BOOK REVIEWS


The aim of this book is to bring together the important facts and ideas connected with the observation that organisms have a limited lifespan. It is intended to be read by a wide circle of readers but particularly those who wish to research into the sources of data for the measurement of lifespan.

There is a summary of data on lifespan in the form of life tables and then, on the basis of those tables, certain hypotheses are suggested. A mathematical model is constructed to provide a quantitative explanation for the data studied. A general theory of lifespan is thus created.

The topic is of importance to epidemiologists in relation to a variety of puzzles on the subject of lifespan: the difference between the stage of aging process and the difference in lifespan between different countries and social classes. The authors make the point that some of the increase in the numbers of elderly people is now due to increased longevity, but there is no evidence that this will increase the proportion of disabled people in the community. If people live longer because they age more slowly the proportion of ill and helpless people might even decrease.

Another myth, about the heritability of long life, is then examined. The authors suggest that there is little correlation between the lifespan of children and their parents or (and this is the more reasonable experiment as they are more likely to suffer similar environmental hazards) between siblings. This lack of correlation has even been found to be so when long lived Drosophila have been selected through many generations.

Gompertz noted that there are two parts to mortality, one which grows with age and the other which is independent of age. The authors give details of these forces of mortality and their relationships in a number of different species, most startlingly in 400 female confused flow beetles. The dependence of mortality on age appears to be similar for the overwhelming majority of human nationalities. The point is made that the decline of human mortality in developed countries in the 20th century is almost exclusively accounted for by the age independent component of mortality. Age dependent mortality has remained practically unchanged despite radical social transformations, changes in the major causes of death and advances in medicine and health care.

The authors describe epidemiology as a sub-discipline of medical geography, which will delight the heart of a number of geographers. They show that a reduction in mortality and a movement of one type of cause may be compensated for by a growth in mortality from another, so that there is no overall change. It is suggested that the reason for this is that organisms are unreliable mechanisms with a high degree of redundancy, so that there are usually back up mechanisms available. There is always a certain probability that failure in different elements of the organism will coincide in time and the organism will therefore be "non-specifically vulnerable". At this point almost any disease, and sometimes multiple diseases, may cause death. There is a tendency for this stage to become more common with increasing age and the authors suggest that the date of non-specific vulnerability can be described as "having one foot in the grave".

The large number of defects is part of what makes each person, or amoeba, an individual. We all have a unique set of defects—our friends more than most.

It is suggested therefore that the best strategy is to look at non-specific markers which show that individual humans may be becoming vulnerable to a number of causes of death. It is suggested that there is an underlying unitary mechanism in the origin of many diseases. It is possible that such an approach may be related to changes in the immune mechanisms.

This is altogether an interesting, if slightly technical book.

NORMAN VETTER
University Hospital of Wales, Cardiff


This book is aimed primarily at research workers and postgraduate students in the social and behavioural sciences and gives emphasis to the exploratory phase of data analysis leading to the generation of hypothesis and speculation". On the whole, it does this admirably in a well written text containing numerous examples, extensive reviews of graphical and tabular methods. It is possible, as well as nearly 300 references to source material.

The book is divided into four parts, entitled "Approaches to analysing data" (part I), "Exploratory multivariate data" (part II), "Regression models" (part III) and "Latent variable models" (part IV). Part I briefly sets out the authors' own recipe for approaching the analysis of complex data, emphasising model building in particular, while part II gives a comprehensive treatment of graphical and table based multivariate methods. Comparison of parts I and II with the equivalent section of the more mathematically inclined Introduction to multivariate analysis by Charlesfield and Collins find the present book somewhat less clear at a first read. In their favour, Evertt and Dunn are more comprehensive more often. Part III gives a clear account of (mainly univariate) regression methods, illustrated with many examples analysed using GLIM. While surprised to see such an extensive account of univariate methods in what is after all a multivariate book, I imagine this will be well received by readers less well grounded in the concepts of generalised linear models around which the bulk of this long section (over 100 pages) is based. I found the rendition lucid and accurate though perhaps a little too concise in parts for some readers.

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Part IV covers factor analysis and covariance structure models, methods not normally covered in such detail in similar but more mathematical texts. Both methods are clearly and carefully explained. The well rehearsed arguments against any and all use of factor analysis are considered here also; as might be expected, the authors give their support to the critical and careful use of this method. At 35 pages, this section is considerably shorter than I had expected, although of course much of the more general multivariate material is covered in part II.

Overall this is a good book marred by the kind of flaws associated with many first editions. Numerous typographical errors, particularly early on, and the need to skip forward several pages to find the graph or table associated with the text were enough to discourage me initially. On the other hand, excellent internal cross referencing to other relevant sections, summaries at the end of each chapter, and a good deal of critical evaluation of presented methods are extremely useful. I look forward to the second edition.

STEPHEN PYKE
Medical Statistics Unit
London School of Hygiene and Tropical Medicine


The main concern of this book is with how general practice can maintain and increase the quality of patient care in the context of a more market orientated system. It splits into three sections. In the first section, two articles (by Martin Roland and Rosalind Eve) attempt to resolve the power to direct care which fundholding brings with the effects on non-fundholding practices, and the need to retain some central coordination of service priorities. Nick Bosanquet then puts a controversial but convincing argument that a substantial element of locally negotiated remuneration might paradoxically protect against a "supermarket versus corner shop" drive for economies of scale. David Taylor analyses primary health care according to the economic and managerial logic of the "new NHS".

In the second set of articles, dealing with the need to reconsider how medical manpower is deployed, Duncan Keeley puts the case for a professional hierarchy, as in hospital medicine, with a reduced number of principals who would manage associated teams of "junior" doctors and other health care workers. Steve Illiffe and Ursula Haug argue convincingly that present arrangements for 24 h care are a costly waste of resource and Geoffrey Marsh reiterates his well known view that by "sticking to their last" and maximising the skills of other professionals, general practitioners could increase their average list sizes to around 4000 patients per doctor.
This is stiff reading. The new NHS. In the section on why this is happening, a scathing dissection of the recent changes in GP contracts, leading directly to Denis Pereira Gray's well considered case for much increased academic support for general practice. David Jewell, Tom O'Dowd and A D Wilson, and Richard Baker outline the enormous benefits which would arise from increased support—new and more relevant forms of medical education, medical care delivered to optimal (but flexible) standards, and a new tradition of accountability through medical audit. Clive Richards ends the book by considering whether anyone will want to be a GP in this brave new world, reminding us that the health of the doctor is at least as important as that of his or her patients.

This callation is intentionally polemical: it will likely raise many hackles but it will also make us take stock of our hitherto sacred cow. For the reader, the book should be incorporated in the prescribed list for training practices, and those doctors who do not archive their BMJs might do well to purchase it.

R J TAYLOR
Department of General Practice
University of Aberdeen


Following hard on the heels of the second edition of the Oxford textbook of public health, the 13th edition of another major textbook—Maxcy-Rosenau-Last Public Health and Preventive Medicine—has recently been published. It is also a massive tome comprising 75 chapters written by 166 authors, many of whom are well known experts in their respective fields in North America.

With such a well established textbook, readers expect a traditional approach, and this is indeed what they get. Following a very brief introduction to public health methods, the reader is launched into over 300 densely packed pages covering around 60 communicable diseases—everything from paragonimiasis to AIDS! Each disease is covered systematically with many excellent headings, so that it is possible quickly to home in on the relevant information. I discovered, for example, that the incubation period of Kyasanur Forest disease is 5 to 8 days! There are facts galore for the public health doctor. This is also true in the major section on environmental health, providing coverage of topics such as radiation, water quality, and housing. Occupational health is also included; an interesting chapter on special working groups describes current occupational hazards for women and minority workers. It also discusses the problems of child labour which many might naively imagine had disappeared in developed countries.

Behavioural factors affecting health are dealt with in another part of the book, with emphasis on smoking, alcohol, and drugs. This leads nicely into a major section on chronic diseases. Cancer and cardiovascular diseases are naturally given prominence, but again the coverage is comprehensive with inclusion of diseases affecting most of the main body systems. In keeping with modern times, a chapter on violence includes such topics as 'spouse abuse' and 'elder abuse'. Finally, a section on health care planning comprises a complete overview of chapters on everything from family planning to military medicine—or maybe they aren't that disparate?

So, is this book any good? It is a comprehensive textbook and, in my view, is worth having as a means of quickly getting sound well referenced information on subjects with which readers may not be very familiar. It is not a book on methods and is too detailed for an undergraduate or postgraduate course textbook. Whether to go for Oxford or Maxcy-Rosenau-Last is very much a case of personal preference.

F G F POWKES
Department of Public Health Sciences
University of Edinburgh


Health services research claims to be an authoritative account of the current state of the art and science of health care research in the USA. As such it is uniquely American in its orientation, context and style. The serious non-US reader will first have to contend with three pages of three to seven letter acronyms. AMA and DRG may be familiar enough this side of the Atlantic but try dealing with TEFRA (Tax Equity and Fiscal Responsibility Act) or RBRVS (Resource Based Relative Value Scale).

On a more serious note, of the 11 chapters in the book, I found chapter 7, by Professor Newhouse, the most interesting. It describes in detail the RAND Health Insurance Experiment, a remarkable and probably unique attempt to study in an experimental setting the effect of different methods of financing health care on service utilisation and health outcomes. The broad conclusions are almost unsurprising: services are less often used when people have to pay part of the cost of health care; this reduction in usage appears to be mainly confined to inappropriate use. The results relating to health outcomes are less conclusive. In any case the RAND experiment was conducted in such a special setting that the results can hardly be generalised. Another chapter on quality of care provides some fascinating information on the appropriateness of medical care and on the health outcomes of standard procedures in different hospitals. It also addresses the twin issues of the public’s role in assessing quality of medical care and its ability to understand and use such information.

The claim that health services research influences policy—a suggestion that appears even in the title of the book—is largely unsubstantiated. Would that it were so. It is rather the case that policy is led by political and economic considerations and influenced by cultural, financial, legislative, and ideological factors. What this book succeeds in doing is "enlarge the knowledge pool about how the US health care system operates...". It also points out how the system might be modified in order to "improve its efficiency and effectiveness", but there is nothing to suggest that policy makers act on these ideas.

JAMMMI N RAO
Sandwell Health Authority
West Bromwich


In October 1991 the BMA published a document entitled "Leading for health", in which it attempted to set the UK agenda for health in the 1990s. To answer some of the many questions raised, a series of articles was commissioned by the BMA. These have now been republished as The future of health care. Despite its short length, this book covers a broad range of issues, including rationing, accountability, management, audit, research, and health care funding. The articles are well suited to a general level of readership, and useful references are given for further reading. Each contribution is from a respected figure in the mainstream of the health care debate. Given the space constraints, the authors make an excellent job of not only stating their own views and the basis for them, but also considering opposing arguments. There is a fair degree of overlap between the articles, particularly in respect of the issues of rationing and funding of health care, and it seems a pity that republication was not taken as an opportunity for the authors to comment on several important differences of opinion which emerge. Insofar as the articles represent a response to "Leading for health", it is also disappointing that the focus should be so firmly upon health care delivery rather than health in its broader context. However, at least the reader has been served with fair warning of this in the title of the book! Overall, the BMA deserves credit for making available these eclectic and provocative pieces in a convenient and inexpensive format. For anyone interested in the future of the NHS, this book can be recommended as a useful starting point.

CAMERON EDGELL
Department of Public Health Medicine
Salford Health Authority
Manchester

Short Reviews


This book describes almost 400 projects in health services research carried out in Denmark from 1989 to 1991. The projects are presented...
The Future of General Practice

R J Taylor

*J Epidemiol Community Health* 1992 46: 630-631
doi: 10.1136/jech.46.6.630-b

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