



Book Review

The Health of Populations: General Theories and Particular Realities. First Edition

By Stephen J. Kunitz

ISBN-10 0195308077, ISBN-13 978-0195308075, Oxford University Press, New York, New York (Telephone: 800-445-9714, Fax: 919-677-1303, E-mail: custserv.us@oup.com, World Wide Web: <http://www.oup.com/us/>), 2006, 304 pp., \$49.95

Among major works on population health, this one by Stephen Kunitz belongs in the same general category as those by McKeown (1), Riley (2), Wilkinson (3), Cairns (4), and Easterlin (5). Some of those authors, such as McKeown and Wilkinson, would fit Isaiah Berlin's definition of hedgehogs (6). Kunitz declares himself to be a fox.

In the image of the intellectual world developed by Berlin in *The Hedgehog and the Fox* (6), hedgehogs are those who know one big and important thing, while foxes are those who know many things, each one perhaps of not that much importance in itself. In *The Health of Populations*, Kunitz substantiates his claim to foxhood by examining many things; he believes "big theories" on population health always have shortcomings and exceptions. He draws on sources from a wide variety of fields, including sociology, epidemiology, psychology, public affairs, economics, anthropology, and international relations. Kunitz is a social scientist in the best sense of the term: He does not hesitate to cross disciplinary borders when the theories or evidence about an issue under discussion come from diverse fields.

The book is structured in two parts including seven chapters and five appendices. The first part of the book is titled "Epistemology, Ideology, and Epidemiology" and contains two chapters, "Two Revolutions" and "Counterrevolution." The "revolutions" Kunitz alludes to are the industrial revolution and the epistemologic revolution, in which the germ theory of disease started a new way of thinking about causal processes. The "counterrevolution" was the one initiated by authors believing that the germ theory and similar theories applied to noninfectious diseases are oversimplified schemes that ignore the importance of host resistance and host susceptibility.

The second part of the book concerns the social determinants of mortality and morbidity, with chapters on standards of living, inequality, community, and globalization. The final chapter, titled "Masterful Images," uses AIDS as an example of how inherited ideas embodied in political ideologies help to shape our explanations about health and disease. The book concludes with five brief appendices and a useful index of subjects and authors.

Throughout the book, Kunitz's discussions are precise and nuanced. He generally presents major theories in the words of their creators, citing passages from their work; then he discusses whether and how the evidence produced favors a theory or its competitors. The chapters on inequality and community (chapters 4 and 5) are perhaps the best.

Kunitz cautions the reader that studies of social inequalities in health "are often written as if behavior and culture are simply what happens when people don't have enough money or are not well enough educated to make rational choices regarding their health. They miss the ways in which communities at all income, educational, and occupational levels shape behavior, assuming instead that choices are an individual matter constrained (or made possible) only by income and education (or their absence)" (p. 89). Presenting in a quite detailed way the fuzzy concept of social capital (perhaps tongue-in-cheek, Kunitz refers to the supporters of this theoretical concept as "social capitalists"), Kunitz strongly suggests that many theories on "social capital" do not fit well with the empirical evidence. He devotes several pages to a discussion of Putnam's ideas, including Putnam's recommendation that, if you are a smoker and want to improve your health, you should either quit smoking or join some kind of club or association. Any of these two will provide approximately equal rewards in terms of health, because joining a group will increase your social capital and raise your life expectancy by more or less the same amount as quitting smoking. Kunitz is particularly blunt in his rejection of this recommendation, which, in his view, "is clever rhetoric but bad—indeed irresponsible—advice" (p. 125).

The sour controversies that have taken place in recent years on the potential role of inequality in diminishing population health are cleverly summarized by Kunitz, though it is likely that there will be disagreement on the fairness with which Kunitz presents them. In this context, Kunitz also makes an interesting case for the potential contribution of spatial autocorrelation as a factor inflating support for the hypothesis that inequality has a harmful influence on health. (Spatial autocorrelation as a statistical issue is nicely discussed by L. J. Layne in appendix 4, the only part of the book not authored by Kunitz.) Less compelling is Kunitz's discussion of exceptions to the gradient of health by social class that has often been found in both old and modern societies. At any rate, in discussing that gradient, Kunitz also presents an impressive array of studies, and his comments and reflections on them are always interesting and thought-provoking.

The fact that Kunitz is a physician with a sociologic background is revealed by the attention he devotes to theories that we might consider rather sociologic or anthropologic. In both quality and extent, they are presented better than, say, economic theories. For instance, he bluntly asserts that

the faster income increases, the more rapidly mortality declines (p. 151). In adopting this economic dogma, Kunitz ignores not only old findings and controversies (7–9) but also recent contributions on the relation between macroeconomic change and health (10–16). He mentions Samuel Preston's seminal contributions showing that only a small part of the increase in life expectancy during past decades can be attributed to growth of income per capita (17); however, Kunitz's insistence on making a direct connection between mortality decline and income growth suggests he is unaware that, for instance, in India and China the declines in mortality rates were small during recent decades, which were decades of strong economic growth, as compared with large drops in mortality during the slow-growth decades before economic liberalization (18).

Probably the weakest chapter in the book is the one on globalization. Kunitz explains that structural adjustment policies were developed and implemented under pressure from the International Monetary Fund and the World Bank and were strongly influenced by the situation in the 1970s and 1980s, in which the flow of petrodollars created the need for massive credits, leading first to massive loans to developing countries and then to policy prescriptions to force the repayment of the foreign debt (p. 142). Though there is no doubt that such factors were a driving force behind globalization, Kunitz does not take into account the fact that in the inception of neoliberal policies a major role was played by the economic stagflation and the crisis of Keynesian economics that began in the early 1970s. The apotheosis of structural adjustment policies embodied in the so-called Washington consensus in the late 1980s and early 1990s indeed coincided and followed the demise of the Soviet Union and the Soviet bloc at large, whose centrally planned economies were converted into market economies in a brush stroke.

In several instances, Kunitz refers to the upheavals in mortality that have occurred in the nations that formerly were part of Yugoslavia and the old Soviet Union in the early 1990s. However, he does not present a complete picture of the health consequences of the transition to a market economy in all of the nations that had been part of the Soviet bloc—when, in the early 1990s, the “shock therapy” prescribed by Jeremy Sacks (19) was applied, prices were liberalized and skyrocketed, social services were privatized or discontinued, and unemployment and poverty exploded in these nations. An integrated picture of the deleterious short-term health consequences of the transition to market economies in the old Soviet bloc would have been a major contribution to the book. The upturn in mortality that afflicted Eastern Europe and the old Soviet territories in the 1990s is without doubt one of the major health phenomena of recent decades, and the integration of these countries and China into the world market is obviously a major aspect of globalization.

The chapter on globalization also includes a classification of egalitarian and anti-egalitarian forces into nationalist and anti-nationalist fields (p. 138) that this reviewer did not find particularly illuminating. Much more interesting are Kunitz's comments and observations on the Alma-Ata conference (held in Kazakhstan in 1978), the World Health Organiza-

tion slogan “Health For All,” and the change in perspectives on good health, seen in recent years “not primarily as a human right, but as one of the means for promoting economic development” (p. 149). However, it is in the last pages of the chapter on globalization that the fox-like explorations of the author take him to a mine field—time series analysis—in which he unfortunately receives some shrapnel. This happens when Kunitz reports correlations between variables in time series with trends. These correlations—for instance, the ones between life expectancy and either gross domestic product (GDP) per capita or openness of the national economy (table 6.5)—tell us nothing about the causal relations between the variables. Since in recent decades both GDP per capita and openness have been growing in Turkey and India, without major departures from the trend (as shown in figure 6.2), the correlations between these variables in these two countries are very high: 0.88 and 0.94, respectively. In contrast, the correlation between openness and GDP per capita for South Korea is almost null, just 0.10, because GDP per capita has a clear rising trend while openness first declines, then increases. All of these correlations and their associated *p* values, reported to the fourth decimal figure in the book, are just statistical noise that provides no evidence of any causal relation—or lack thereof—between the variables involved. The same mistake vitiates the correlations reported by Kunitz between the average height of a cohort and its life expectancy at birth or age 1 year (pp. 187–189).

Since Thomas McKeown is the paradigmatic hedgehog in the fields of public health and demography, it is not surprising that fox Kunitz takes aim at McKeown's ideas. In appendix 2, “The Conundrum of Tuberculosis,” Kunitz displays an impressive depth of clinical, epidemiologic, and demographic knowledge about this infection. Nevertheless, this reviewer was not totally convinced of the conclusion reached by Kunitz that, in the decline of tuberculosis, it “does not appear that improved nutrition played the major role McKeown had assigned to it” (p. 197).

McKeown was also the major debunker of the myth—quite pervasive in the first half of the 20th century—that medicine and institutionalized health care had been major factors, if not the basic determinants, of the generalized declines in mortality observed in many countries starting in the second half of the 19th century. McKeown's ideas on the role of medicine in the demographic transition were seminal in the work of authors who have seriously questioned the importance of health care for population health in recent decades. Kunitz immerses himself in this issue (chapter 3) with an interesting discussion of the impact of differential health-care access on the White-Black differentials in health status in the United States. From the point of view of the present reviewer—skeptical as to the role of medicine in changing population health indicators—Kunitz presents cogent and convincing evidence that inadequate health care is detrimental to the health indicators of African Americans. Though Kunitz makes a strong case for his view, perhaps he would be even more convincing if he had referred to other potential factors contributing to these differentials. Differences among Whites and non-Whites in harmful exposures (at workplaces, in neighborhoods, in homes, in schools) are probably more the rule than the

exception. Starting from that background, it is hard to ascertain to what extent the lack of access to medical care contributes to the higher mortality and morbidity levels of Blacks. Kunitz's discussion on the role of health care in population health might also be complemented by very recent evidence suggesting that iatrogenic damage can sometimes be observed even at the population level. The recently reported drop in breast cancer rates in the United States following the massive interruption of hormone replacement therapy has been more intense among White women and women of medium or high social class, who were more exposed to hormone replacement therapy (20–22). In particular cases like this, the lack of access to health care may have actually protected low-income women.

It is also in the context of the contribution of medical care to better health levels that Kunitz refers to studies “to determine the share of the decline in mortality that may be accounted for by specific interventions.” He refers particularly to an investigation of the decline of stroke mortality in which “it was observed that the incidence of stroke remained the same over the [20-year] period but the severity declined significantly and, as a result, case-fatality rates and overall stroke mortality also declined” (p. 65). Kunitz's observation that “it is possible that more effective treatment of hypertension may have reduced the severity of strokes even though the incidence had remained unchanged” seems plausible, though perhaps no more plausible than the alternative explanation that less smoking or less heavy drinking or some other factor unaccounted for may be responsible for that reduction in stroke severity. Indeed, neither of the two studies cited by Kunitz examined the evolution of cigarette smoking or alcohol consumption in the population studied.

Kunitz closes with some comments on different types of science (historical and predictive) and the so-called fallacy of misplaced concreteness. This part of the book may be the most engaging, though it is probably the most arguable too. According to Kunitz, accurate prediction “is unlikely to rest upon deductive science” (p. 183). By the context in which this assertion appears, perhaps Kunitz means it applies only to the field of population health. However, more generally, this idea does not seem to match the fact that hard sciences such as astronomy, hydrodynamics, or physical chemistry are the most capable of producing accurate forecasts and predictions based on deduction from particular theories.

According to Kunitz, the risk of death from cardiovascular disease seems to increase in a straight line with increases in body mass index (BMI), though this “appears to be especially true among nonsmokers” (p. 198). This is a line of reasoning that Kunitz repeatedly follows: to establish a regularity and immediately indicate an exception. In Berlin's jargon, it is a foxy procedure. However, as probably any smoker or ex-smoker knows, the transition from the status of regular smoker to the status of nonsmoker very often entails weight gain. The explanation may well be that smoking reduces appetite, because nicotine stimulates gastric contraction and so satiety is reached with less food. It therefore seems plausible that, on average, smokers have lower BMIs than nonsmokers and, among smokers, the higher the average number of daily cigarettes, the lower the BMI. Since the chemicals in tobacco smoke are potent inductors

of cardiovascular disease, this could well produce an inverse relation between BMI and cardiovascular disease risk in smokers, with higher cardiovascular disease risk among heavy smokers, who also have low BMIs. Would this be a hedgehog explanation? It may be.

Overall, this book is an excellent resource. One of its many virtues is its wealth of tables and figures, always apposite and illustrative. Bringing together for the reader an extremely well-chosen set of data, interesting ideas, and smart reflections on the afflictions of human societies, *The Health of Populations* is a major contribution to social science and public health, adding to the already considerable amount of solid knowledge that Stephen Kunitz has produced.

ACKNOWLEDGMENTS

Conflict of interest: none declared.

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DOI: 10.1093/aje/kwn131; Advance Access publication May 20, 2008