than a cohesive whole. I was surprised at the general lack of any serious attempt to locate the authors' perspectives within the context of current debates in the field, particularly with respect to theory, as for example articulated in the pages of Health Promotion, Health Education Research, and recent books sponsored by the Research Unit in Health and Behavioural Change and WHO Europe. There is no mention, let alone discussion of, the Ottawa Charter. Finally the choice of focus seemed, at times, somewhat arbitary. There is a chapter on evaluation but none on priority setting or programme planning, for example. Devoting two chapters to attitudes and how to change them struck me as somewhat bizarre in a book on health promotion, particularly when the fundamental questions set by the authors—"Are attitudes predictive of behaviour? Will a change in attitudes necessarily result in a change in behaviour?"—are neither seriously addressed nor answered.

AMANDA AMOS

Atlas of Disease Distributions: Analytical Approaches to Epidemiological Data. A D Cliff, P Haggett. (Pp 300; £100·00.) Blackwell, 1988. ISBN 0–631–13149–3.

Disease mapping has a long tradition in epidemiology. Now with the availability of small area statistics and powerful computerised mapping packages there has been a resurgence of interest in cartographic techniques being applied to health related data. There is now immense competition between software companies jostling to provide interactive mapping packages and geographical information systems to health authorities and academics.

However, much of this mapping activity is reduced to a plotting of points, drawing of circles, or shading of areas on maps. It seems at times as if a powerful visual display can make people suspend their critical faculties. As the authors acknowledge, it is essential that apparent geographical patterns are not merely artefacts of the mapping process. If disease maps are to be a serious aid to the epidemiologist then they need to be handled with as much care and critical attention as any other source of evidence. This book is a contribution to this process.

Cliff and Haggett bring together in one text the major cartographic methods available for mapping medical data and devote most of the chapters to issues of analysis and statistical techniques available. In addition to the more familiar techniques for examining spatial variation in disease they also explore in some detail the analysis of time series and space-time interactions. All of these are discussed in relatively simple terms and in the context of a concrete mapping problem using real data. The more technical material is presented in useful appendices.

Data from several countries on a wide variety of diseases are used but with a heavy emphasis on infectious diseases. Since quite a few cancer atlases are already available with useful statistical appendices the omission of cancer data sets is not that serious. However it would be useful if the next edition dealt in more detail with the chronic diseases.

In a fast developing area like disease mapping any major text is going to miss important developments. One of the classic problems for disease mapping is the conflict between using the incidence rate (which produces maps dominated by areas with small populations) or the significance level (dominated by areas with larger populations but perhaps little public health importance). The book, which was finished in 1987, was prepared too late to discuss the important Bayesian techniques described by Clayton[1] which help solve this problem.

The book is clearly written and well presented. Each technique is demonstrated on a data set and this allows comparison of different approaches. It is well references and annotated. Not only will this book be useful for the epidemiologist and medical geographer but also those involved in health service planning and research.

TREVOR A SHELDON

1 Clayton D, Kaldor J. Empirical Bayes estimates of age-standardised relative risks for use in disease mapping. *Biometrics* 1987; **43**: 671–81.

Mind, Stress and Health. R Totman. (Pp 224; £14·95.) Souvenir Press, London, 1990. ISBN 0–285–65085–8.

The structure of this book obeys the British convention that it is churlish to be destructive without offering constructive criticism. It is also its main weakness. In the first part, Totman shoots down the balloons of beliefs that diet causes heart disease or cancer, diagnoses margarine madness, and scorns the bran panacea. It is disconcerting that an experimental psychologist can spot premature conclusions and unjustified inferences in works by professional epidemiologists and public health experts who congratulate themselves for providing "scientific" evidence. (The most ruthless dissection of the rotting diet-heart corpse was carried out by Russell Smith, also a psychologist, in his massive report *Diet, blood cholesterol, and coronary heart disease*, available at $85 from Vector Enterprises, 1930–14th St, Santa Monica, CA 90404.)

If diet and disease, or rather national diet and national health, is a non-starter, why do people get ill? As the title of the book hints, it is all due to stress. Critical powers, which the author flashed so brilliantly in the first part, die out in the second half like sparks on smouldering paper. The Type A personality walks in and dominates pages on heart disease. Studies which failed to confirm type A as a risk marker are ignored. Political and sociological aspects of this typology are not explored. Wasn't the type A personality invented to fit into the myth that coronary heart disease was a "managerial" disease? Why else was type A typically a middle aged white American male earning a higher than average salary? And who are the B types? Those who are not A, by definition? Zaki Strougo in the 1989/90 winter issue of *Projections: La santé au futur* calls the A type hypothesis a moral model, in which a heart attack is the price that the ambitious, aggressive, assertive egoist pays for striving to emulate the glorified model of overachievement in the capitalist society.

Totman makes a special plea for the relationship among psychological stress, personality, the brain, the immune system and disease. He marshals the best available evidence for the psychosomatic model and for the stress-disease hypothesis. The trouble with this explanation is that it explains too much, or, to put it negatively, it cannot be falsified. Immunological speculations, intended to serve as a solid scaffolding to the melting wax model, are straws swaying in the wind of evidence. The structure hangs together by the strength of conviction.

Having aired my "positivist" prejudices, I happily acknowledge that this is a well-written, stimulating book, informing us competently about what the psycho-somaticists are up to.

PETR SKRABANEK

Applied Mathematical Ecology. Eds S A Levin, T G Hallam, L J Gross. (Pp 491; £35.) Springer-Verlag, 1989. ISBN 3–540–19465–7.

As one sharing the interest of *JECH* readers in the influences of environmental forces on patterns of disease, I have wondered occasionally where points of intersection might lie with other groups of environmental scientists. This volume of articles, based upon presentations at the Second Autumn Course on Mathematical Ecology, provides some enlightenment with respect to one discipline. The description of ecosystems and the use of predictive modelling for environmental management appear to remain the central concerns of ecologists. However, Levin, in his brief introductory overview, indicates a debt to ". . . applied imperatives arising from . . . epidemiology . . ." as contributing to current advances in (ecological) mathematical theory; and half the book is given over to topics in epidemiology, with an additional smattering of demography. (Other areas included in the book are resource management, ecotoxicology and population biology. Additional presentations at the Course covered ecosystem processes, behavioural ecology, nuclear war and population genetics.) To absorb the book fully would require a reasonable grounding in mathematics. Nonetheless, the principles underlying most sections are accessible, although the book is not worth purchasing for this alone. Most of the reference lists are now dated by three to four years, which may limit the value of the work for the specialist.

The epidemiological niche which falls within the ambit of the mathematical ecologist is quite specific: modelling infectious diseases, including practical implications for prediction and control of epidemics. While the level of presentation is not basic, the section on epidemiology gives a good sense of fundamental issues and approaches to modelling infectious diseases in humans and other animals. Practical questions addressed include a brief and clear evaluation of the effectiveness of measles immunisation; a more extended informative description of the complexities of trying to describe influenza occurrence mathematically; a very good chapter assessing the relative merits of different strategies for vaccination against rubella; and two chapters on HIV and AIDS modelling, including an outstanding paper by May and Anderson (both chapters are current, with references to 1988/9).

In summary, this is an interesting book, giving a window on the practical themes of quantitative ecology and a good intermediate level feel for the state and utility of modelling infectious disease processes. Probably one for the library rather than the office bookshelf for most of us.

CHRIS BAIN

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