Social Gerontology

The Oldest Old. RICHARD M. SUZMAN, DAVID P. WILLIS, and KENNETH G. MANTON, Eds. Oxford University Press, New York, 1992. xii, 444 pp., illus. $65.

Until recently, policy-makers and students of aging have had to rely on cross-section surveys (for example, the census) for information about America's aging population. Longevity has clearly been increasing, and the population 65 and older is becoming a larger proportion of the whole. These statistics fueled doomsday predictions about the burdens of dependency at the same time the income status of the elderly appeared to be improving. With commendable foresight, several federal agencies (the Health Care Financing Administration, the National Center for Health Statistics, and the National Institute on Aging) have funded longitudinal surveys to provide more detail relevant to policy and scientific controversies. The National Long-Term Care Survey surveys the disabled at intervals of several years, with a complex sampling design that now includes some institutionalized persons. The Longitudinal Study of Aging builds on a supplement to the Health Interview Survey. Providing even greater detail are the Established Populations for Epidemiologic Studies of the Elderly (EPESE), which provide data on the health and economic status of all persons 65 and older in three specific locations at annual intervals. Individual information from each survey can be matched to Medicare bills to reveal ongoing health-care utilization of Medicare-covered services.

The survey designs allow a focus on the so-called "oldest old"—those aged 85 and older—who cannot be stably described statistically through random samples of all elderly. The sharp contrasts found among the segment of the elderly who live to (what was once considered) extreme old age have much to teach about the process of healthy aging and the needs of the disabled, chronically ill, and poor among the aged. The longitudinal format captures phenomena unlikely to be seen in cross-section snapshots. This volume is a compendium of relatively early research reports of the findings from these data-gathering efforts. Beyond reports here, survey findings are having a continuing impact on wider policy debates: statistics on Medicare expenditures by disability status, probability of nursing home use, distribution of length of disability episodes and nursing-home stays, and participation of family care-givers are informing planning for national expenditures under current programs, public debates about possible future approaches to long-term care, and design of private long-term–care insurance benefits. This volume contributes to planning efforts by making a wealth of statistics available for many uses and by raising, explicitly or implicitly, more questions than it answers about the most aged segment of our society.

The overall picture of the oldest old is one of diversity. Just as, individually, their stories of long ago open a window on history for their great-grandchildren, the sweep of recent history appears in the statistics describing currently living generations. Our oldest old were born before 1910, are more likely to be immigrants, were less likely to marry, attained fewer years of schooling than later cohorts, weathered the Depression, and were of prime working age during World War II. Women of these generations were less likely to work and had fewer children. The timing of their lives in a particular portion of our history colors their current economic and social status and may affect their health status in unknown ways. Although about 22% of those 85 and older reside in institutions, over half of those living in the community were able to perform the functional and instrumental activities of daily living (bathing, dressing, inside mobility, transferring, toileting, eating, money management, shopping, telephoning, and so on) that have become the established standard for assessing disability. Cognitive impairment is more difficult to assess, but one report based on EPESE data projects a population rate of severe cognitive deficit at 48% of those 85 and older; the rates for younger elderly were significantly lower, only 4% for those 65 to 74 and 16% for those 75 to 84. A chapter is devoted to the robust oldest old, who not only had no reported disability but were able to walk specified distances, lift given weights, and climb stairs: 33% of those 80 and older were found to be robust. As cohorts with better education and work history have moved into the ranks of the elderly, the economic well-being of those 65 and older has improved, but 38% of those 80 and older have incomes below one-and-a-half times the poverty level. The statistics affirm that disability, cognitive impairment, and poverty are by no means inevitable accompaniments of survival to very advanced age. They also focus our attention on the significant proportion of the oldest old who do have severe needs for assistance with activities of daily living and economic support.

Hospital aide helps discharged elderly patient. [Photo Researchers, Inc.; Joseph Nettei]

Several chapters discuss the complexities of survey design for this population. Nonresponse of subjects is likely to be greatest for those with the poorest health status, whose situation is of greatest interest to investigators. The periodicity of a survey must be short enough to capture health events whose duration is initially unknown, like spells of illness, disability, and nursing-home placement. Health events of interest may cluster in the period prior to death, which removes subjects from the sample frame and from follow-up observation. Not adequately stressed is the tendency of older people to underreport unmet needs. Of necessity, survey items are framed to answer questions of the current scientific or policy community; by the time subsequent waves of a survey are fielded, hypotheses may have changed, and policy decisions and emerging problems may have made old issues irrelevant.

A number of puzzles emerge from the data as the authors attempt to describe *how* the general observed decline in mortality rates is occurring and whether it foretells more active or more disabled years for the American population. Women live longer than men yet are more likely to be disabled; how and why this occurs is not well understood. The correlation of cognitive impairment with low education level is striking, and, if it holds for the future, reduces impairment projections for future elderly cohorts with greater educational attainment. Black Americans exhibit an alternating relationship of disability to age, with higher levels of impairment for those 65 to 74 than for those 75 to 79; disability rates rise again for those 80 to 85 but actually fall for the oldest old. The finding of a mortality "cross-over" by race, such that whites exhibit lower mortality rates prior to age 80 and blacks who reach that age have a longer life expectancy than their white counter-

parts, may be due to more stringent selection by early mortality in the black population. The broader base of social support available to the black oldest old, who, like their white counterparts, have often outlived the capacity of spouses, siblings, and children to care for them, holds lessons for all of us.

The book presents a number of frustrations to the reader. Several of the chapters were written (and published elsewhere) to report very early findings from the surveys and have not been updated to reflect later survey waves. At the very least, allusions to the policy context for the data, for example current spending on Medicare and Medicaid, should have been revised from 1983 and 1984 levels. With income and assets so important to the well-being of the elderly and so sensitive to cohort effects, it is unfortunate that the chapter on economic resources relies on 1984 income data. The definition of the oldest old, although usually meaning those 85 and older, is taken as 80 and older in some reports, hampering a comprehensive view of the population. The Grade of Membership technique, used in several chapters, is a method of identifying types within a population (for example, the most likely combinations of mentioned causes of death or of personal characteristics and functional limitations) that is not widely used and will not have been encountered by the average reader. The presentation of findings relying on this method is quite opaque and does little to increase insight or suggest policy responses. A chapter on the politics of aging, in a jarring shift of tone, presents a diatribe against those who pit generations against each other rather than recognize that the young will one day become the old and that allocation of resources over lifetimes is a legitimate problem.

What can we draw from such a compendium to inform our response to the challenge of an aging population? Unfortunately, casting the findings about our elderly as epidemiological science diverts attention from the impact of public policies on almost every aspect of these data. For example, the transition to institutional care is an important outcome for the elderly. But Medicaid and other state policies shape the configuration of long-term care in every state, so that the probability of use of an institution depends not only on personal health characteristics but on whether the individual lives in Nevada, with 27 nursing-home beds per thousand elderly, or in Minnesota, with 89. The chapter by Pamela Doty on international comparisons of institutional use begins to address the context of these rates. In like manner, though health status may depend largely on personal factors, it is also affected by access to health services, which varies by location and economic status and over time. During the time covered by these surveys, the rate of hospitalization of the elderly has shifted by diagnosis, as hospitals have responded to Medicare's Prospective Payment System and many surgical procedures have been moved to outpatient settings. How has this affected observed health services use, and how will future developments, such as ongoing increases in Medicare provision of skilled care at home for beneficiaries needing it and shifts in access to physician services under the 1991 Medicare fee schedule, affect the health status and survival of the oldest old?

Statistics from these surveys are being used by proponents on many sides of policy debates, and projections must be viewed with healthy skepticism. The actual and potential effects of public policies and unmeasured social trends must be considered along with the cohort effects stressed here, and it should be recognized that relatively small shifts in the definition of population subgroups (the disabled, the institutionalized, the cognitively impaired) can transform what may be a gross exaggeration to an equally perilous minimization of future needs. Projections of mortality and disability may be sensitive to technical longitudinal survey issues, like the treatment of nonrespondents (who may be more likely to be nonsurvivors).

It is an opportune time to highlight the diversity of the elderly, especially the oldest old. Our health sector, so much under attack for its high cost, should get at least some credit for their growing numbers. We need not be simply overwhelmed by the future burdens the statistics in this volume seem to foretell. Findings about the correlates of healthy aging support better education for our young people and promotion of healthy behavior for everyone. Functional disability is clearly not a necessary accompaniment of advanced age, and identification of the health events that lead to disability should direct health technology development and provision of high-quality primary, acute, and long-term care. The current policy debate is being waged by those who may be among the oldest old in 2020 or 2030. Stereotypes about old age and fears concerning potential cost of health and other care for these survivors can only be countered with knowledge, informing personal and public plans for the next generations of elderly, and for ourselves should we by good fortune enjoy long life.

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R&D Powerhouses

The Cold War and American Science. The Military-Industrial-Academic Complex at MIT and Stanford. STUART W. LESLIE. Columbia University Press, New York, 1993. xvi, 332 pp., illus. $42.

The impact of the predominantly military funding of research and training in the physical sciences and engineering at the Massachusetts Institute of Technology and Stanford University during the Cold War years is examined in this valuable, informative, and well-written book by Stuart W. Leslie, a historian at the Johns Hopkins University. The two institutions form prime subjects for such scrutiny—MIT because it emerged from World War II as the nation's largest university defense contractor and remained at that rank, Stanford because, although a minor player in the wartime mobilization of science, it deliberately sought to emulate MIT and succeeded handsomely.

Leslie's story nominally begins with World War II, but he enriches his tale by reaching back into the prewar decades, sketching the engineering enterprises at each institution, their connections with industries such as aeronautics and electrical power, and the eagerness of both to become first-class in physics. Although the Depression stifled such ambitions, World War II revived them. After the war, faculty and administrators at MIT, which had been home to wartime research on microwave radar, obtained rich support from the armed services for an interdepartmental program on all phases of microwave electronics. Louis Smullin, who ran the postwar microwave tube laboratory at MIT, later remarked, "We were the real war profiteers; there's just no question about it" (p. 27).

At Stanford, the drive to follow MIT's