

Book reviews

Population Dynamics: Some Past and Emerging Issues. Edited by R. A. Powell, E. A. Mwageni & A. Ankomah. Pp. 94. (Institute of Population Studies, University of Exeter, 1996.)

The 1994 Cairo meeting of the International Conference on Population and Development devised a wide-ranging programme of action for infant and reproductive health and for family planning. This interesting volume of papers from the 1995 BSPS-sponsored Population Festival conference provides an up-to-date overview of recent research on various dimensions of this broad theme.

There is much concern for demographic transition theory. Robins uses data on changing child/women ratios in Western Kenya from the 1920s to 1960s to argue that falling mortality was not a necessary condition for rising fertility: rather, under colonialism, changes wrought by Christian evangelism, labour migration, and cash-cropping provided incentives for high fertility. This may have been the case in the past. However, following the theory of Frank and Bongaarts, Brown examines trends in the correlation between contraceptive prevalence rate (CPR) and total fertility rates (TFR). Where TFRs exceed those expected from the global regression of TFR on CPR, then 'excess fertility' may be inferred: declining excess fertility in Zimbabwe, Kenya, and Botswana since the late 1970s suggests convergence towards the global norm and fertility suppression or contraceptive efficacy which is consistent with the theory of transition.

Transition theory depends on the premise that declining early mortality will reduce incentives to high fertility, and several papers concentrate on proximate determinants of under-5 death rates. Santos uses logistic regression to identify the role of child's age and socioeconomic indices in risk of diarrhoeal and respiratory infections in NE Brazil, while breast-feeding showed no protective effect. However, determining morbidity—particularly diarrhoeal—status by recall alone weakens this claim. In an interesting paper on familial clustering of childhood death in Malawi, Madise shows that the impact of clustering on mortality risk is greatest where households are weak in terms of maternal education and socioeconomic status. A theoretical perspective from Root's paper lends weight to the importance of spatial scales in analysis of infectious disease transmission, which has been central since Snow's study of cholera around the Broad Street pump in the Soho of 1854; but neither Santos nor Madise considers this dimension of analysis with the requisite complexity.

Family planning has been speculated to reduce mortality through wider effects on reproductive behaviour. Mturi and Curtis examine Bongaarts' contrary argument that family planning does not reduce the infant mortality rate, as other changes intervene. These authors show persuasively that potential gains in infant survival in Tanzania from family planning programmes are about 1%. A theoretical maximum of 7.8% would follow complete elimination of all teenage births and under-24-month birth intervals. Family formation patterns appear favourable in Tanzania, and contrast with

those in Brazil where contraception has been used for stopping reproduction altogether rather than for spacing pregnancies. Thus, major changes in infant mortality should not necessarily be expected from family planning programmes. In this context, Mwageni's interesting but brief paper on attitudes of Tanzanian men to contraception highlights the oft-underplayed significance of male roles and opinions in family formation.

Contraceptive practice and failure are subjects of papers on China (Wang) and Egypt (Ragab *et al.*). About 7% of the general fertility rate of 15–49-year-old currently married Chinese women is attributable to contraceptive failure; and Wang applies hazards models to show that duration of use, age, number of living children, and prior contraceptive failure all influence this risk. However, no allowance was made for coital frequency in this analysis.

The social value of children and family tends often to be underplayed by policy-orientated demographers. Ragab, Ankomah, Ford and Powell refreshingly emphasise this factor in rural Egypt, and examine cultural and religious impediments to contraceptive use. One man is quoted as saying: 'I tried a condom once and I pray to God that I will not use it again. Before using it I had a very strong erection; when I used this "son of a dog" (the condom), I became impotent for more than one week'. The paper concludes that Islamic teaching on sexuality is more appropriate for such a culture than Western secular family planning programmes. However, it asserts rather than argues the case for this view, and says little on the nature, extent and relevance of existing Islamic proposals in this respect.

The social value of fertility is demonstrated effectively among the Islamic communities of Fulbe pastoralists and Bozo agro-fishermen of Mali. Marriott analyses how household structure and female dependency ratio affect women's workloads, so that when household structure provides more help to mothers, they spend more time caring for children and less working, contrary to what is sometimes claimed. Although the sample sizes are small, this careful study reinforces the value attributable to anthropological methods in the study of small-population demography.

It is a pity that the editors of this book appear not to have allowed contributors to cross-refer between chapters or to revise them after discussion. In summary, however, this is a thoughtful and thought provoking volume which can be recommended to all with an interest in this branch of population studies in developing countries.

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The Analysis of Longitudinal Data. By P. J. Dingle, K-Y. Liang & S. L. Zeger. Pp. 253. (Clarendon Press, Oxford, 1994.) £30.00.

This book describes strategies for analysing longitudinal data relevant to the biological and medical sciences. In these disciplines a relatively short longitudinal series of measurements, often taken at irregular intervals, is frequently available on a comparatively large number of individuals or cases. This differs from classical time series analysis, regularly applied in economics and some physical sciences, which typically involves long temporal series on a single case.

The volume is written for advanced undergraduate statistics majors, and first year statistics graduate students, but is intended to be accessible to applied researchers from other disciplines. The book is extremely well organised. The first chapter introduces the concepts of longitudinal analysis, and describes six studies taken from the biological and medical sciences, complete with listings of the raw data. These are used as examples throughout the book. The second and third chapters cover the design of longitudinal studies, and methods of exploratory longitudinal analysis respectively. The next three chapters consider longitudinal models for continuous response variables. The first of these chapters describes the general linear model for correlated errors from the 'regression' point of view. The second presents additional strategies and details concerning parametrically modelling the covariance structure of these errors. The third chapter considers ANOVA 'repeated measures' approaches in which the covariance structure is non-parametrically modelled. The next four chapters consider longitudinal models for categorical and count data. The first of these chapters introduces three basic approaches which differ with respect to (a) the source of the correlation within cases, and (b) the interpretation of the regression coefficients. The three following chapters take up each of these three approaches in turn, marginal, random effects and transitional. The next to last chapter considers the 'missing values' problem with respect to continuous response variables. The last chapter presents some statistical background for those who need it.

As an applied researcher from another discipline (i.e. non-statistician) I found this volume to be an excellent description of the available strategies and rationales of longitudinal data analysis in the biological and medical sciences. The book does (for me) precisely what the authors state is their intention in the preface. However, this is in my view also a weakness. The authors have explicitly chosen not to discuss software and the nuts and bolts of applications because the commercially available packages do not cover a full range of analysis techniques. The authors apparently depended upon the S system with their own home grown functions to carry out the analyses presented in the book. I (as a user of S) would have found it helpful to see the functions that the authors have developed for fitting these models. This would make the methods, as well as the concepts available to applied researchers such as myself, although it would not help those without knowledge of S. As it is I find myself interested in these models. I can think of applications in my own work. But after reading the book I still have little notion of how to carry them out. I find it curious that the authors have included the raw data for their examples, but no guidance concerning the practical methods necessary to reproduce their analyses.

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Gender, Health and Welfare. Edited by Anne Digby & John Stewart. Pp. 239. (Routledge, London, 1996.) £40.00.

In the social and political climate that currently prevails throughout the democracies of the post-industrial West, it seems almost fanciful to imagine an era when politicians and policy makers actually contemplated significant reforms without reference to the

public sector borrowing requirement. Yet, as this collection of nine articles reminds us, it was not very long ago that activists dreamed of implementing social programmes intended to address the problems of want, disease, ignorance, squalour and idleness, 'the five giants on the road of reconstruction', as Beveridge put it in 1942.

In their introduction to this collection, Digby & Stewart define their primary goal as a re-examination of the ways in which culturally constructed ideas about gender shaped the development of British welfare policies from the mid-19th to the mid-20th century. The editors and other contributors also argue for restoring women to the historical record as activists who were instrumental in shaping welfare programmes. Given the present representation of 'welfare mothers' as consumers of welfare, who are dependent on the largesse of an overly beneficent state, this volume offers a timely reminder that women, even poor women, have always been not just consumers but providers of welfare in a variety of capacities: as public sector employees, as unpaid carers and as participants in the voluntary sector.

In many instances of welfare, however, middle and upper class women were required to police the conduct of their poor or working class sisters, demonstrating that the category 'woman' is not unitary but is riddled with disparities. Although none of the contributors deals explicitly with race or ethnicity as other important social divisions in addition to class, which divide the category 'woman', Thane's chapter on the history of provision for the elderly reminds us that age is also an important marker and that the old are, overwhelmingly, women.

As this collection illustrates, welfare policies did not emerge as a single set of intentions but emanated gradually from a mixture of contradictory interests. Concern over improving the health and welfare of mothers and infants, for example, was also linked with eugenics and the perceived need to guarantee the future robustness of the British 'race'. The chapters by Digby on the development of programmes to address the health of poor mothers, Hoggart on birth control campaigns in the 1920s and Stewart on the Labour Party's concern over children's needs in the inter-war period all give some attention to the problematic aspects of this confluence of issues, though discussion of some of these implications might have been extended further.

As Hoggart also points out, the relationship between those women activists identified as 'maternalists', and feminism, appears fraught with contradictions, as many of the most active campaigners sought to improve the lot of women specifically as mothers, rather than challenging the basis of the inequalities which determined gender relations. This theme is also taken up by Lewis in an excellent and comprehensive conclusion to the volume, in which she summarises and compares a number of debates which attempt to address this apparent antagonism between feminism and maternalism as political stances. Indeed, if there is any intellectual rapprochement to be found between these two apparently colliding positions, it may lie in recognising just how politically rife the terrain was on which the very notion of modern motherhood was established. As several contributors illustrate, fights over the character of the mother did not lie outside 'real' politics but were the very stuff of which political campaigns and agendas were fashioned.

This collection is the result of a conference on 'Gender, Health and Welfare' and the quality of the contributions is slightly uneven. Two biographical chapters, which attempt to illustrate through example different ideas about the proper nature and role

of women as reformers, seem somewhat less theoretically refined and do not mesh as gracefully into the whole compared with the other chapters. Morrell offers an overly long chapter on the already well-documented life of housing activist Octavia Hill, and Deane provides a study of the much lesser known 19th century philanthropist, Louisa Twining.

For biosocial anthropologists, only one chapter makes a concrete link between social structures and empirical data concerning health. Johannson compares female mortality statistics in Meiji Japan and Victorian England, and argues persuasively that censuses which claim to demonstrate excess female mortality in these societies cannot be regarded as purely biological 'data' but must be seen in the context of cultural notions about the social value of men and women. This otherwise interesting chapter is marred by some rather awkward writing and overblown rhetoric, as, for example, when the author compares the physical hardships imposed by such socially defined roles and resultant government policies to 'slavery' (p. 57).

Overall, this collection is likely to be most useful for those interested in historical perspectives on the intersections between gender, policy and poverty. Those familiar with the literature on social welfare will already be aware of the considerable contributions of three of these authors in particular, Digby, Thane and Lewis, to a corpus of work engaged in a comprehensive exploration of most of the issues touched on in this volume. It would have been interesting for the editors to have included a section on how engendered welfare policies, which cast husbands and fathers in the role of primary breadwinners thereby stigmatising unemployed or underemployed males, have affected men's health. In the absence of any significant attention to men, the term 'gender' is in danger of becoming a gloss for 'women'.

Despite these minor criticisms, this volume has appeared at a strategic moment. By complicating our understanding of just how contradictory and contested the emergence of the 20th century welfare state was, the contributors allow us to look back at where we have come from without undue nostalgia. As Digby comments, in the mid-19th century, 'people looked backwards toward the old world that they wished to change, rather than conceptualising the kind of welfare system they wished to create' (p. 83). As we appear now to be poised on the brink of some brave, new, post-welfare era, it is crucial that over a century later, we do not repeat that same mistake.

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People, Environment, Disease and Death; a Medical Geography of Britain Throughout the Ages. By Melvyn Howe. Pp. 328. (University of Wales Press, Cardiff, 1997.) £50.00.

Melvyn Howe's book tackles the nature versus nurture question by reviewing patterns of disease in Britain from pre-Norman times to the present. The book is divided into two thematic sections: one that describes health hazards of the environment and another that discusses diseases prevalent in Britain through time.

The first section begins with a chapter on the 'people of Britain', which describes invasions, blood group distributions and disease associations. The following chapters describe physical, biological and sociocultural environments that are 'thought likely to

promote disease'. These include weather and climate, background radiation, quality of water supply, parasitic infection, density of housing, diet, pollution, noise, agricultural practices and industrialisation. Specific examples of disease–environment relationships are mostly from the last century.

The second section presents a historical/medical geography of Britain that begins with leprosy and ends with a discussion of premature deaths from all causes. The association of environmental conditions with diseases and the impact of these diseases on the population are presented. The last chapter of the book is a 'retrospect and prospect', which presents a bleak view of current British health. Howe argues that much morbidity and mortality in Britain is a result of environmental factors that could be controlled and are, in effect, 'self-imposed'.

Overall, this book is a comprehensive overview of disease in Britain, and an interesting read for both amateurs and professionals. As might be expected, there are numerous maps to illustrate points, as well as a glossary. However, more thorough referencing could have been used; it is not always possible to differentiate between well established facts and anecdotal evidence derived from the author's experience. Moreover, while the book provides convincing evidence of the interactions between certain environments and diseases, it remains unclear how genes and environment interact to influence disease risk in modern populations.

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