

Book reviews

Methodology and Epistemology of Multilevel Analysis: Approaches from Different Social Sciences. 2003. Edited by DANIEL COURGEAU. Dordrecht: Kluwer. Pp. ix+235. €99.00. ISBN: 1-4020-1475-9.

By now most population scientists are well acquainted with multilevel analysis, and many have applied multilevel models in the analysis of empirical data. Some researchers who have not thought of themselves as carrying out multilevel analysis recognize that they have applied equivalent models in the analysis of event-history data. Widely available statistical software, such as *MlwiN* (Rasbash et al. 2000), has eased the challenge of estimating rather complex multilevel models.

To the accumulating stock of textbooks and journal articles (didactic and empirical studies), Daniel Courgeau has contributed this volume that is a blend of history, philosophy, and statistics. It is hardly surprising that Courgeau would assemble a volume with just this blend, since he has long occupied a singular position in the field, with his enthusiasm both for rather abstract excursions into the epistemology that governs the population sciences and for technical innovations that extend the frontiers of empirical research. Accordingly, the volume has a dual purpose: first, to consider how multilevel models can provide a more complete and balanced portrait of empirical reality than alternative models; and, second, to describe how multilevel analysis is performed, with particular attention to some recent technical innovations. This makes for an unusual and stimulating volume—I am aware of no other collection of papers on multilevel analysis with this distinctive blend—but also results in a work that is somewhat disjointed, with most chapters consisting either of theoretical discourse or presentation of technical material but not both. It seems that there are few scholars with Courgeau's capacity to handle both kinds of material with intelligence and authority.

In fact Courgeau's own contributions constitute a substantial portion of this volume. There are eight chapters in total, and Courgeau is the sole author of three of them (including the Introduction and Conclusion) that together amount to roughly 90 of the 215 pages of text. In the Introduction and a chapter entitled 'From the Macro–Micro Opposi-

tion to Multilevel Analysis in Demography', Courgeau argues that multilevel models are the logical evolutionary progression beyond the simpler and inadequate models that demography employed in the past. To make this case, Courgeau submits a capsule review of the history of the field in which the dominant modes of analysis were, successively, the aggregate-period approach, cohort analysis, event-history analysis, and now multilevel analysis. His review provides an appropriate backdrop for the current hegemony of multilevel models, but it is questionable whether this history improves our understanding of multilevel analysis or will convert more researchers to their use.

Indeed, the case for multilevel analysis in this volume—in Courgeau's Introduction and chapter 'From the Macro–Micro Opposition...' and in a chapter by Ana V. Diez Rouz entitled 'Potentialities and Limitations of Multilevel Analysis in Public Health and Epidemiology'—for the most part will be entirely familiar to most readers. There is some value in having cogent contemporary statements of the case for multilevel models—for inclusion in course syllabi, for example. But the reader will not find in these statements a rationale for such models that differs much from the rationale laid down in the 1980s and 1990s.

In addition to Courgeau's three contributions, the volume contains two other chapters that are largely theoretical in content. Bernard Walliser ('Organizational Levels and Time Scales in Economics') discusses the treatment of time and level of aggregation in economics. His discussion of time is, if anything, more elaborate and revealing than his discussion of level of aggregation. While time can be regarded as a level in multilevel analysis, the parallels with spatial and social levels are far from exact. Walliser's discussion is compact and schematic, and I suspect that essays with this broad perspective on the epistemology of economics are rare. Robert Franck, who can be characterized as a philosopher of social science, devotes most of his chapter ('Causal Analysis, System Analysis, and Multilevel Analysis: Philosophy and Epistemology') to a discussion of the question of causality. His conclusion is that the constraints exercised by the social environment on behaviour—constraints which he acknowledges are often very powerful—are not

causal determinations. Bounds are set on human actions, but this is not equivalent to causal determination. It is a subtle argument, not easily compressed into a synopsis.

Two chapters of an entirely different sort focus on technical issues. Harvey Goldstein ('Multilevel Modelling of Educational Data') briefly introduces the multilevel statistical model and then discusses approaches for multilevel structures that are not neatly and cleanly hierarchical: cross-classified models and multiple membership models. These are important extensions of the flexibility of multilevel analysis in practice, and certainly all practitioners should be aware of these extensions, which are presented at more length in Goldstein's textbook (Goldstein 2003). Tranmer, Steel, and Fieldhouse ('Exploring Small Area Population Structures with Census Data') illustrate how full-fledged multilevel analysis can be conducted when the data for different levels of aggregation come from different sources. Obtaining all information from the same source is desirable but often not feasible, either because of the nature of the information sought (intrinsically demanding different data-collection mechanisms) or, as in this case (UK census data), because of guards on confidentiality that prevent linking individuals with areal information at low levels of aggregation. By no means is Tranmer et al.'s solution generalizable to all circumstances in which data cannot be readily linked across levels, but the chapter serves the purpose of inspiring the development of similarly inventive solutions.

I found the volume most stimulating where it identifies unresolved problems in multilevel analysis or points towards developments that would enhance the power of multilevel models, or does both. Here is a partial listing: the fundamental problem of how structures at higher levels of aggregation are formed and maintained by actions at lower levels of aggregation; the implications of social interaction (within or across the boundaries of higher-level units), i.e., non-independence of analytical units; how the boundaries of higher-level units are to be determined ('zoning effects'); the extent to which individual decision making consists of active strategizing about multilevel structures, indeed includes active efforts to shape those structures; greater reliance on Bayesian statistical models; and feasible data-collection strategies for measuring the multiple and changing groups to which individuals belong. One or more of these problems is identified in most of the chapters, without tight solutions being proposed. This will be the agenda for further research in multilevel analysis.

References

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Twenty-first Century India: Population, Economy, Human Development and the Environment. 2004. Edited by TIM DYSON, ROBERT CASSEN, and LEELA VISARIA. Oxford: Oxford University Press. Pp. xxii+414. £75.00. ISBN: 0-19-9243350-2.

'This may not be the first book on India's population and development. But it is the first to present them in an integrated manner' (p. vii). In fact, its approach worthily follows a distinguished tradition. In the 1960s, there was the Ford Foundation's *Second India Study*, of how India might handle its population doubling around 1968–2000. Later came Cassen's own *India: Population, Economy, Society* (Macmillan, 1978). More recently we have had Repetto's *'Second India' Revisited* (World Resources Institute, 1994), emphasizing environmental issues, as this study does.

The originality of this new book consists in its use of *disaggregated* (Statewise) projections of fertility, mortality, age-composition and sex-composition, and urbanization up to 2026 (and sometimes to 2051). These not only predict the balance of population—and its consequences—among States, but also alter the national picture, because key variables converge towards big States with extreme values. For example, 'a state-level approach to framing fertility assumptions results in a slower rate of fertility decline than when assumptions are developed for all-India . . . [I]t will be in the fertility trajectories of [the four fast-growing Northern states] that India's demographic future will largely be determined' (pp. 105–6). In the period 2021–26, India's projected crude birth rate of 16.1 is exceeded by that of only two States, Bihar (17.5) and Uttar Pradesh (19.4) (p. 98). The growing proportion of India's population in the poorer, less well-governed and higher-fertility states is a cause for concern.

The book illuminates the extent to which demographic futures, especially for age structure, shape the subject matter of the chapters: health transition; urban growth, education, employment and poverty,

and the economy; food prospects; and the environment. Sometimes this is done explicitly in the chapters. Sometimes (as with education) much of the linking is left to the reader. Only in a few disappointing chapters are the links with demography weak or absent. Big pending changes in age structures, largely pre-set by today's population dynamics, in turn largely determine for 2026 the size and structure of need (and to some extent demand) for food, water, preventive and curative health, and education, and of the supply of workers and savers to meet that need. Policy can respond—or fail to respond—to demographic destiny in the short to medium term, but can *change* it only in the medium to long term.

India has already enjoyed much of its demographic bonus. The dependency ratio (DR) fell from 0.92 in 1971 to 0.71 in 2001. India's rising proportion of workers and savers—alongside a 'green revolution' that expanded affordable workplaces, and provided more work worth doing and more investment worth saving for—explains some of the improvement in economic growth and poverty reduction. (Cross-national multiple regression suggests that about one-third of Asian growth and of its inter-country differences in the period 1962–90 can be explained by improving age structure (Bloom et al. 2000). The DR is projected to fall further, to 0.53 in 2026. It then starts to rise, reaching 0.64 by 2021 (pp. 92, 103, 170). The bonus 'presents an opportunity that has to be grasped . . . before a larger ageing population begins to reverse the benefits of fertility decline' (p. 9).

A not-obvious example of the impact of changes in age structure on policy needs is in education. The proportion of Indians of prime working age (15–60) who will be over age 40 in 2026—and thus already, in 2004, beyond the reach of *school* education—is projected to be 37 per cent; up from 29 per cent in 2001 (p. 92 for proportions aged 15–49, 50–59; the proportion aged 40–49 was provided by T. Dyson in a personal communication). The proportion of workers over 40 will rise much *more*, owing to (a) the falling proportion of 15–25 year olds at work (as a result of longer education), (b) a rising proportion of persons aged 60–65, and (c) (given better health) the rising share of them still at work. Therefore, for a given improvement in workforce education and quality 20–25 years hence, far greater emphasis on *adult* education is needed in 2004 than was needed in, say, 1984. In the discussions of health and (especially) nutrition, too, the ageing population suggests a need to shift policy towards adults—not, perhaps, by raising their share of health resources

(though that will become necessary for the rising numbers of illness-prone over-60s after about 2020), but by embedding the life cycle effects of nutrition in overall health priorities, including those for children.

Leela Visaria's careful review of mortality trends and the health transition (Chapter 3) says much about HIV/AIDS, understandably so since too much of India's Establishment is still in denial; but that is also true of an issue given scant attention here, the potential demographic devastation from India's fast-spreading, and still largely uncontrolled, cigarette addiction. It would also be useful to unpick the past and projected changes in life expectancy; proportional changes in e_0 have been much more dramatic than changes in e_{10} or even e_{60} , and differential Statewise attainments for each age group would be instructive.

Less predetermined than age-composition is composition by sex. Dyson's outstandingly clear, measured, and carefully periodized overviews of past, and projected, population trends (Chapters 2 and 3) encompass, in addition to standard fertility and mortality data, urbanization, age structure, and sex ratios. However, some later chapters should have made far more use of such demographic findings. This applies strongly to most of the environment chapters, and to some extent to the otherwise excellent chapters that project—given possible interactions with demographics—the performance and capacity of India's development process to help those who need help most: Chapter 10, 'The Economy', by Acharya, Cassen, and McNay; Chapter 8, 'Employment', by McNay, Unni, and Cassen; and Chapter 9, 'The Condition of the People', in which Cassen and McNay track progress against poverty; and Chapter 11, 'Food Demand and Supply', by Hanchate and Dyson.

On the economy, 'we have not been able to carry out a study of population effects on the Indian economy as a whole over time' (p. 205). I think more might have been done, for example, to tease out the implications of the tantalizing statement that 'the higher the [State] dependency ratio . . . the lower was its rate of economic growth' (p. 222). As for the economic outcome, India's growth of real gross domestic product (GDP) per person rose from 1.5 per cent per year (in fact closer to 0 per cent when measured at world purchasing power parity) in the period 1960–75 to 3.5 per cent in the period 1975–89 (this was probably due mainly to delayed effects of education, the Green Revolution, and high though not very cost-effective investment). Market-oriented reforms (after the recession of 1990–92) brought further growth acceleration to 1997, but growth

declined sharply in the late 1990s, the fall being partly hidden by the methods of accounting for public-sector pay increases in 1997 (pp. 209–10). In the late 1990s as in the late 1980s, rising consumption/income ratios and public-sector deficits brought a misleadingly healthy-looking flush of unsustainable growth. Unsurprisingly given this diagnosis, the authors are gloomy about post-2004 growth: the impact of market reforms is over, the deficit has been sustained but is not sustainable, export incentives have been undermined, and the investment share in GDP is unlikely to rise much. However, the ‘growth pessimism’ may be overdone—given the demographic bonus. The authors argue that, for India to gain from it, there must be ‘an end to policies which restrict labour demand and dilute skill formation’ (p. 218). However—while such desirable (and unlikely) reforms would remove a deadweight inefficiency, and allow a once-and-for-all rise in *income*—they need not affect extra *growth* from better workforce/dependant ratios.

The main channel from growth to poverty reduction is employment (Chapter 8): rising demand for labour, and thus rising real-wage rates, permits the able-bodied poor to get better returns from their main marketable asset (labour) and to use them to benefit their dependants. The falling responsiveness of poverty to growth in the 1990s is attributed to ‘job losses in the public sector [and] declining capacity of agriculture to absorb labour’ (p. 7). Indeed, daily status unemployment rose from 6 per cent in 1993–94 to 7.3 per cent in 1999–2000 (p. 158), despite unparalleled economic growth (p. 161). In contrast to earlier East Asian trajectories with poverty at a comparable incidence (25–35 per cent), India’s ‘agriculture has almost stopped absorbing labour’, as a result of slower agricultural growth and an *apparently* falling capacity of such growth to absorb labour (the elasticity of employment to agricultural growth, EEAG). Citing Chadha and Sahu, the authors see the fall in EEAG as genuine, and attribute it to smaller holdings and a changing crop-mix (p. 160). However, this is not plausible. Smaller holdings normally mean *higher* labour/capital ratios, *raising* employment per hectare. So does India’s changing crop-mix in the 1990s, from cereals and pulses to horticulture (and rather little to animal production: Chapter 11). Contrary to the claim (p. 183) that ‘good harvests do not now generate much additional employment directly’, India’s EEAG remains high; its ‘fall’ since 1990 (and indeed 1970) is mostly illusory. Agriculture *has* suffered labour-displacing trends, mainly from tractors, reaper–binders, and weedicides, but these

effects are offset by—and largely independent of—agricultural growth, which still offers big gains to employment. These gains (together with effects on food prices) largely explain Ravallion’s and other findings that agricultural growth remains a much stronger source of poverty reduction than does growth in other sectors in India, as elsewhere. Extra farm output will remain, in the period 2000–30 as in the 1990s, India’s main potential source of extra affordable workplaces, and hence of turning the rising worker/dependant ratio to the advantage of the poor.

Employment, as a link from future growth to poverty reduction, is even more important than is suggested by the projected fall in the ‘pure’ demographic DR, of dependants to persons of prime working age, from 0.71 in 2001 to 0.53 in 2026. That is because (on the authors’ central projections) there is also a rising ratio of workforce participants to persons aged 15–60, from 0.40 to 0.45, owing to rapid rises in State-specific participation of females as a consequence of fertility decline. Hence the ‘true’ economic DR—the ratio of dependants to workforce participants—is projected to fall from 1.77 to 1.18 in 2001–26, i.e., by 33 per cent, well above the 25 per cent fall in the ‘pure’ DR. This sharper rise in the ‘true’ ratio—if India is to achieve in the next 25 years substantial gains in poverty reduction from growth (as in East Asia in the period 1975–90) rather than modest gains (as in India in the 1990s)—further increases the importance of faster growth in the sectors, especially agriculture, where it most raises demand for this extra labour. (The authors ‘project demand for labour independently of its supply, and do not take account of the likely labour-market adjustment mechanisms’ (p. 172), but this affects only the *balance* of transmission from growth to extra labour use, as between wage rises and employment rises—not the *central role* of the transmission in cutting poverty.)

For the next 25 years, restoring agricultural growth to the levels of the 1970s, from the wilted levels of the 1990s, is even more central to employment, and hence poverty reduction in the face of the demographic bonus, because (as credibly projected in this book) growth in most other sectors will do even less for employment in the future than in the past. Even with economic growth optimistically projected at 6.5 per cent per year, workforce growth plus rising participation rates for females are projected to double daily status unemployment from 1999 to 2000, to a 14.5 per cent peak in 2021 (p. 176). Such trends, which are due in large part to continued slow agricultural growth, mechanization, and the

absence of land redistribution, would dramatically impede poverty reduction, turn the demographic bonus into a demographic curse, and perhaps threaten the stability of the polity.

Another channel from growth to poverty reduction is the course of food prices and reliable availability, as affected by food demand and supply; Chapter 11 explores the likely future here. The bottom line is that India can, indeed, produce the required 2026 level of demand (including provision for humans, animal feed, seed, and waste). There may be tacit assumptions here, though: that demand continues to depend on purchasing power rather than food needs; that increasingly scarce water continues to be subsidized (and voluntarily used) for low-value cereal crops; and that self-sufficiency is still deemed wise. Hanchate and Dyson project that ‘virtually all the rise in demand for cereals and pulses is likely to come from population growth’ (p. 241), i.e., it is not linked to expected income growth and elasticities. However, this is almost guaranteed by their assumption ‘that for the rural and urban populations of each State levels of per capita consumption will remain constant as in 1993–4’ (p. 237). Controversially, the authors argue (pp. 240–1) that Indian diets will impede a large income-induced shift to meat and dairy, which substantially raised demand for (feed) grain elsewhere in Asia. On the supply side, Statewise projections of cereal area and yield (cautiously) assume growth at only half the (anyway decelerating) 1985–98 rates. ‘In the areas of the greatest agricultural potential [“productivity” may be more accurate], especially Punjab, Haryana and Western Uttar Pradesh... the long-anticipated diversification of food production will actually happen’, but will be compatible with growing food supply owing to expanded double-cropping under irrigation. That is an optimistic view.

Chapter 9 extracts some consensus from the controversies about Indian poverty data. It concludes that the proportion below India’s (fixed) poverty line fluctuated trendlessly around 55 per cent in the period 1950–76; fell to about 36 per cent in 1989 (and 1993); but, despite much faster growth, fell only to 29 per cent in 1999–2000. Food and nutrition trends confirm slowing poverty decline; there is a good review of National Sample Survey data, for example, showing that the proportion of people reporting they got two square meals a day rose from 81 per cent in 1983–84 to 94 and 96 per cent in 1993–94 and 1999–2000, respectively (pp. 195–6). This section would need reference to anthropometric (National Institute of Nutrition)

data, and integration with demographic evidence, before clear nutritional conclusions could be drawn.

Poverty fell fastest where the rural sector grew most. ‘In 1970–93... expenditure on rural infrastructure, agricultural research and extension, education and irrigation... raised agricultural productivity and benefited the poor; and when it lessened, poverty reduction slowed’ (p. 183). Yet since ‘52% of the landless [and] half the 206m [in] scheduled tribes and castes are poor... growth alone is not the answer’. The authors cite S. Guhan’s call (1986) for ‘development policy... [to] be directed towards increasing entitlements to the rural poor from ownership and exchange [via] redistribution and transfer of assets;... improving returns from assets and enterprise; increasing real earnings for wage labour; and the provision of social consumption and the safety net’ (p. 201). Yet the authors also show ‘large and sometimes growing inequalities... and the threat that these will worsen’, with ‘clear discrimination by gender, by caste and tribe... Five large states [have well above average] poverty, ill-health, malnutrition and [under-education, with] faster population growth than the Indian average’ (p. 178). National economic characteristics tend to converge upon these large, high-fertility Northern States—a major finding, made possible by this book’s disaggregation of Statewise demographics. These States’ gender and land inequalities (which cut efficiency *and* boost fertility), together with their slowing farm growth have to be addressed. ‘India’s high growth in the 1990s to some extent bypassed the States with most poverty, and [there] produced less poverty reduction than it did elsewhere’; inter-State, intra-State, rural–urban, and intra-urban inequalities all grew (p. 191), albeit far less than in China.

Programmes for anti-poverty entitlements cut poverty, ‘but not at all efficiently in proportion to [cost]’ (p. 187), i.e., as compared with spending the resources for farm growth, primary health, or primary education. Lower fertility and smaller, more equal farms also speed up poverty reduction, via both faster growth and more equal income distribution, across Indian states (pp. 184–6).

The human gains from poverty reduction are often hidden. ‘The poorest fifth... had 2.5 times the infant mortality of the richest fifth [and 2.8 times higher child mortality] in 1992–3, and... 75% higher malnutrition... The total fertility of the poorest fifth was almost twice that of the richest fifth, and fertility aged 15–19 three times higher’ (p. 188). Yet Statewise projections show poverty reduction—while continuing, to 13 per cent in 2026—severely and

increasingly held back by a rising concentration of poverty in already poor, high-fertility States with 'lower economic growth, lower [response of poverty to it], and faster population growth' (p. 200).

Except for Anderson's Chapter 12 (on modelling and the energy environment), the environmental chapters are sadly disconnected from the earlier careful Statewise disaggregations, population analyses, and projections. In Vira and Vira's disappointing Chapter 13 on the urban environment, this applies even to the long discussion of 'possible futures'. Chapter 14 (by Vira, Iyer, and Cassen), on water, is much better. It rightly rejects 'priceless', naive Club-of-Rome type projections of supply–demand gaps—but does not attempt the serious quantitative modelling, with specified technical options and marginal costs, by which Chapter 12 builds in price responses for energy; nor does Chapter 14 clearly tell us what slower population growth, or slower urbanization, might do to the water position. Population analyses are also underplayed in Vira's Chapter 15 on common pool resources (CPRs). Jodha is rightly much cited, but Jodha's tables, though sometimes not his remarks, confirm that CPR decay is higher where there has been faster previous population growth (which affects both legitimate sharers of CPRs and intruders). The odd statistical links between village size and access to, and use of, CPR fuelwood and grazing (p. 338) tell us nothing about the effect on CPR outcomes of population size, density, dependency, and urbanization. Excellent data-sets, reported in this chapter, should be used to test for links. 'Pressures from competing land uses' (p. 335) are indeed crucial for the fate of CPRs, on which the poor often rely heavily; but how are such pressures related to population growth, structural shift, and State-specific factors?

Using a sophisticated energy model as an example but citing evidence from elsewhere also, Anderson concludes that 'addressing environmental problems will lead to an improvement, not a diminution, of India's economic prospects', and that 'technical progress, together with the [policies that induce it], is by far the most important factor in enabling countries to reconcile economic growth with environmental improvement' (pp. 254–5). The advances assumed by Anderson in solar and hydroelectric power (nuclear is ruled out on cost grounds) are something of a *deus ex machina*. Importantly, however, Anderson quantifies (pp. 271–5) the high returns to taking *early* action (on vehicle engines and fuels) to cut pollutant emissions, to anticipating climate change, and to cleaning up—and shows that

effective population policy permits such actions to be taken somewhat later, i.e., is a partial substitute for incurring early costs. 'The population effect on emissions from energy production and use is significant only if no environmental policies are put in place. Without [them], population growth . . . intensifies greatly the effects of pollution. [With them], the induced . . . pollution abatement would . . . virtually . . . eliminate the effects of population growth' (p. 274). The converse is also true: to achieve a given level of pollution reduction, lower fertility reduces and defers the required economic and political costs of policies to control emissions. Yet more spending on such policies is clearly justified: 'to allocate [the needed] 2–3 per cent of GDP . . . would shave 0.15–0.2 per cent per year off India's . . . economic growth', a reduction far outweighed by economic benefits (p. 283). A key issue remains the design of plausible implementing agencies with incentives, or controls, to use these vast sums well, or to induce private people and firms to do so.

This is an outstanding collection of papers. It is a big step towards integrating demographic findings and analyses into our understanding of the past and future of Indian well-being and policy options. One of its great strengths is that it builds on disaggregated regional demographic analyses. What is now needed is to integrate these too, and further disaggregations based on the Sample Registration Survey, more fully into the analysis of economy, welfare, and environment.

Reference

Bloom, D., P. Canning, and M. Maloney. 2000. Demographic change and economic growth in Asia, *Population and Development Review* 26(Suppl.): 257–290.

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Social Security Programs and Retirement Round the World: Micro-estimation. 2004. Edited by JONATHAN GRUBER and DAVID A. WISE. Chicago: University of Chicago Press (A National Bureau of Economic Research Conference Report). Pp. ix + 741. £69.50. ISBN: 0-226-31018-3.

In countries with a developed programme of public pensions, notably the richer countries of Europe, North America, Asia, and Australasia, a declining

ratio of workers to pensioners as a consequence of population ageing is seen as a major threat to the financial viability of the programmes, since they are financed largely from contributions and taxes levied on workers. But, argues this volume edited by Jon Gruber and David Wise, to blame the financial 'crisis' of public-pension programmes simply on ageing is to miss a major feature of them: that they contain built-in incentives to encourage individuals to retire early that exacerbate the ageing 'problem'.

The volume reports on work from an ongoing cross-country programme coordinated by the National Bureau of Economic Research that looks at retirement incentives across a range of 12 countries (here, 9 countries from Western Europe as well as Canada, Japan, and the USA). Retirement incentives are broadly defined as the shift in an individual's costs and benefits (in terms of accruals of pension rights and future earnings) as a result of postponing retirement, relative to retiring immediately. Deferring retirement, it is argued, increases the individual's lifetime earnings from work and may (or may not) increase the average pension that will ultimately be received. However, the discounted value of social-security wealth may or may not increase, since deferring retirement means that the individual has less time left in which to enjoy the retirement income.

The authors argued in an earlier volume, based on stylized computations, that in most of the 12 countries surveyed, there is effectively a 'tax' on continuing to work beyond the age of around 55, since most countries allow people to retire early through special provisions in the public-pension programme or through other public programmes such as disability insurance and unemployment insurance. The 'tax' implies that the public programme does not fully compensate individuals for the opportunity cost of deferring retirement. Moreover, the authors showed that there is a very strong positive relationship between the size of this implicit tax in each of the surveyed countries and the proportion of the labour force inactive in that country. Obviously, following this reasoning, if these 'taxes' on continued work for older workers could be reduced (by tightening early retirement provision and by giving people extra incentives to retire later), the impact of ageing on public-pension programmes would be alleviated, not exacerbated. Much the same argument has been made in similar work by staff at the OECD.

This volume takes that argument two steps further. First, the authors for each country study undertake econometric analyses using household

data in order to see how these 'taxes' on later retirement affect retirement behaviour in practice in that country. Second, they use the results from this exercise to simulate two policy 'experiments'—one in which it is assumed that all the provisions for retirement and early retirement do not start to operate until 3 years later (e.g., a state pension age for men of 68 instead of 65 for men in Britain), and a second in which uniform retirement 'rules' are imposed in all countries. The first experiment tests the effect of policy changes (note that in models of retirement behaviour, this will mean not simply that everyone retires 3 years later, since retirement is a *probabilistic* process) and the second assumes that retirement rates across countries would converge. To do all this is not to do something trivial: the authors of the country studies have to calculate the marginal retirement incentives (e.g., changes to social-security wealth from working one more year, or indeed several more years) for *each* household in their data-set, and some of the econometric techniques and issues are complex. In general, as summarized in the Introduction by the editors, the country studies generally confirm the importance of retirement incentives and the magnitude of the effects from changing those incentives.

Let me make some general comments on this important reference volume. First, the editors have gone for a common template—the studies are repetitive in the sense that they all do the same thing. This is deliberate, although the chapters contain country-specific background information, data, and results. The volume therefore does not present a variety of views on the 'problem' of retirement and public-pension programmes—this is not its object. Similarly it does not consider other issues—for example, the *demand* for older workers. The object is simply to see how far differences in retirement incentives in public-pension programmes alone can go in explaining both the effect of retirement incentives on household behaviour and cross-country differences.

From the point of view of the non-specialist reader, the introduction is terse and in some places unclear. Since there are several measures of 'retirement incentives', a number of tables summarizing results are far from transparent. For example, a reader interested in Table 2 would have to go to individual chapters to work out exactly what model had been estimated. Again, the discussions of model specification (e.g., the inclusion of age dummies and interaction terms) are important for *aficionados* but probably unclear to others. This is a pity since both editors (and several of the authors) are excellent at

explaining their techniques and results, as is evident from their other publications and their presentations at conferences.

There are other technical issues. First, retirement depends not just on implicit wealth in the form of public-pension rights but also on other forms of wealth. Since most of the studies do not have evidence on other forms of wealth (the UK study is one of the exceptions), this raises an omitted-variable problem—if cross-household differences in (omitted) non-public-pension wealth correlate with public-pension wealth, the results will be biased. Moreover, the studies handle the so-called problem of multiple routes into retirement (that is, where one might retire through ill-health, unemployment, or the pension programme) in a slightly peculiar way—namely, by weighting the incentives to retire through each route by the age-specific probabilities of retiring through it. This means, for example, that if one retires according to their model for the disability-insurance programme, the assigned benefits are a weighted average of those from all the retirement programmes. An alternative method would be to model alternative routes into retirement as competing risks, even though this would get multi-valued measures of the ‘taxes’ on retirement—the individuals would not choose to retire just at the maximum utility value from a single programme but at the maximum value of *any* programme. However, this poses a more complex analytical problem.

These *caveats* apart, this is an essential reference work when it comes to understanding how public-pension programmes and other welfare programmes give incentives to people to retire early. Scholars who wish to understand the impact of ageing on economic behaviour must make this volume one of their first points of reference.

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The History of Human Populations, Volume II. Migration, Urbanization and Structural Change. 2003. By P. M. G. HARRIS. Westport, CT, and London: Praeger. Pp. xxiv+553. £56.99. ISBN: 0-275-97191-0.

Sometimes it is a real challenge to assess a book in an objective and balanced way, and this is one of those cases. Though written in a proper academic style with the first person (‘I’ word) occurring only in the Preface, this huge tome is an intensely personal piece of work. It aims at nothing less than a rewriting of the history of migration and associated

population change by a former Temple University faculty member, now an independent scholar adjunct in History at Indiana University. This rewriting is of a very special kind, involving the testing of the hypothesis that migration streams evolve over time in the form of a particular growth trend (‘G-curve’) or close derivatives of it and have an impact on the changing population size and composition of the destination population in a similarly predictable fashion. Readers will either love this approach or hate it, or, more specifically, will either consider that it extends our knowledge considerably or feel that, despite the great mass of material drawn together and analysed, it is an irrelevance or even an unhelpful distraction.

It is the second volume of what is billed as a trilogy. In the first, Harris demonstrated how historically recorded human populations have increased or declined according to six closely related patterns. The most common, the G-curve of constantly proportionally decelerating growth at the 0.03 rate, is interpreted as capturing how populations usually expand to exploit some opportunity in their environment. He found this form of increase to be virtually universal in small and local populations for all eras and for recorded regional or national populations before the 1500s. Then, beginning in the sixteenth century, three alternative but closely related forms of demographic expansion began to appear: the F-slope at the 0.03 exponential rate discovered by Benjamin Franklin that applies when population increases without any resource constraints; the H-curve when the brake pressure is roughly half that in G; and the E-curve with an accelerating rather than decelerating pace of expansion. Finally, the D-curve is G stood on its head, with rapid then slowing decline, while the C-curve is E upside down, with progressively accelerating contraction. This second volume examines the migration component of population change to see how far recorded experience fits the G-curve or its alternatives and thus to assess the extent to which migration can be held accountable for the trends in overall population change, while the third volume anticipates doing the same for births and deaths.

A huge amount of material is drawn upon. The first main chapter alone covers a very wide spectrum of migration. It has a particular focus on the transcontinental flows of the nineteenth and early twentieth century, interregional flows in the USA from 1850, and settlement in early British America in the seventeenth and eighteenth centuries, but it also goes on to examine more briefly a host of other migration streams. Chapter 2 comprises a 90-page

case study of the Atlantic slave trade from 1450 to 1850. This is followed by two chapters on urbanization. The first of these looks at the growth of individual cities, including those in sixteenth–eighteenth century England and the Netherlands and later examples in Germany, and then at the collective urban experience of societies and regions including England and the Netherlands again, plus Sweden, Ireland, New Zealand, and the USA. The second, on international urban systems, examines how the interactions and competition between cities evolve as a consequence of these dynamic patterns. Notably, this involves a reworking of de Vries' data on 1500–1800 Europe in terms of the extent to which G-curves are embedded in the growth of cities of various sizes. The two remaining chapters probe how the composition of migration flows and demographic structures at their destinations altered through time. Chapter 5 looks at how African-American populations emerged progressively out of various local imports via the slave trade, while Chapter 6 shows how the same patterns of normalization and stabilization have characterized a whole range of other historical populations.

All this is done with the aid of 152 figures and 43 tables, the majority of which contain the actual observations and fitted curves or comprise lists of the results of this and other curve-fitting work. The results are remarkably consistent, as Harris makes very clear in a 20-page 'summary and implications' section at the end of the book. Virtually all the hundreds of migrations examined have followed the G'-curve, i.e., the first derivative of the G-curve, whereby the volume of migration builds up quickly to a peak and then falls off again but more gradually, giving a long tail to the right-hand end of the time-series graph. This applies not just to 'free migration' like the nineteenth-century movement across the North Atlantic, interregional migration in the USA, and urban population growth, but also to forced migration. Harris finds the latter particularly impressive and gives it a great deal of emphasis: 'The slave trade, every bit as much as freer migration that has been historically documented, was a river fed by local streams of G' shape and emptied out through a New World estuary of many G' channels' (p. 511). This pattern of migratory growth then translates directly into the G-shaped curve of population growth at the destination. There are exceptions, notably with respect to some aspects of urbanization, but these are few and far between and are

essentially deemed to prove the rule: the G' patterning is 'virtually universal' (p. 512).

In terms of the vast quantity of evidence brought together, the result is reminiscent of Colin Clark's great work *Population Growth and Land Use* (1967), but the final result strikes me as far less satisfying. The main conclusion that Harris draws is that economists have little to offer to the explanation of the patterning of migration flows, that rather the driver is demographic. The key statement is on page 512: 'To date, the flow and ebb of migration has been mostly addressed in the literature in economic terms. . . . But those who would like to think that economics governs how the numbers who relocate change through time must explain how migrations of so many types over and over again take just the one G' form. What dynamics of an economic sort could be so general across so many and such diverse historical settings as are covered in this study? . . . The necessary general economic proof for that line of interpretation appears unattainable. . . . Instead, the determinative mechanism was demographic.'

Well, yes, there is something to this, but such a sweeping statement is surely untenable. On the one hand, Harris rightly demonstrates, as have many before him, that in-migration (except that involving specific groups like the elderly) generates natural increase which then, all other things being equal, will become a proportionally more important element of population growth at the destination and reduce the need for migration-fed labour, while there is also weakening growth of the population at risk of leaving the source area. But this reliance on the demographic imperative is greatly misplaced in relation to explaining individual migration streams, let alone overall population change for destination areas. At one extreme, one could just as sensibly interpret the phenomenon merely as some form of natural law, as in the common saying 'What goes up must come back down.' Indeed, the literature on population is replete with mechanistic curve-fitting and hypothesis-based cycles. Yet there is only the briefest mention of the 1920s' work of Pearl and Reed and of Lotka—just the bald statement (p. 2) that 'the G function improves upon the "logistic" curve' that had been the main focus of their thinking—and no mention at all of Cowgill's work on population growth cycles two decades later. Indeed, even more seriously given the subject matter of this volume, there seems to be no awareness at all of kindred spirits in migration theory. For instance,

there is no allusion to Ravenstein's 'laws of migration' or the way in which these were subsequently developed and refined by Lee (1966), nor any mention of the 'mobility transition hypothesis' in which Zelinsky (1971) documents and models the rise and fall of international, frontierward and rural–urban migration through the transition of nations from pre-industrial to post-industrial.

At the other extreme would be the admission that it is not only the demographic mechanism that is at work but other drivers too. While not a demographer, historical or otherwise, I—like Harris—am able to recognize the importance of momentum in demographics. But equally, while not an economist, I am familiar with the concepts of cumulative causation and the law of marginal returns. In fact, it turns out that, despite his sweeping statement on page 512, Harris does appreciate the interplay of economic and demographic trends (pp. 520–7), but the G-shaped curves observed in the former are seen to arise because of the driving force of the latter. As a geographer, I have been trained to take a holistic approach to migration analysis, where social, cultural, political, institutional, and environmental explanations also need to be considered. From this perspective, I am surprised that Harris seems unaware of the substantial literature on the 'maturation' of migration streams, of which one of the best examples is the classic work of Böhning (1972) on guest workers in Western Europe, and in particular the idea of chain migration, which can surely not be reduced simply to an element of the demographic mechanism.

In sum, I tend to fall into the 'doubters' camp. While this book impresses as a collection of data on migration streams and their impacts on the structure of destination populations, by itself it does not seem to add much to our sum total of understanding about the factors that fashion the shape of these events in human population history. On the other hand, it may possibly serve as a means to such improvement. For instance, one outcome of curve-fitting is to draw attention to exceptional cases, which can then be investigated for signs of unusual conditions, and also to departures from a single time-series curve, with these residuals being examined to see whether the quality of the migration data faltered or something distinctive occurred in those years. More generally, Harris's one-track interpretation may prompt a challenge from other disciplines that may shed light on the regularities observed. If, for instance, there is now a well-established set of econometric rules that explain the logistic curve (and I am afraid I do not know whether or not this is

the case), then maybe the same can be achieved for the G-curve and its variants.

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The End of World Population Growth in the 21st Century: New Challenges for Human Capital Formation and Sustainable Development. 2004. Edited by WOLFGANG LUTZ, WARREN C. SANDERSON, and SERGEI SERBOV. London: Earthscan. Pp. x+341. £29.95 paperback. ISBN: 1-84407-099-9.

In a spate of books, chapters, and papers, Wolfgang Lutz, often with co-authors, has been the main contemporary demographer arguing the case for a new approach to population projections based on probabilistic forecasting. This need was stated in the Foreword by Nathan Keyfitz to a predecessor of this volume, *The Future of World Population: What Can We Assume Today?* Keyfitz wrote: 'the public regard it [projecting population change] as our most important task ... The best demographers do it, but none would stake their reputation on the agreement of their forecasts with the subsequent realization—in fact some of the most eminent demographers have been the authors of the widest departures' (Lutz 1996, p. xii). Keyfitz went on to applaud efforts to improve projections, but the question remains whether the task is possible. The fragility of forecasts is shown by the fact that Lutz 1996 was a revised edition of Lutz 1994, a revision necessitated by unforeseen changes in the intervening 2 years in reported population trends in Eastern Europe, China, and sub-Saharan Africa (which together account for a third of the world's population).

In this new book, Chapters 1, 2, and 10, all co-authored by Lutz, address the projections themselves, while Chapters 3–9, mostly written by others, draw out the interactions with education, urbanization, and the environment. All these chapters contain fascinating findings, but they probably would

not have been very different if they had used the United Nations' population projections as their framework.

This review will address the following issues: (1) How different from other projections are the Lutz set? (2) Is a probabilistic projection of human population growth possible? (3) How were the Lutz projections constructed? (4) What is revealed about likely future trends in human capital formation and sustainable development?

1. The comparison is between the Lutz projections and the 2002 United Nations (UN) projections (2003, 2004), which Lutz regards as the inferior but major competitor, and the World Bank (WB) (2002) projections. Employing the median, sole, or 50-per-cent projections (UN, WB, and Lutz, respectively), the forecast global population for 2050 (the only measure that policy makers are likely to heed) is 8.919 billion according to the UN, 8.806 billion (or 1.3 per cent lower) according to the WB, and 8.797 billion (or 1.4 per cent lower) according to Lutz. Those who remember the unexpected movements of the birth rate in the West in the 1930s and 1950s or in China in recent decades would hardly be likely to risk their money on one rather than another of these estimates. Lutz is prouder of the forecast 50-per-cent probability of world population peaking at 8.975 billion in 2070, in contrast to the UN median peak in 2075 of 9.2 billion or 2.5 per cent higher. Here again, it is anyone's guess. The probabilistic projections for 2050 provide a 10-per-cent figure of 7.347 billion or 0.8 per cent below the UN low projection and a 90-per-cent figure of 10.447 billion or 0.2 per cent below the UN high projection. Admittedly, these limits were not defined as being equivalent, although it might be noted that experts assembled to forecast populations for the period 2030–35 for the probabilistic projections were told to think in terms of 'high', 'central', and 'low' forecasts of fertility and mortality (Lutz et al. 1996, pp. 362–9). The further probabilistic projections through to 2100 are constructed on a different principle (discussed below), and yield more impressive differences with their 10-per-cent, 50-per-cent, and 90-per-cent forecasts being 1.5 per cent above, 7.2 per cent below, and 13.5 per cent below the UN's low, median, and high projections. The policy maker could conclude that after another century, Lutz and colleagues think it likely that global and national numbers will

be falling faster than the UN envisages. Whether that will be taken to be good or bad news by our descendants remains to be seen. Of course, both projections might be wrong because population trends may be altered by policy makers reacting to these very projections. Clearly, that is anticipated in the final chapter of the book being reviewed (pp. 315–34) written by Lutz, Sanderson, and O'Neill.

2. It is not completely clear to this reviewer what constitutes a probabilistic projection. It is clear in the physical world when we are talking of the way large numbers of ball bearings will distribute themselves on falling or how shotgun pellets will spread when fired. In this book the parallel is drawn with short-range weather forecasts (p. 21). I doubt if the comparison is warranted. Weather forecasters can draw on records of a great number of similar atmospheric pressure and cloud systems approaching their district. Human history, rarely repeating itself, has come our way once and is heading off into a dimly visible future. Unlike weather systems, the human population can produce projections of its apparent future size and then can react to these very projections, thus proving them wrong.
3. In this difficult situation, how were the Lutz projections constructed, and particularly how were probabilities assigned? Although the recent literature is copious, the answers to these central questions are hard to find.

The answer given in this book (pp. 20–7) is that for the period up to 2035 'experts' were found—'resource experts and meta-experts'. The former are regional experts covering between them fertility, mortality, and migration, while the latter are evaluators who can judge the evidence and translate it into operational projections (p. 23). From this process 2,000 population paths were projected. But how did the meta-experts decide on probabilities? We are then referred to Lutz et al. 1996, pp. 361–428, and specifically to Chapters 15 and 16. Their method 'is distinguished from other methods by its use of expert opinion both on the future courses of fertility, mortality, and migration, and on the extent of their uncertainty' (p. 398). Surely, the many UN Population Division's Workshops did something of this kind? The meta-experts, not the regional experts, decided the probabilities, 'for it is difficult for policy makers and others untrained in statistics to access the error bounds produced

by time-series analysis' (p. 400). In Chapter 16 we are told that we must go to Chapter 15 to find out 'how the opinions of the experts were translated into the high and low values that constituted 90 per cent confidence intervals for total fertility rate, life expectancy, and migration levels in the period 2030–35 and extended to 2100' (p. 403). But in Chapter 15 we are not told this. Was each separate decision made by a single super-expert, a regional one for the 50-per-cent estimate and a statistical one for the 10- and 90-per-cent probabilities? Or, and this is more likely, did a group of experts in a meeting or seminar or graduate class, or by mail, vote? Such methods have been used, for instance, in the Global Burden of Disease programme to assign disability weights. But in population matters the process does not mean what it does in physics, and it is difficult to understand what a policy maker would do with such probabilities, especially as large divergences from other projections are found only so far into the future that they are beyond bureaucratic planning or budgetary allocations.

The experts' determinations are of importance only to 2030–35. Thereafter, as fertility dips below replacement level, it is assumed to stabilize with a total fertility somewhere between 1.7 and 2.1 in 2080 as determined by projected population densities in 2030, and with the densest populations having the lowest fertility. This determinist conclusion rests on a preliminary analysis (Lutz et al. 1996, p. 373, fn. 4), which was finally published in 2002 (Lutz and Qiang 2002) and which appeared to show that countries with denser populations exhibit lower fertility. But Lutz and Qiang (2002, p. 1209) agreed that the relationship did not hold for Europe (and they could have added that, taken as separate regions, it did not hold for either North America or Australasia). Given that these fertility paths are for countries with below-replacement fertility, and that at present most are found in the regions that have to be excluded from the analysis, the guiding assumption for the extended projections can hardly be said to be convincing. It might also be noted that fertility and mortality after 2080 are assumed to be constant.

4. For nine African countries, the authors constructed a Population–Environment–Development–Agriculture (PEDA) interactions model, demonstrating 'the interactions between population, education, environment and food

security' (p. 198). In Chapter 6 the model suggests that Ethiopia is in danger of ever greater famine unless fertility falls decisively, education levels rise consistently, and new agricultural technologies are adopted. Doubtless, PEDA will show something similar for every African country, although not perhaps to the same extent as in famine-prone Ethiopia. Chapter 7 presents a pessimistic appraisal of the impact of AIDS on Botswana, with population numbers still falling steeply in mid-century. The author (Warren Sanderson) pins his faith on educational change, supported thinly by what he agrees are 'titbits' of evidence that the more educated are now more likely to change their sexual behaviour. This is contestable but it is almost certainly true that the more educated will more successfully employ antiretrovirals. Chapter 8 throws light on education and urbanization in China. The brave new world comes more sharply into focus on reading that 'China will soon have more working-age men and women with secondary or higher education than Europe and North America together' (p. 280). Chapter 9, on global warming, argues that population control will probably not be the main weapon against greenhouse gases but will be a supplementary one, ameliorating the impact of other measures on the way we live.

The endpoint of the whole investigation is Chapter 10, with its advocacy of 'population balance', which means not experiencing fertility so low that it makes the old-age burden insupportable or fertility so high that it endangers national well-being. My guess would have been that the 'welfare indicator' would reach a maximum at about replacement fertility, but the answer that emerges from a mass of equations in Figure 10.1 (p. 329) is a total fertility of around 1.3 for more educated populations and 1.9 for the less educated. Nevertheless, the differences are not great between total fertilities of 1.0 and 2.5, which are likely in the kind of world towards which we seem to be moving. It is noted (p. 330) that in the very long run, below-replacement fertility will tend towards extinction, and this will almost certainly provoke government policies for its avoidance. The implication is that at present, and perhaps throughout the twenty-first century, the low-fertility countries of Europe and elsewhere have little to fear.

The research programme centring on the International Institute for Applied Systems Analysis has been valuable in that it has made us think more deeply about the nature of population projections. It

has brought in researchers to examine the implications of the projections for education, urbanization, agriculture, the environment, and the atmosphere. Admittedly their conclusions would probably have been very similar if they had used the UN projections, but they may not have been challenged to do that. Perhaps the greatest strength of the IIASA/Lutz projections, although the book's authors would almost certainly disagree, is the close agreement they bear to the UN projections over the next 50 years and the reasonably close agreement over the full century. Both are, of course, inevitably and properly affected by recent and current population trends, more perhaps than future population growth will be. The early IIASA projections almost certainly helped to convince the UN Population Division that below-replacement level fertility had come to stay—although other voices had joined that chorus after the late 1970s—and that projections should look beyond 2050 and record the peaking of global population growth. The weak points of the projections are the inadequate identification of just how the probabilities were allocated. There is too much attribution to 'experts', too little discussion of what probabilities mean for a unique event like human population history, and insufficient advice about how policy makers might use them.

It is a thought-provoking book and applies the projections to national studies more than has previously been the case. I have referred to page numbers of the entire edited book because of difficulties encountered in referencing the authorship of every chapter in a book with ten chapters written by 25 authors, many counted more than once. To make amends: Wolfgang Lutz co-authored nine chapters, Warren Sanderson four, Sergei Scherbov and Brian O'Neill three each, and Anne Goujon one, presumably in the role of meta-experts, while Gui-Ying Cao, Landis MacKellar, Paulina Makinwa-Adebusoye, and Georges Reniers contributed one each, as specialists or regional experts.

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International Migration: Prospects and Policies in a Global Market. 2004. Edited by DOUGLAS S. MASSEY and J. EDWARD TAYLOR. Oxford: Oxford University Press (International Studies in Demography). Pp. x+394. £75.00. ISBN: 0-19-926900-9.

This collection of essays situates itself at the forefront of an emerging paradigm in texts about contemporary international population migration, involving the unselfconscious adoption of a 'transnational' perspective. The book is divided into four principal sections ('Prospects', 'Policies in Sending Nations', 'Policies in Receiving Nations', and 'Prospects and Policies Reconsidered') and 20 chapters, which together give approximately equal weighting to both the 'migrant sending' and 'migrant receiving' countries in the development of an explanatory framework for international mobility. This is an unusual undertaking; to date, both empirical and theoretical treatises have tended to privilege one or other perspective, even in cases where the authors explicitly engage with 'transnational theory'.

As the title suggests, the collection seeks to provide a wide-ranging exploration of contemporary issues around international migration on a global scale, and I think it does so successfully. The book's examples include case studies from around the world: Central and Eastern Europe (Okolski); the Americas (Zhou; Martin; Maguid; Jasso; Fix and Zimmermann; Bean and Spener); Western and Southern Europe (Withol de Wenden; Joly and Suhrke; Baldwin-Edwards); Asia (Hugo; Hugo and Stahl; Abella; Battistella); Africa (Adepoju); and Oceania (Bedford). Three additional chapters (two by Massey and Taylor and one by Zlotnik) provide a more general overview of salient issues).

The essays challenge traditional conceptions of immigration and emigration in different ways, and a number of broad recurring themes can be identified. Several essays directly confront the myth that migration is unidirectional and more or less permanent. The circularity and transnational nature of migratory flows is frequently stressed (e.g., in the

chapters by Hugo and Stahl, Okolski, and Bedford). In the context of Central and Eastern Europe, Okolski has termed this phenomenon 'incomplete migration' characterized by 'loose social status and flexible occupational position in their [migrants'] country of origin' (p. 44). In Oceania, Bedford argues, migration is characterized by remittance flows and structures of regional interdependency. He suggests that population mobility is better conceived in terms of 'multi-local "meta" societies encompassing migrant sources and destinations' (p. 232); temporary labour, tourists, and short-term visitors form a significant part of this regional migration system. The essays by Hugo and Stahl and Battistella are attentive to the importance of *return migration* as a fundamental feature of global population mobility. In several essays, the implications of non-permanent migrant status for migrant workers' rights are highlighted (e.g., the chapters by Hugo and Stahl, Abella, Battistella, Joly and Suhrke, and Baldwin-Edwards).

The transformation of contemporary migration practices is suggested in a number of other ways, such as through the significance of informal migration channels (e.g., the chapter by Bean and Spener) and the role of private organizations and institutions in enabling and directing migration (e.g., the chapters by Hugo and Stahl and Abella). In a particularly informative essay by Hugo and Stahl, the role of governments in Asia in actively facilitating and encouraging the export of labour is emphasized. Government strategies include the marketing of workers overseas.

Perhaps the most striking aspect of this collection, however, concerns its overt political objectives. The book has been developed as a response to what the editors perceive as irrational, emotive, and often extreme public reactions to contemporary migration in certain 'developed' countries; 'public discussions of immigrants and immigration policy,' they write, 'have been dominated by myths, misinformation, and, at times, outright lies that are grounded in ideology rather than scientific understanding' (p. 384). Providing a scholarly, social-scientific intervention in contemporary public debates about immigration is clearly one of the central goals underpinning this work. International migration is conceptualized as a '*natural consequence* of broader processes of social, political, and economic integration across international borders' (p. 385, emphasis added). Migrants behave rationally within this pre-existing system; the contradictions and inconsistencies characterizing contemporary international population migration arise from the unilateral actions

of 'developed' nation-states that close their borders to people at the same time as they open their borders to capital.

Two conclusions in particular stand out as representative of the general tenor of these essays. First, as suggested above, migrants respond to structural pressures outside their control and immigration is frequently initiated in response to the historical and ongoing actions of 'host' nation-states. An historical perspective is often lost in accounts of contemporary migration; here it is put to work to good effect, emphasizing, in particular, the continuation of colonial ties into the present. Second, and contrary to many academic and popular representations of international migration, most migrants do not intend to seek permanent settlement in the country of destination; indeed they frequently perceive migration as a way of solving problems at *home*. A transnational perspective is essential for understanding large-scale migration processes. The unilateral migration policies currently pursued by the majority of countries in the 'Western world', aimed at restricting international flows, fundamentally fail to recognize this point.

In sum, this is a thoughtfully edited collection of essays that manages, as many such collections do not, to be more than the sum of its parts. It is undoubtedly an innovative piece of work that contributes to and advances existing scholarship. The reader may not agree with the overtly political stance advanced within these pages, but in my view the attempt to intervene in the highly charged debates currently occurring on international migration is a commendable one.

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Population and Development of the Arab Gulf States: The Case of Bahrain, Oman and Kuwait. 2003. By NADEYA SAYED ALI MOHAMMED. Aldershot: Ashgate. Pp. xx+181. £49.95. ISBN: 0-7546-3220-2.

This book is a welcome addition to the literature on population and development. It elegantly links demography, human capital development, and employment opportunities and productivity for Gulf nationals. It fills an evident gap in our knowledge and understanding of population and development dynamics in Gulf countries.

The book systematically and convincingly builds up evidence against the 'laissez-faire' attitude of Gulf governments towards family planning, and argues that population growth should be managed

as part of development planning. The application of this argument in countries that rely on a large number of foreign workers and are not suffering from economic hardships requires an adequately deep understanding of the context and complexity of forces shaping the demography and economics of Gulf countries. It is an understanding that is very evident throughout the chapters of this book.

The book draws heavily on demographic techniques, reviewing theoretical conceptualizations and utilizing mathematical models. While it will definitely appeal to the specialists, non-specialists too will find it quite informative. They would probably skip certain sections but would still be able to follow the arguments and appreciate the thematic link that unifies the book.

The book is divided into three main sections. The first analyses the demographic components of the Gulf populations (migration, mortality, fertility). It starts with a very informative chapter on non-nationals, and traces the evolution of labour migrants from being simply the fillers of a demographic void to becoming a lucrative source of business for all involved with them. The chapter also identifies the social and political dynamics of the inadequate attempts by governments to influence migration despite the increases in unemployment among nationals.

The second section of the book focuses on the assessment of public services underpinning the formation of human capital and employment. The third links the first two parts by using alternative population projections to show the advantages of moderating population growth.

This is an informative and interesting book that would be useful to academics and their students as well as to those responsible for policy formulation.

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The Road to Independence: Leaving Home in Western and Eastern Societies, 16th–20th Centuries. 2004. Edited by FRANS VAN POPPEL, MICHEL ORIS, and JAMES LEE. Bern: Peter Lang. Pp. vi + 450. £42.00 paperback. ISBN: 3-906770-61-3.

In recent years, youth researchers have become more interested in the process of leaving home as a signifier of transitions to adulthood and independence. The work has stimulated greater awareness of the importance of contextualizing the process, since it is subject to considerable variation, particularly within Europe. This book, which is a useful addition

to the literature of the field, treats the experience of leaving home in historical context to unpack how patterns of leaving are mediated by economic, and social and cultural factors, as well as individual aspirations. The material presented draws on empirical analyses of leaving home in Europe (two from Britain, one from Belgium Ardennes, two from Italy, one from French Pyrenees, one from Sweden, one from the Netherlands, and one from France and Germany) with two case studies from Japan and one from the USA. All the contributions were first presented at a European Science Foundation conference in 1999.

The book is organized into three parts. The first two parts draw on quantitative analyses of census and registration data on young people leaving home, and distinguishes between leaving nuclear-family and extended-family households. The third part uses qualitative approaches, based primarily on biographic narratives, in order to describe motivations and behaviour that affect the patterns highlighted in the first two sections. The qualitative chapters generally cover a wider geographical area than the quantitative case studies. The methodological distinction between quantitative and qualitative is useful for organizing the material, though it is far more informative to read the later chapters as expanding on the behavioural patterns outlined in the case studies.

The quantitative case studies clearly illustrate the need for researchers to be opportunistic in their use of data to reconstruct patterns of leaving home in past times. All but two of the case studies use household registration lists, rather than census data, because the former give more detail about departures from the family home, though the scope to follow young people's trajectories depends on how the boundaries of the study area are defined. If leaving home involves migration out of the study area, this will also imply a departure from registration lists. However, this departure from the official returns may be of interest in itself. For example, Nagata's analysis uses the ways in which migrants were recorded as 'disappeared' in Japanese registration lists to infer the type of migration behaviour. The use of registration data facilitates the application of event-history analysis (now almost de rigeur in contemporary analyses of leaving home) and the technique is usefully applied in the case studies reported here, to determine not only the factors influencing the age at leaving home, but also the destination on leaving. Destination on leaving is used to distinguish between young people who leave to set up their own household from those who move

into established households for such purposes as domestic service. This distinction has implications not only for household formation, but as Bras and Kok's analysis of Dutch oral testimonies demonstrates, for relations between leavers and household of origin too. Adult children who leave to take up employment elsewhere have close financial ties to the parental home, though this association is mediated by distance, an observation also borne out in Pooley and Turnbull's analysis of British diaries and autobiographies.

While registration data are better suited to the analysis of leaving home, census data can be used also. Schürer's development of the calculation of the singulate mean age at leaving home (analogous to the SMAM) uses census data to compare mean ages at leaving across time and place. Though the method is not without its problems, it does at least free the researcher from being tied to case studies for which there are available data, given that census data are far more universally available for later periods.

All the case studies show that the influences on if, when, and how young people leave are complex, and emphasize the importance of household structure (especially presence and number of siblings), class position, and the individual's sex. The analysis of registration data is necessarily restricted to micro-studies, which tend to emphasize the importance of local conditions. Leaving home is, for the most part, treated as a household strategy. For example, Dribe's analysis of Swedish data describes how parents from different class backgrounds 'kept' their children at home depending on local economic conditions. The analyses clearly set out the need to show the importance of economic, social, and cultural factors.

Owing to the way the book is organized, the role of the prevailing family system comes across as having most influence on the patterns and timing of leaving home, though I would endorse Derosas's observation that concentrating on prevailing family systems is more useful for descriptive than for analytical purposes. In particular family systems apply to 'ideal types' that are often very different from lived experiences, and are always mediated by local socio-economic factors that lead to considerable local heterogeneity in patterns of household and family formation. The case studies presented

confirm an impression that family culture is not the same as family practices, since the latter will be mediated by other external factors, such as wealth and class, ethnicity, and local economic conditions.

While the overwhelming conclusion to be drawn from this book is that it is very important to describe the social context of leaving-home transitions, the emphasis on context is also the book's main weakness. A reader will learn a lot about the specific characteristics of each of the case studies, and about the problems of reconstructing leaving-home transitions from historical data, but will have less of an impression of more theoretically informed approaches to understanding the causality and outcomes of leaving home. Further, the way the material is presented, with detailed discussions of the case studies, methods, and empirical results, and, in most cases, relatively short conclusions, is rather disjointed. Neither the conclusions at the end of each chapter nor the introductory chapter, which does little more than summarize the main findings, do enough to pull the material together into a more coherent whole.

Nevertheless, working through this material would usefully inform readers' understanding of the ways individuals go about mediating cultural norms as well as economic and social circumstances (such as class position or ethnic background). As it is presented here the detailed material will be of most interest to researchers with a specific interest in leaving home, and particularly in the application of 'new' methods to historical data. The reader in search of new ways of thinking about the process of household formation may find the concentration on detailed case studies makes the book less rewarding.

Finally, the presentation of the book, which was produced by collaboration between European, North American, and Asian researchers, is of varying quality. A couple of the chapters would have benefited from more editing to improve the standard of English. There are numerous errors in the text and diagrams. For example, the graphs in Derosas's otherwise excellent chapter on Venice include a transcription error that implies that never-married sons and daughters are less likely than ever-married sons and daughters to live with parents.

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