BOOK REVIEWS

PATRICK V. KIRCH AND JEAN-LOUIS RALLU (EDS.)
The Growth and Collapse of Pacific Island Societies: Archaeological and Demographic Perspectives
Honolulu: University of Hawai'i Press, 2007. xvi + 390 p. $60.00; $35.00 (pbk.).

In this volume archaeologists, demographers, and biologists reconsider the evidence for change in the size of human populations living on Pacific islands. The resulting papers are fascinating for several reasons. They often develop models in which populations grew and then declined at remarkably high rates, illustrating characteristics of island biogeography. Many authors focus on quantifying the magnitude of post-contact declines in population size, often challenging the historical reconstructions of earlier researchers such as Norma McArthur (see, for example, McArthur 1967). The general conclusion is that pre-contact populations may have increased very rapidly in the late prehistoric period to reach levels far higher than some researchers had previously inferred, and that consequently post-contact decreases in population were substantial, perhaps greater than has sometimes been discussed.

Such conclusions involve the authors of each paper in complex considerations of how to measure population size. Circumstances superficially favor these inferences: the time span of human occupation being examined on many islands is short, often little more than a millennium in the eastern regions, and during the contact period there are historical records of population reductions. However, the historical documents shed no light on the prehistoric growth of populations and leave the initial contact size of many populations uncertain. Consequently arguments presented in the book are grounded in the use of indirect indexes of population size, often relative measurements that have been roughly calibrated to yield an absolute estimate of human numbers.

In the first chapter the editors, Patrick Kirch and Jean-Louis Rallu, summarize four categories of proxy measures: demographic inferences from human skeletons, studies of housing and settlement patterns, the number of radiocarbon dates as a signal for the number of people as proposed by John Rick in the 1980s, and estimates of carrying capacity by which calculated resource abundance is employed to establish the maximum number of people who could have been supported. Their explanation of these methods is thorough and critical, to the point that readers may lose confidence in the ability of archaeologists to develop reliable absolute estimates of ancient population sizes. And perhaps this is a reasonable understanding to instill in readers, since the robustness and precision of such measures are disputed. For instance, Kirch (chapters 4 and 6), Brenda Hamilton and Jennifer Kahn (chapter 8), and J. Stephen Athens (chapter 13) all rely on changes in the number of radiocarbon analyses to signal population change, but increasingly the reliability of this proxy is being questioned; radiocarbon samples are typically purposefully selected rather than representative, do not have a fixed relationship with the number of people, and are subject to destruction as time proceeds. That final process, the differential destruc-

tion of older charcoal samples, is particularly significant in the context of statements, repeated by several authors in the book, that Polynesian population growth was characterized by a sigmoidal curve in which initial unrestrained exponential increase gave way to relatively stable numbers near carrying capacity in the recent past. Destruction of earlier sites and samples could produce similar radiocarbon curves, thereby obscuring other patterns and rates of demographic change (e.g., Surovell and Brantingham 2007). Of course a sigmoid-like growth curve is plausible, and even using different methods archaeologists have arrived at this interpretation, but this example illustrates the difficulties of translating archaeological residues into reliable statements about population change. On the whole, the contributors to the book take an optimistic but sophisticated view of their capacity to reconstruct demography.

Despite the severe methodological difficulties encountered by those exploring long-term demographic change in the Pacific, the questions being posed by authors of this book are significant, and their conclusions are provocative. They challenge the reality of previous estimates of small pre-contact populations and offer compelling arguments for far higher population levels prior to European contacts. Furthermore, they tackle the task of estimating population sizes and the magnitude of reductions in population size in diverse geographical locations across the Pacific, including Hawai'i, the Marquesas, Tonga, Samoa, the Caroline Islands, Vanuatu, and New Caledonia. There is no extended discussion of other locations, such as New Zealand and Easter Island, that might offer intriguing population histories, but the many regions that are studied provide an impressive insight into the demographic and cultural processes that may have operated in those other island landscapes. Beyond the substantive models of Pacific demography, the book also offers a clear vision of the research problems confronting archaeologists, demographers, and natural scientists reconstructing prehistoric population change, and illustrates the creative and sophisticated ways in which those problems might be overcome. Anyone interested in the cultural histories of the Pacific islands or the process of inferring ancient population change will find this book an irresistible resource.

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BJORN LOMBORG
Cool It: The Skeptical Environmentalist's Guide to Global Warming
New York: Alfred A. Knopf, 2007. x + 253 p. $21.00.

In 2001 Bjorn Lomborg rocked the boat in environmental and scientific communities with his book, *The Skeptical Environmentalist*. Inspired by the writings of Julian Simon, he reviewed a range of issues related to the environment and well-being, from climate change and biodiversity to poverty and health, and concluded that much of the public discourse surrounding them was exaggerated, leading to skewed priorities in public policy. He took particular exception to what he viewed as hyperbole regarding the state of the environment. The book provoked a huge outpouring of responses; it was hailed in some quarters while generating a firestorm of criticism in others. (A review appeared in *PDR* 27, no. 4.) Environmentalists argued that their positions had been mischaracterized and that Lomborg, a Danish political scientist with a background in statistics, had bungled the scientific analysis. Many scientists joined the fray as well, writing reviews, editorials, and even a four-essay special section in *Scientific American* detailing what were seen as fundamental flaws in the arguments and in the reading of the science.

Now Lomborg is back with another book, *Cool It: The Skeptical Environmentalist's Guide to Global Warming*, this time focused on the issue of climate change. The basic argument is much the same, if narrower in scope: the risks of climate change are being exaggerated, and, rightly considered, should occupy a place far down any priority list of the world's problems. I would like to be able to report that Lomborg learned from his previous experience and has written a thoughtful and balanced contribution to the climate change debate. Unfortunately this is not the case. The flaws in the book, and there are many, have changed in detail but not in kind: selective use of the literature, mis-framing of the problem, and in some cases outright distortions of the source material, all presented in the tone of an authoritative but easily digestible review for the general public.

This is a shame, because Lomborg's two main arguments deserve a fuller hearing, and the sleight of hand he employs, while undercutting his case, is simply unnecessary. First, it is undoubtedly true that in some cases the climate change issue is being painted in the starkest of doomsday colors, at odds with the scientific literature. Lomborg is right to call people to task when they speak of impending catastrophe or of the very existence of civilization being at risk. You won't find support for such assertions in the reports of the Intergovernmental Panel on Climate Change (IPCC), the international scientific body that produces authoritative assessments of the science every five years or so. I, like many others working in this field, am increasingly uncomfortable with the growing use in public discourse of catastrophic language and of phrases like "tipping points" to describe possible changes in the climate system. They may be technically correct descriptions, in an academic sense, of possible nonlinear or irreversible changes, but they are too imprecise for the public conversation. Passing a tipping point in ice sheet disintegration does not mean that we will wake up the next day with the West Antarctic Ice Sheet gone and sea level rise quickly swallowing up whole cities, but it is bound to be interpreted that way.

Second, it is also worth putting climate change in the context of the set of larger issues the world faces, including not only other environmental issues but also those more directly related to development and well-being. Lomborg has already generated much criticism (well founded, in my view) of his previous efforts to do this by organizing a hand-picked set of experts to produce a "Copenhagen Consensus" on the world's most pressing problems (you can guess how climate change fared). Many do not agree with the basic premise of such an exercise, arguing that we are not playing a zero-sum game in which attention to one issue must come at the expense of another, and many more do not agree with his resulting prioritization. But at some level I think we do live in a world of tradeoffs, and it is worth considering the appropriateness of the current balance of effort, money, and political attention expended on the various problems we face. Issue advocates, and scientists who work on a specific issue, can sometimes lose sight of the fact that "their" issue is but one of a larger set that society must grapple with.

But *Cool It* is unlikely to lead to considered discussion of these issues. The response to the book, at least so far, has been relatively muted. One can easily speculate why. For one, the public attitude on climate change has shifted since Lomborg's first book, away from debating the science and toward what ought to be done about the issue. The awarding of the Nobel peace prize to the IPCC for its scientific contributions and to Al Gore for his campaign to spur action is indicative of the reduced public appetite for wrangling over the science. In addition, Lomborg's readership may well be wary after the broadside of criticism last time around.

The smoke and mirrors begin early in the book. For starters, the critique that the climate debate is plagued by hyperbole, while accurate in specific instances, is a sweeping generalization. For example, Lomborg makes no clear distinction between the way climate risks are represented in the scientific community, on the one hand, and in the media and advocacy arena, on the other. Yes, *Time* and *Newsweek* have run headlines not well-founded in the science, but no, that does not mean the science of climate change is exaggerated. Similarly, Al Gore, who comes in for special scrutiny, is rightly criticized for his dramatization of the effects of a 20-foot sea level rise flooding Miami and San Francisco Bay while neglecting to mention that this event may take centuries or millennia to occur. But we are not told that, in the view of many in the scientific community, Gore's presentation as a whole, while clearly an advocacy piece, was generally faithful to the science.

Second, Lomborg's analysis is not an accurate reflection of the essential nature of the climate change problem. His basic approach would be called, in the jargon, "deterministic cost–benefit analysis." He assesses a single mid-range scenario of future climate change, amounting to about a 2.6°C (4.7°F) increase in global average temperature by 2100, that he believes is the most likely outcome in the absence of emissions reductions. He judges the consequences of such a scenario to be of some concern, to be sure—he does not dismiss climate change as entirely unimportant—but relatively mild. He judges the costs of reducing emissions to avoid this outcome to be extremely high. And therefore he concludes that the problem is not worth doing much about at the moment, proposing instead that we invest in measures that will help us adapt to climate change and make some modest investments in developing

new energy technologies so that in the future we will have the know-how to reduce emissions.

This deterministic approach, which ignores the possibility of less likely but more extreme outcomes, is simply not suitable for a problem like climate change. It may be that something like his preferred 2.6°C scenario would come to pass if we do nothing, but it may be that there would be substantially more (or somewhat less) warming. The range of warming in the set of scenarios produced by the IPCC, for example, is 1.4–6°C, with no part of that range judged as more likely than any other. You can't just pick your favorite outcome and forget the rest. A warming of 6°C would almost certainly be a major challenge to society, with substantial risks of large-scale changes to regional climates, loss of unique ecosystems, and threats to water supplies and food production. Ignoring this possibility when considering current climate policy is like designing airline safety regulations based only on the most likely outcome—an uneventful flight—rather than on the small chance of a crash. Or, to put it in demographic terms, it is like designing a social security system based only on a medium population projection, without considering the chance that fertility will be lower, life expectancy higher, and therefore the age structure much older than in a best-guess case. Typically, and as has been shown for climate change specifically, including such risks in the analysis tends to justify more emissions reduction now as a hedge against unpleasant outcomes.

Third, when it gets down to the details, Lomborg's analysis of the science is simply not reliable. His version of the likely impacts and emissions reduction costs suffers from the kind of selective citation of the literature he rails against in the environmental community. As an example, he picks an estimate for the future damages associated with the emission of a ton of carbon today of about US$2, a low value that fits well with his conclusions, without indicating that: (1) the uncertainty range is two or three orders of magnitude (with $2 at the extreme low end); (2) such estimates depend crucially on a value judgment about how much one should care about damages experienced by future generations; and (3) the estimate excludes so-called non-market impacts such as species extinction and loss of life that are too difficult to value in dollar terms. Similarly, he makes much of studies indicating that the increase in lives lost to future heatwaves will be outweighed by the reduction in deaths from cold snaps. But he fails to mention that this conclusion is in fact prominently displayed in the IPCC's summary for policymakers. Nor does he let on that when one considers the full set of projected health effects, including anticipated increases in infectious disease and malnutrition, the net consequences are expected to be decidedly negative. Finally, even in what he considers his exhibit A—supposedly alarmist warnings about the future plight of polar bears—he distorts the evidence. The Arctic Climate Impact Assessment, a multi-year study coordinated by the governments of eight northern countries, clearly concludes that global warming, by causing a loss of summer sea ice in the Arctic, could threaten the survival of polar bears as a species. Lomborg twists a single sentence in the report to back up his assertion that polar bears are "likely" to adapt easily to a warmer world.

Population does not figure heavily in the book's arguments. The only demographic issue raised is one of spatial distribution, in particular increasing concen-

tration of population in coastal areas and flood-prone river basins. This trend is an important factor in understanding historical impacts and future consequences of sea level rise or coastal storms. Lomborg misses an opportunity here, as population offers an example of the kind of development-policy-*cum*-climate-policy that he advocates. For example, education and improved economic opportunities for women will have many development benefits, while also increasing the resilience of populations to environmental stresses, and, by tending to reduce fertility, also leading to lower emissions and less climate change in the long run.

The US version of the book is a slim volume aimed at a broad audience. For those interested in a more extended argument, a longer version published in Britain by Cyan and Marshall Cavendish makes essentially the same points. But should you read either one? Think of it this way: Bjorn Lomborg is like the Oliver Stone of climate change. He has written a book that sets out to support a certain point of view, and, unless you are an expert, you will never know which facts are correct and appropriately used and which are not. You might not be aware that large (and crucial) chunks of the story are skipped altogether. But like a Stone movie, it is a well-told tale and raises some questions that are worth thinking about. So if you are going to read only one book on climate, don't read this one. But if you are going to read ten, reading Lomborg may be worthwhile. You might also consider writing one yourself: the market niche for an even-handed inquiry into the relative importance of the climate change issue is still open.

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NANCY FOLBRE
Valuing Children: Rethinking the Economics of the Family
Cambridge, MA: Harvard University Press, 2008. viii + 235 p. $45.00.

Valuing Children represents the latest stage in an argument that Nancy Folbre has been making for many years. It follows her earlier book, *Who Pays for the Kids?* (1994), and her subsequent paper with Paula England, "Who should pay for the kids?" (England and Folbre 1999). The consistent argument across this series is that parents, particularly mothers, bear the lion's share of the costs of children but that employers, taxpayers, and children themselves gain the lion's share of the benefits. The contention is that this situation is fundamentally unfair and exploitative.

Folbre argues against legislation that would require greater recompense from the beneficiaries on a direct individual basis. She does not believe that children should be legally required to return benefits to their own parents on some kind of formal basis, nor does she take the more extreme position that employers should be required to provide returns to the parents of their workers. Such approaches rather obviously would involve inequities, would be administratively cumbersome, and could potentially sour relationships that are important to society. Many countries

and many states in the United States have legislation on the books that requires adult children to support their elderly parents if they are in need of support, but legislation of this type is rarely implemented. Such legislation is also based on the needs of the parents, not upon their rights to a fair return to their investment. Finally, parents need assistance in covering the costs of their children at the time that they are incurring the costs.

Instead, Folbre contends that the inequity to parents derives from the institutional arrangements of societies. For example, she argues that the inequities are greater in the United States than in many European countries and in the other English-speaking countries because of their differing institutional arrangements. Thus the remedy is radical institutional reform at the national level.

She begins the case for institutional reform in the United States by conceptualizing the costs of children and who pays for them while introducing her fundamental argument that children are a social good. The second chapter describes the direct financial costs of children and their measurement in the United States but goes on to argue that the time costs of children are more significant. The central new argument is that the time costs of childrearing should be valued at their substitution or replacement costs, that is, how much would have to be paid to purchase equivalent childrearing services in the market. Folbre argues that this is a more comprehensive measure of the time costs of children than the more conventional opportunity cost of lost wages.

The replacement cost is calculated simply as the hours of care multiplied by the cost of a care worker for these hours and is then applied to families according to the number of children they have. The result for the United States as a whole is a very large sum. A potential criticism of the method is that market costs of a child care worker usually relate to situations where the worker has responsibility for four or five children simultaneously (i.e., in a nursery or child care center), whereas this number of offspring is very unusual in the American family. This would mean that the cost per child that Folbre uses is an overestimate. Nevertheless, this fact would not change the argument that the total time cost to parents of raising children is very large.

Folbre is careful in providing solid philosophical arguments to justify her case that institutions should be changed in order to provide greater benefits to parents. She is also careful in laying out the difficulties of estimating the costs of childrearing and the data deficiencies. Finally, she is careful about the actual estimations of cost. While it is important to make these arguments as well as they can be made (I am a strong supporter of the need for institutional reform), in the end the case can never be more than a strong political assertion. It is society that must determine the proper balance of responsibility between the state and parents in relation to the costs of childrearing. The political balance shifts as children become scarcer, and for this reason we now see substantial policy action taking place in many countries that have had low fertility rates for many years. The prospect of a rapidly declining labor supply focuses the attention of policymakers on the social value of children.

Institutional reform must be country-specific, and Folbre's next book should address the specifics of institutional reform that would be appropriate for the United States. This is the missing final chapter: only when the specifics of reform are discussed can political progress be made. While Folbre describes what other countries do, the United States is not and never will be Sweden or Australia.

This book is an important contribution to the public debate that the United States needs to have in relation to the institutionalized inequities that surround having children. Folbre gives a good deal of attention to inequalities among children in the United States and how institutional arrangements contribute to them. These arguments are very well made but, at times, I felt some disjunction between the arguments as they relate to all children and those that relate to differences among children.

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HELGE BRUNBORG, EWA TABEAU, AND HENRIK URDAL (EDS.)
The Demography of Armed Conflict

Dordrecht, Netherlands: Springer, 2006. ix + 395 p. $79.95.

Can rapid population growth help cause civil violence, such as insurgency or revolution? How does war affect the population structure of societies? Is the science of demography a useful forensic tool in determining mortality arising from war crimes?

This edited volume addresses such questions. It brings together fifteen papers on various aspects of the relationship between demography and violent conflict. Most were originally presented at a seminar held in Oslo in 2003 and then published in 2005 in the *Journal of Peace Research* and the *European Journal of Population*. The papers, each making up a chapter in the book, address both directions of the bivariate causal relationship between demography and conflict: how changes in demographic factors might cause conflict and how conflict might cause changes in demographic factors. A number of chapters closely examine specific cases, including Bosnia and Herzegovina, Cambodia, Mozambique, Uganda, and Rwanda.

Although the book promises much, it lacks a binding conceptual framework; it covers some relatively marginal topics in depth, while barely addressing others; its chapters vary markedly in quality and do not effectively relate to one another; and, while some chapters are fascinating and important, others are either too narrow in focus, irrelevant to the book's topic, or simply muddled. Sadly, the result is far less than the sum of its parts.

Much of the book focuses on the demographic consequences of violent conflict. Three chapters deal with macroscopic considerations: the relationship between new weapon technologies, battle deaths, and the cost of warfare; the importance of making a temporal distinction between the immediate and the lingering effects of mass

violence on adult mortality; and the generally declining trend in the global total of battle deaths since World War II.

Three other chapters deal with the problem of counting the victims of violent conflict for the purpose of war-crimes prosecution. Two of these discuss the conflict in the former republic of Yugoslavia: one estimates the deaths in the massacre in Srebrenica (at least 7,475) and the other the total deaths in Bosnia and Herzegovina (102,622, including 55,261 civilians). Partly because of this focus on a common case, these three chapters form the most coherent part of the book.

A smaller part of the book deals with potential demographic causes of conflict, and this part is by far the least substantial. One chapter analyzes the relationship between economic inequality and major civil violence, including ethnic war, revolution, and genocide. Although perhaps interesting in itself, this contribution bears little relation to the topic of the book, except under the most expansive definition of "demography." Two other chapters make the case that demographic pressures can significantly contribute to conflict. One, a study of demography, migration, and conflict on Pacific islands, suggests that when emigration is not an option for island populations, competition for employment among youth heightens communal tensions and civil unrest. Another argues that territorial loss and refugee influxes raise the likelihood that a society will experience genocide, because these phenomena induce fierce socioeconomic competition among groups. This latter chapter, although included in the weakest portion of the volume, is among the most intriguing and informative.

A fourth chapter in this section is far more skeptical about the conflict-inducing potential of demographic pressure. Henrik Urdal of the International Peace Research Institute in Oslo uses a cross-national statistical analysis to argue against the hypothesis that population pressure and resulting environmental degradation (depleted soils, deforestation, and the like) can cause civil conflict. But Urdal's analysis does little more than reproduce the long-standing and well-known finding that the simple bivariate correlation between population pressure and violence is weak. It does not investigate the more complex multivariate and interactive hypotheses put forward by several researchers (including the author of this review) that include population pressure in a constellation of factors that can raise the probability of civil violence.

The editors of the volume acknowledge that the book's examination of the demographic causes of conflict is relatively weak. "We would have liked to include more articles [about] demographic causes but the study of this is still in its infancy." Here the editors are decidedly wrong: the study of this subject is not remotely in its infancy. Over the last several decades, scholars have produced a large body of important and fruitful research on how population stress can cause violence, including the Lateral Pressure theory of Nazli Choucri and Robert North in the 1970s, the deeply insightful work of Jack Goldstone in the 1980s and 1990s on the demographic precursors of revolution, a detailed statistical analysis by Population Action International in 2003 that reaches a conclusion diametrically opposite to that of Urdal, and Colin Kahl's 2006 book on how demographic and environmental stresses have been key drivers behind violence in the Philippines and Kenya. It is hard to believe that the editors are not familiar with this work. Assuming they are, it is inexcusable to suggest that it has not substantially furthered our understanding of the relationship between population pressure and violence.

Although some of this book's individual chapters are valuable, the reader should not expect a thoroughgoing treatment of the complex relationship between demography and violence.

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SHORT REVIEWS

by John Bongaarts, Susan Greenhalgh, Geoffrey McNicoll

ISABELLE ATTANÉ AND CHRISTOPHE Z. GUILMOTO (EDS.)
Watering the Neighbour's Garden: The Growing Demographic Female Deficit in Asia

Paris: Committee for International Cooperation in National Research in Demography, 2007. xii + 425 p. Download at «http://www.cicred.org/Eng/Publications/pdf/Book_singapore.pdf».

Despite the existence of data demonstrating growing sex-based imbalances across a wide swath of Asia, especially in India and China, there has been little systematic study, even less rigorous comparison, and virtually no serious theory-building on this subject. By presenting new work on Asian societies from the Caucasus to East Asia, this important interdisciplinary volume maps out this critical terrain and lays the groundwork for the more energetic development of this field of research and action. Ably edited by Attané, research fellow at the French National Institute of Demographic Studies (INED, Paris) and Guilmoto, senior fellow at the French Research Institute for Development (IRD, Paris) and executive director of the Center

for International Cooperation in National Research in Demography (CICRED), the book includes 17 papers presented at a 2005 international seminar in Singapore. In a highly informative introduction, the editors provide a critical history of the issue. It was only after 1990, when Amartya Sen published his work on the "missing women," that what had been deemed a demographic curiosity began to be viewed as "the most blatant symptom of the intensity of gender discrimination" in Asia (p. 2). International concern then began to grow. The editors report that upwards of 100 million women around the world are "missing."

The volume's 35 authors—primarily demographers, anthropologists, geographers, and economists—employ a range of quantitative and qualitative methods to chart the dimensions of this problem, its causes, and some of its consequences. The chapters are organized into four sections, titled Recent Trends in Sex Ratio in Asia, Differentials in Discriminatory Behaviour, Local Perspectives on Gender Bias, and Policy Response and Impact. With its many maps, tables, and charts documenting the disappearance of girls and women, the book makes for dismaying reading. Perhaps inevitably for so new a topic, its chapters raise more questions than they answer. What does this "rampant demographic masculinization," as the editors put it, mean for women—and men—in Asia (and beyond)? How will the gender gap alter political, economic, social, and cultural institutions in Asian societies? Are there any effective measures available to policymakers to arrest the trend? Data-packed though it is, this collection reveals how much remains to be done to answer these questions. Many of the needed data are missing or flawed. Central concepts—even basic ones such as "missing girls"—are problematic (the girls are not so much missing as nonexistent). Theory is a problem too. The editors bemoan a lack of unified theory, but to this reviewer what is most needed is theory that attends both to the proximate determinants of gender selection and to the larger political, social, and economic forces that encourage such practices. As the editors point out, ethical and political sensitivities continue to complicate and discourage work on the issue. For feminists, who have long held that women's autonomy and empowerment were progressive forces, discrimination against daughters is an especially vexed matter, for in many areas it is precisely the most "autonomous" and "empowered" women who are most energetically aborting female fetuses. Prenatal sex determination followed by sex-selective abortion is now the most important proximate cause of the rise in gender disparities. This collection reveals the scale of the problem and hints at the toll it exacts in female-deficit areas. One hopes that it will be widely read and discussed, and prove a stimulus to interdisciplinary work. Chapter-end references, no index.—S.G.

JOHN C. CALDWELL
Demographic Transition Theory
Dordrecht, Netherlands: Springer, 2006. vii + 418 p. €94.95.

This substantial volume assembles the author's main writings on demographic transition from a mere six-year period—1999 to 2005. Twelve of the 16 chapters reprint journal articles, a number of them jointly authored. Pat Caldwell and Bruce Caldwell

each appear multiple times as co-authors, Peter McDonald and Thomas Schindlmayr each once. (Pat Caldwell, John Caldwell's wife, longstanding fieldwork collaborator, and the joint author of numerous articles in the Caldwell canon—including ten in this journal—died in May of this year at the age of 86. Thomas Schindlmayr, John Caldwell's postdoctoral assistant and later his associate on several projects in the years covered by this volume, died in April at the age of 38.) Four of the articles are from *PDR*, another four from *Journal of Population Research*, and the others from *Population Studies*, *Journal of Family History*, and *Journal of Comparative Family Studies*. The topics represent only part of Caldwell's broad demographic interests: there is little here specifically on demographic change in Africa and South Asia, nothing on health transition and the AIDS epidemic. Instead, we have a collection that complements and advances the research program set out in his earlier collection of articles, *Theory of Fertility Decline* (1982)—a return to large-scale theorizing about the causes of mortality and fertility change. In addition, the time dimension is radically extended, reaching into the distant human past as well as the low-fertility present: chapters treat neolithic mortality, fertility control in ancient Rome, historical Asian infanticide, and the modern globalization of fertility behavior. The four newly published pieces are "The analytical approach," a broad introductory chapter; "Population intensification theory," revisiting Malthus and Boserup on productivity responses to rising rural densities; "Transmuting the industrial revolution into mortality decline," tracing how potential mortality improvements generated by a growing economy were impeded by slow acceptance of the germ theory; and "Back to the future: the great mortality crises," a bleak ending to the volume anticipating future global mortality crises that, contra Watkins–Menken in *PDR* 11(4), "would leave long-lasting, and possibly permanent, scars on the population."

Caldwell's theoretical work, while widely influential, has received its share of criticism. This has been particularly true of his initial account of fertility transition as a response to an institutionally grounded reversal of family-level intergenerational economic transfers that make children a burden rather than an asset (*PDR* 2(3/4)). His updated views on "wealth flows," reprinted here from *PDR* 31(4), take note of his critics—for example, by acknowledging a pre-transition regime of downward intergenerational transfers among hunter-gatherers—but concede little. On modern low fertility, his sweeping "search for commonalities"—co-authored with Schindlmayr—which appeared in *Population Studies* 57(3), is here necessarily shorn of the barrage of criticism it received in the subsequent issue of *Population Studies* and of the authors' vigorous rejoinder. In all, the volume attests again to Caldwell's impressive integration of his own field observations and the findings of a diverse and extensive secondary literature to yield a unified vision of population history and demographic transition. Index.—G.McN.

ROBERT CLARK, NAOHIRO OGAWA, AND ANDREW MASON (EDS.)
Population Aging, Intergenerational Transfers and the Macroeconomy

Cheltenham, UK: Edward Elgar, 2007. x + 307 p. $125.00.

Population aging is the frontier of economic demography, providing meaty issues of empirical substance, opportunities for display of analytical prowess, and arenas

for policy speculation. All are in evidence in this collection of papers, loosely linked together by an interest in the broad topics signaled in the title. An initial section presents three country studies of the economics of population aging, each with its own focus: productivity implications of an older workforce in Austria; effects of longevity on household wealth accumulation in the United States; and retirement ages and pensions in Japan. Productivity effects of aging, although generally negative, are found to vary with industry and are often reversed in larger firms; anticipated longevity leads to higher household savings; and accommodation of aging will entail later retirement and lessened public and private pension benefits. The analytical heart of the volume comprises two models of inter-age and intergenerational transfers over the course of demographic transition, stressing dependency-rate effects on transfers. (One of these models, by Mason and Ronald Lee, is illustrated by an extreme piece of demographic cantileverage: a 300-year simulation of the demographic transition of Niger.) Prosaic investigation resumes in discussions of age-structure effects on trade patterns and current account balances, financing problems of health care in Japan, and Australia's efforts to provide for future public pension liabilities.

A paper in the policy section of the collection, by David de la Croix and Axel Gosseries, offers a brave new vision of marketized demography. The authors elaborate the concept of "tradeable procreation licenses," first proposed by Kenneth Boulding in the 1960s. They envisage a market in childbearing permissions and exemptions, with the intricate cash transfers being managed by a "procreation agency." (A negative per-child price would apply where births were to be encouraged rather than discouraged.) Extended further to international migration, a tradeable emigration permit might be required of skilled workers seeking jobs abroad, the permit price rising with the expected return to emigration—an alternative they prefer to the "Bhagwati tax" that would remit some portion of migrants' income taxes to the country of origin. "Tradeable reception duties" could analogously manage access to developed countries' labor markets by unskilled migrants.

The volume derives from a 2006 conference at Nihon University, one of a series of meetings on macroeconomic aspects of demographic change organized under a collaborative project of five research institutes in Europe, the United States, and Japan. Another meeting in the series, held in Vienna, was the basis of the *PDR* Supplement volume *Population Aging, Human Capital Accumulation, and Productivity Growth* (2008). The editors are respectively with North Carolina State University, Nihon University, and University of Hawaii. Index.—G.McN.

NICHOLAS EBERSTADT AND HANS GROTH
Europe's Coming Demographic Challenge: Unlocking the Value of Health
Washington, DC: American Enterprise Institute for Public Policy Research, 2007. ix + 71 p. $15.00 (pbk.).

Europe is facing an unprecedented demographic future, its population projected to decline and to become much older as a result of very low birth rates and high and rising life expectancy. The economic consequences are likely to be substantial, and government deficits are set to grow as the cost of pensions and health care for retirees rises to unsustainable levels while the labor force contracts. This slim

volume summarizes these demographic and economic trends, comparing Europe and the United States. A review of the limited options available to address demographic trends concludes that pro-immigration and pronatalist policies are likely to be ineffective. Since demographic trends are largely given, solutions have to be found elsewhere. The central argument of this essay is that Europe has to exploit the one advantage it has over the United States: a long life expectancy and a healthy workforce. Europe's workers in their 60s are more physically robust and mentally agile than ever and than their American counterparts. Europe thus can improve its productivity and economic competitiveness by putting more of its healthy retirees to work. Unfortunately, Europe's workers prefer to retire earlier, in part in response to incentives to do so. The authors argue that this trend can and must be reversed to avoid economic decline. This message is not new, but the evidence and arguments in support of it are presented concisely and lucidly with numerous graphs aimed at non-specialists. —J.B.

STOCKHOLM COMMITTEE ON MORTALITY FORECASTING

Perspectives on Mortality Forecasting

Social Insurance Studies Nos. 1–4 (2003–2006). Stockholm: Swedish Social Insurance Agency. Order at «www.forsakringskassan.se»

Rapid population aging in the developed world has led to rising concern about the sustainability of pension and health care systems in developed countries. The future trend in longevity is one of the most important factors determining the projected massive growth in public expenditures on support for the elderly. Available methods for forecasting mortality have a poor past record, and, partly as result, the debate over future trends in life expectancy remains contentious. Pessimists believe that the deterioration of biological processes in the aging human body is inevitable and that further increases in longevity will be very small at best. In contrast, optimists note that best-practice life expectancy has increased at a very rapid pace (about 2.5 years per decade) since the middle of the nineteenth century and that this trend can and will continue.

Recognizing the need for further research on this topic, the Swedish National Social Security Board created the Stockholm Committee on Mortality Forecasting. The committee consists of six members from different disciplines whose task is to survey the state of the art and to advance knowledge and practice in forecasting mortality. Several workshops have produced the papers that are published in these four volumes. Each volume consists of several papers on a specific topic: "Current practice" (2003), "Probabilistic models" (2005), "The linear rise in life expectancy: History and prospects" (2006), and "Causes of death" (2006). Authors are members of the committee or invited experts. The general problem addressed in these studies is that simple extrapolation of mortality rates or life expectancy often produces implausible results in the long run. For example, linear extrapolation of past life expectancy trends for individual countries leads to huge differences between countries in the future. This is implausible because life expectancy levels of developed countries have actually converged over time. The same is true for extrapolation of male and female

life expectancy: in many countries male and female life expectancy have converged in recent years. Simple extrapolation of these trends leads to crossover, with male life expectancy exceeding that of females. Similar problems occur when extrapolating mortality rates by age or by cause of death. As a result, satisfactory long-range projections require the imposition of some constraints on mortality or life expectancy trends. The simplest solution, used widely in the past, is to rely on the analyst's judgment in choosing a target level or a rate of change for life expectancy or mortality at the end of the projection period. This approach is increasingly abandoned because of its poor past record. The papers in these volumes analyze regularities in historical time series of mortality measures, attempt to explain past trends, review strengths and weaknesses of existing projection approaches, and propose new approaches or solutions to shortcomings of existing methods. The result is a great deal of new insight and many new ideas, but no resolution and no general recommendations or conclusions. There is clearly still much work ahead. Overall this is essential reading for demographers, statisticians, and actuaries working on or interested in mortality projections. But the highly technical nature of many of the contributions makes them relatively inaccessible to a broader audience.—J.B.

JACQUES VÉRON, SOPHIE PENNEC, AND JACQUES LÉGARÉ (EDS.)
Ages, Generations and the Social Contract: The Demographic Challenges Facing the Welfare State
Dordrecht, Netherlands: Springer, 2007. xv + 390 p. $159.00.

Inter-age transfers make up a large part of a society's social fabric. In modern societies a substantial portion of them pass through the public sector, mainly to support the dependent elderly. Population aging puts an increasing burden on the economy's producers to finance these transfers—a trend that may have decades more to run even if partly offset by higher workforce participation and later retirement. In such circumstances the implicit social contract, under which the workers of each generation in effect provide for the elderly of the previous one, is likely to break down. There is an immediate task of finding acceptable fiscal measures to reconcile conflicting generational interests; more fundamentally the emerging problems challenge our conceptualization of society and the nature of social obligations. The essays collected here take up several aspects of this complex subject. Their main novelty, at least in comparison with most American writing on the subject, is their concern with issues of social solidarity. André Masson, in a synthesis of the modeling literature, identifies three contrasting views of intergenerational economic relations: first where the state is seen as representing the interests of its future as well as present members, if need be through a kind of imposed altruism; second where the state seeks intergenerational equity through redistributionist policies grounded in some form of generational accounting; and third where the state is merely the venue for political conflict between young and old. Private transfers also receive attention. A group of chapters (on Britain, France, the Netherlands, Spain, and Canada) show the current strength of reciprocal intergenerational ties among kin but their fragility under continued low

fertility, frequent marital dissolution, and rising longevity. Other chapters discuss the transition to retirement and the factors underlying differences in retirement ages, the balance between family and work, and international comparisons of the scale of public pensions. The book is in large part a translation of *Age, générations et contrat social* (Paris: INED, 2004). Several chapters have been added, one of them, as opener, Ronald Lee's "Demographic change, welfare, and intergenerational transfers: A global overview," from *Genus* 59 (2003).—G.McN.