integrity (at whatever scale), but is also an inherent part of it. Focussing solely on the health section would therefore lead to missing the key point of the book. Having said that, there is probably more detail than is needed on ecological theory and specifics such as forestry for even the broadest-minded epidemiologist, but that does not limit the utility of the book as a whole.

The introductory section does a good job of telling the story of what the book is about, while making the argument for why the following chapters are important and how they fit into the story. This is followed by the four main sections of the book: the history and philosophy behind the ecological integrity concept; the concept as applied to natural resource systems, including agriculture, landscape and fisheries; human and societal health; and economic and ethical aspects. The book ends with a final synthesis, which brings together the ideas and summarizes a prescription for action.

In contradiction to my recommendation above, but with a view to the readership of the *International Journal of Epidemiology*, a brief review of the health-relevant chapters follows. In chapter 14, Professor Tony McMichael sets out to answer the question *'In what ways do global environmental changes affect the prospects for human health?'* The focus on health *prospects* highlights that this is concerned with possible environmental effects on health in a long-term, ecological framework rather than measurement of current exposure effects. The chapter provides a neat summary of the manifold means by which public health is likely to be affected by global and regional environmental changes, which will be familiar to anyone who has read McMichael's book *Planetary Overload*.[1] In common with much of the rest of the book, McMichael argues for the need for transdisciplinary, holistic scientific assessment, since these complex and large-scale issues do not fit reductionist and classical linear analyses. He suggests that to assume that things are getting, and will continue to get, 'better' because life expectancy