Epidemiol. Infect. (1992), **108**, 559–560
Printed in Great Britain

Book Reviews

Bradford Hill's Principles of Medical Statistics. Sir Austin Bradford Hill, I. D. Hill. Pp. 339. Edward Arnold, Hodder & Stoughton; 1991. £13.95.

It is refreshing to be able to recommend a book on statistics and know that others will agree. This work of Austin Bradford Hill has been around in 11 editions since 1937 and I have always heard it acclaimed by non-statisticians as illuminating, accessible and very helpful. Some other books on medical statistics have been of immense help to applied statisticians but, despite being aimed at the medically qualified and non-statistical specialists, have been found too 'difficult' by some.

In this new and expanded edition, the author and his son have updated the relevance of the examples they give and have included new sections of areas of analysis which have become topical. The authors strike a perfect balance in introducing the new concepts which make a valuable contribution to modern studies while not becoming slaves of fashion. For example there is a description of how confidence intervals can be informative and important in appropriate situations, while acknowledging that other studies are testing hypotheses and P-values still have a relevance.

The structure of the book gives the reasoning behind planning studies, handling data and performing analyses. Explanations are clear and examples abound. The mathematical details are omitted unless essential to the reasoning. Exercises which guide the reader through some of the calculations are confined to an Appendix. This book provides the basic principles which should be understood before you embark on the use of a statistical computer package, and which are all too often omitted from computer manuals. The topics covered are relevant to clinical medicine, epidemiology, chronic and communicable diseases. Examples are given of study designs which will be helpful to the aims, with appropriate statistical analyses. Reasons why an ideal study design may be impossible or unethical are discussed. There are also some illuminating examples of how the wrong study design or statistical approach can lead to erroneous conclusions, emphasizing the need for common sense and clear thinking. A small but carefully selected set of statistical tables is included in the Appendices.

Bradford Hill helped with the preparation of this revised edition right up to his death in April 1991 at the age of 93. I. D. Hill has brought to fruition a sound and modernized textbook which should make a valuable contribution to workers in the field of medical research for several more decades.

I would strongly recommend this book to statisticians working in medical or related fields as well as to non-statisticians. After all, this is the book which has succeeded in communicating the ideas and justifications of applied statistics. Communication can be the most important aspect of the applied statistician's work, but to some it is the most difficult.

Anyone with an affection for the traditional use of 'decent English' will enjoy reading the preface.

HILARY E. TILLETT
Public Health Laboratory
Service, Communicable Disease Surveillance Centre, London NW9 5EQ

Disease and Mortality in Sub-Saharan Africa. R. G. Feachem, D. T. Jamison, eds. Pp. 356. Oxford University Press, A World Bank Publication; 1991. US$ 74.95.

With high rates of population growth, increasing resistance of *Plasmodium falciparum* to chloroquine and other affordable drugs, rapid spread of HIV infection, and economic stagnation, the 1990s will be critical years for the future of health in Africa. As part of a World Bank review of the health sector in sub-Saharan Africa, Feachem and Jamison, with the assistance of 31 other authors, have provided a comprehensive overview of health, disease, and survival in sub-

Saharan Africa. The volume is divided into three sections: 1. Patterns of Mortality, 2. Specific Diseases and Conditions, and 3. Longitudinal Studies of Small Populations. Section 3 is especially useful as it pulls together lessons learned from six prospective population studies carried out during the 1960s and 1970s. It is unfortunate that the important ORSTOM data from Senegal were not included.

The volume provides a balanced appraisal of progress (decreases in mortality and improvements in delivery of Primary Health Care) and the health and country survival challenges of the 1990s. While providing an immensely useful resource and lists of references on health and disease in Africa, the volume resounds with a clarion call for improved collection and use of data to ensure the effective use of available methods. Development of new improved methods are identified as important health priorities for the 1990s.

The monograph immediately becomes the basic reference for health planning units in African countries (hopefully the monograph will also be published in French) and to international and bilateral collaborating partners in health development. Of greater importance, however, is the identification, as a health sector priority, of the need 'to increase the data collection and analysis... capacity of countries... to allow the formulation and implementation of more effective and efficient health sector policies'.

STANLEY O. FOSTER
Director of the Division of
Field Services, International Health
Program Office, Center for Disease Control, Atlanta, USA