NEW DIRECTIONS IN SOCIOECONOMIC RESEARCH ON AGING

James P. Smith, Ph. D.

Director, Labor and Population Program
RAND
1700 Main Street
Santa Monica, CA 90407

This paper was supported by grant no. 5 P01 AG08291 from the National Institute of Aging.

Every so often, an area becomes poised for major new breakthroughs in knowledge. I believe that behavioral research on aging is at just such a threshold. An obvious reason is that the questions are so compelling. The tilt of our age structure toward the old dictates what the important public policy issues of the moment and of the next decades will be—our ability to provide adequate health and income for the largest growing segment of our population, and whether we can exercise any control of the two major items in the federal budget—social security and medical care.

This paper is organized around these three fundamental changes-new findings in research on aging, the emergence of important new data sets and the growing transnational character of aging research. In Section 1, some exciting new research findings that impact on older people's ability to age successfully are briefly highlighted. The second section focuses on three new surveys that will eventually transform behavioral research on aging—two RAND supplements to the Panel Study of Income Dynamics, the new Health and Retirement Survey, and the Health and Asset Survey of the Oldest Old. The final section of the paper deals with how well these new directions in research on aging will transfer to other cultural settings, especially those in the developing world.

SOCIO-ECONOMIC RESEARCH ON AGING

During the last decade, important new economic research has been conducted in four areas that speak to older Americans' ability to age successfully. These four areas are their labor force transition into retirement, their ability to sustain adequate income, the importance of family members to help out in times of poor health, and, finally, the impact of poor health on the elderly's hard-earned but vulnerable wealth positions. In this section, some illustrative examples of that research are briefly highlighted.

Transition to Retirement

The first area where significant progress was made concerns their labor force transition into retirement. Dramatic shifts in labor force behavior, especially among older men, have occurred over the last three decades. As indicated in Table 1, their labor force involvement uniformly fell during this period. The largest changes took place among men in their early 60s, whose participation rates fell by almost 25 percentage points.

Why are older men so less likely to work now than in the past, and what is likely to happen in the future? The reasons are mainly financial, built into the way social security and private pensions are currently structured. A decade ago, such a conclusion would have been met with widespread skepticism. Retirement was widely viewed as influenced principally by institutional customs and laws (e.g., mandatory retirement laws) and the ability or workers to continue on the job as dictated by their health.

Table 2 based on the work of Ward (1984) demonstrates my point about the central role of social security. The upper half of this table plots the probability of retiring at each age, conditional on still working. The bottom part plots the implicit subsidy or tax on work inherent in the structure of social security benefits. The correspondence between these charts is striking. Male retirement has two distinct spikes at ages 62 and 65. Note that these are the very ages when the social security program switches from a subsidy to working for another year to a tax on work which takes place at age 62, and when the size of that tax increases dramatically (at age 65). Ward estimates that at least half of the increased retirement at age 62 and at ages 65 and beyond is due to the social security program.

Table 1

Changes in Labor Force Participation 1963-1990

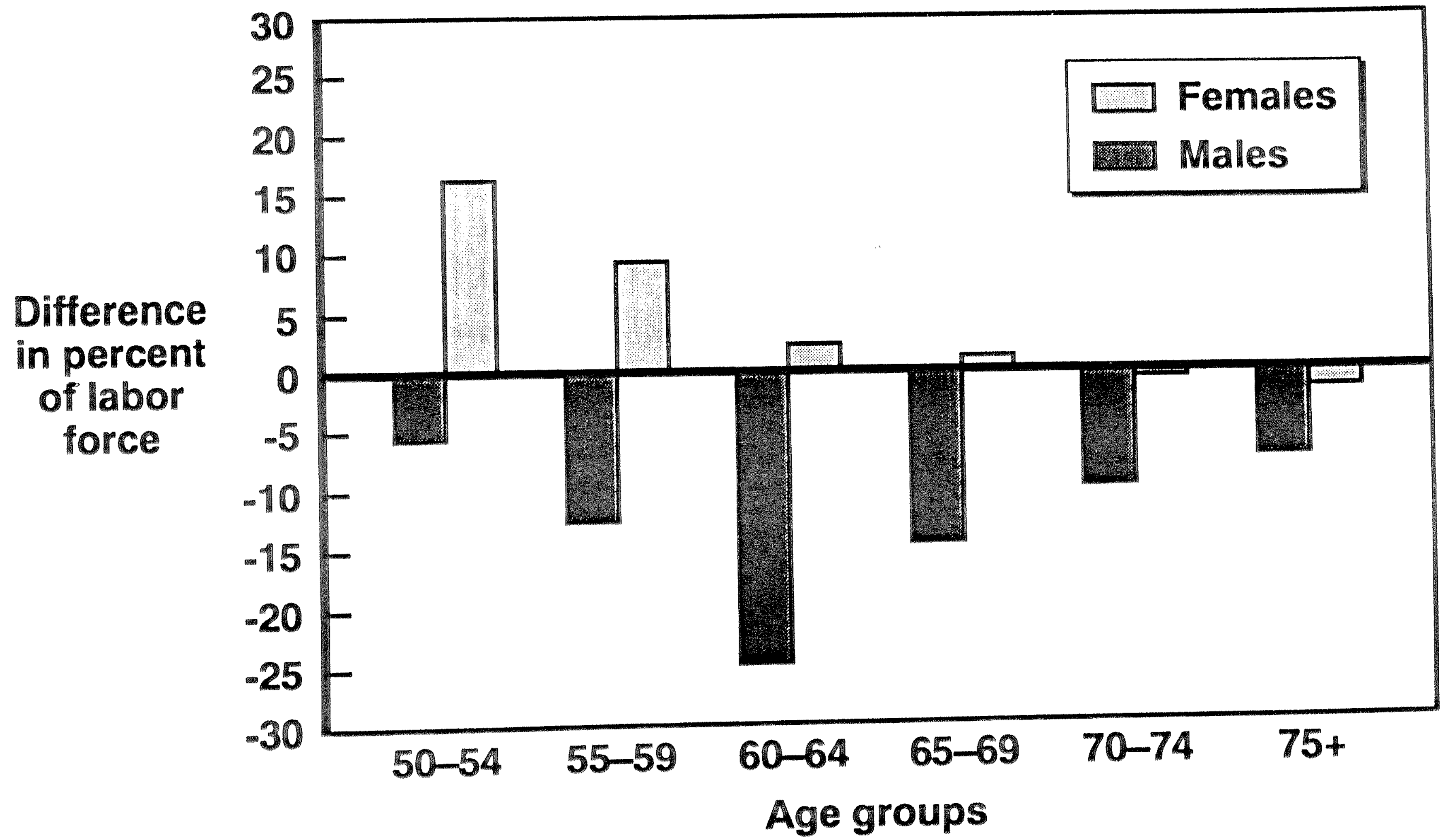
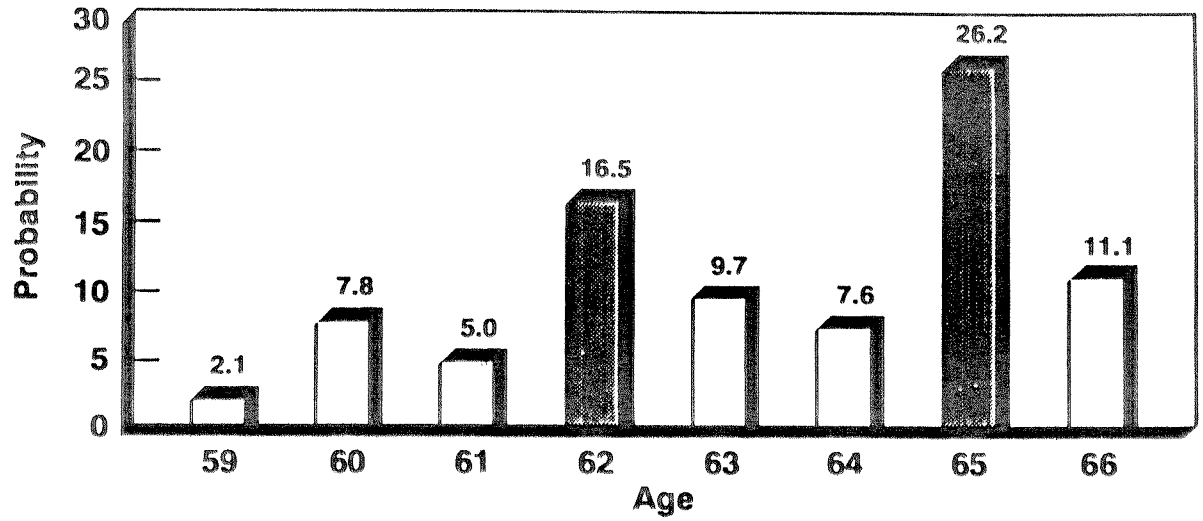
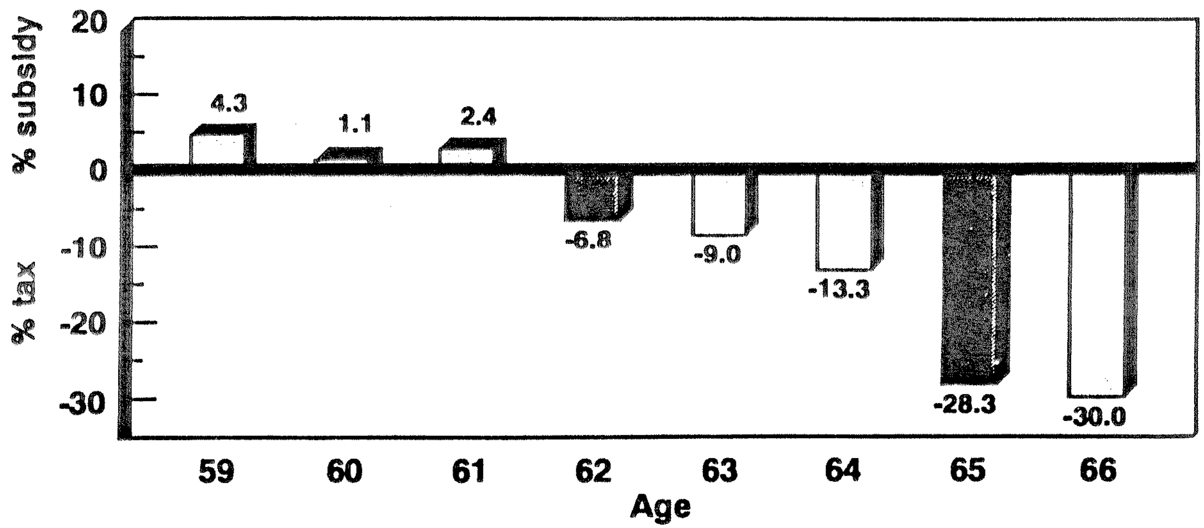


Table 2

Probability of Retiring by Age



Implicit Social Security Subsidy (+), or Tax (-) on Work



Much of the remainder is due largely to similar financial incentives present in private pensions and to mandatory retirement. A body of research, by scholars associated with the National Bureau of Economic Research under the leadership of David Wise, has documented the key role played by private pension plans (Wise, 1989). Private pensions have grown rapidly in recent decades, covering more than half of the private sector workers. Using data from private sector firms, Wise and his associates have shown that the structure of private sector pension plans contains large financial incentives and disincentives to working for another year. The precise age at which the incentive to retire kicks in varies depending on the structure of the firm's pension plan. Yet, in spite of how complicated these pension plans typically are, the research at the National Bureau leaves little doubt that workers respond to these financial carrots and sticks.

The central role that financial incentives in pensions and social security play in shaping retirement decisions offers some hope for the ability to adjust to a daunting future—the retirement of the large baby-boom cohorts in the next century. The implicit formulas in these programs can be manipulated to alter their incentives. Currently retired cohorts received large wealth subsidies from social security—receiving far more in benefits than they paid in taxes. The demographic reality is that this happy situation cannot continue when today's workforce retires. Indeed, future cohort's benefits are most likely to fall because next century's smaller workforce will not be willing or able to pay for them. The least painful way of making that adjustment may be to alter the structure of social security and pension programs so that they encourage rather than discourage work for those well enough to work.

Adequate Income

When the changing economic status of the elderly is addressed, there is some good news to tell. This is one of the real success stories of American public policy, and we should not be reluctant to tell it. Over the past three decades, the economic status of older Americans improved dramatically and did so more rapidly than for any other age group. To illustrate this good news, Figure 1 plots poverty rates for the elderly population alongside the poverty rate for all Americans. In addition, the poverty rate for those at the other end of the life cycle—America's children is charted.

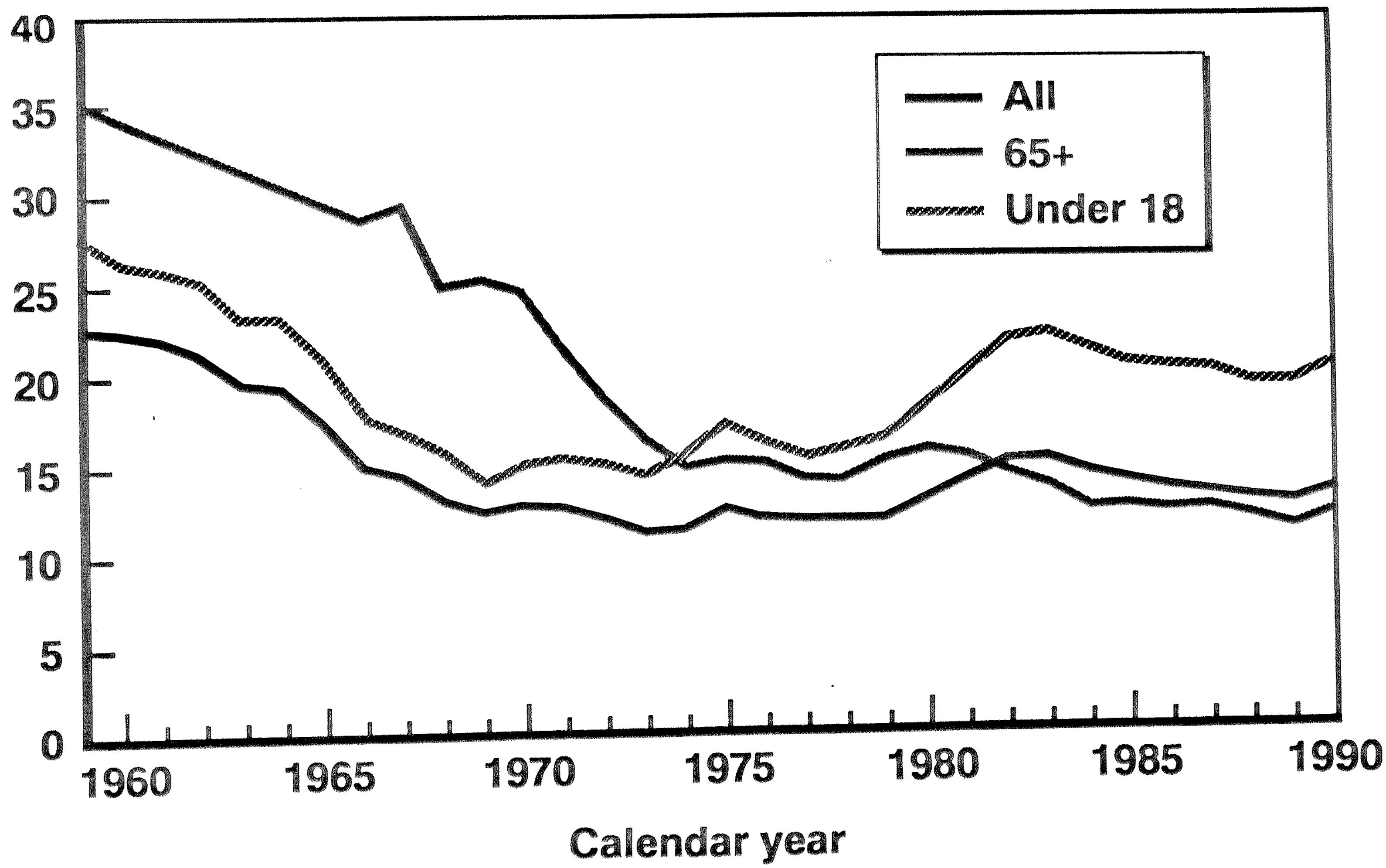
When John Kennedy was elected president, more than one in every three older Americans were poor, echoing a percentage invoked by his New Deal predecessor 30 years earlier. Today, only one in every eight older people are poor. Across these years, poverty declined twice as fast among the elderly as it did for all Americans. The contrast at the different ends of the life-cycle is especially stark. When we first started talking about the war on poverty, the image that entered out mind was that of an older person. Today, it is a child. Even if we take 1970 as our starting point, poverty among the elderly has been cut in half, while that of children has risen by a third.

Even these positive trends understate the good news for older people, because the real poverty rate of the elderly is probably much lower (see Table 3). If taxes paid are excluded, but the value of non-cash benefits that the poor received (food stamps, Medicaid, Medicare) are added in, the poverty rate of those aged 65–74 would fall by another 2–1/2 points. If the implicit rental value of housing is also included, the highlighted numbers in the final row remain. It is these numbers which most economists believe more accurately reflect real economic welfare. This means that instead of one in every ten older persons in poverty, only one in twenty of the elderly are. As can be seen from these tables, the effects of these adjustments are much larger on the elderly than they are for other age groups.

The preponderance of good news should not obscure the equal reality that many older people remain economically vulnerable. This vulnerability is triggered by certain demographic transitions, particularly those into extreme poor health and the death of a spouse. Table 4 measures poverty among the most susceptible population—single elderly women. One in every four non-married older women are poor, more than twice the rate for

Figure 1

Poverty Rates by Age



all older people. Among widows, poverty rates now run as high as 40 percent in this age range. The prospects for older black non-married women are particularly bleak, where seven in every ten live below the poverty line. Treating the elderly as a single homogeneous group has lost whatever meaning it may have had either analytically or politically. It is an equally valid description of life among older Americans to claim that only one in every 20 older Americans are poor as it is to point out that seven of every ten single elderly black women are mired in poverty.

Health and Wealth Among the Elderly

These income data suggest that the key risks to successful aging rest in the complex two-way interactions between wealth and good health and the social and financial support networks set up within families. Debates about the direction of causation have made conclusions about the relation of health and wealth of older populations difficult to pin down. We know that healthier households are also wealthier ones. Is that simply because higher incomes lead to better health? Or does poor health restrict a family's ability to accumulate assets because of their limited ability to work or through their rising medical expenses? Or perhaps neither direction of influence is important, and the association merely reflects some unobserved third factor which makes some people healthier and wealthier. To answer this question requires panel data (to average out these individual differences) and good health and wealth information to isolate the reasons for the association. Unfortunately, research on these questions is only just beginning so that my summary must be tentative and suggestive.

Data provided by Hurd, indicates that the association between health and wealth may not be trivial. For example, among all households aged 65–69, those in very good or excellent health have more than twice as many assets as those with at least one household member in poor health. But that is not the full story, because these differences in initial assets expanded in the future. Over the subsequent years, assets grow by almost 6 percent

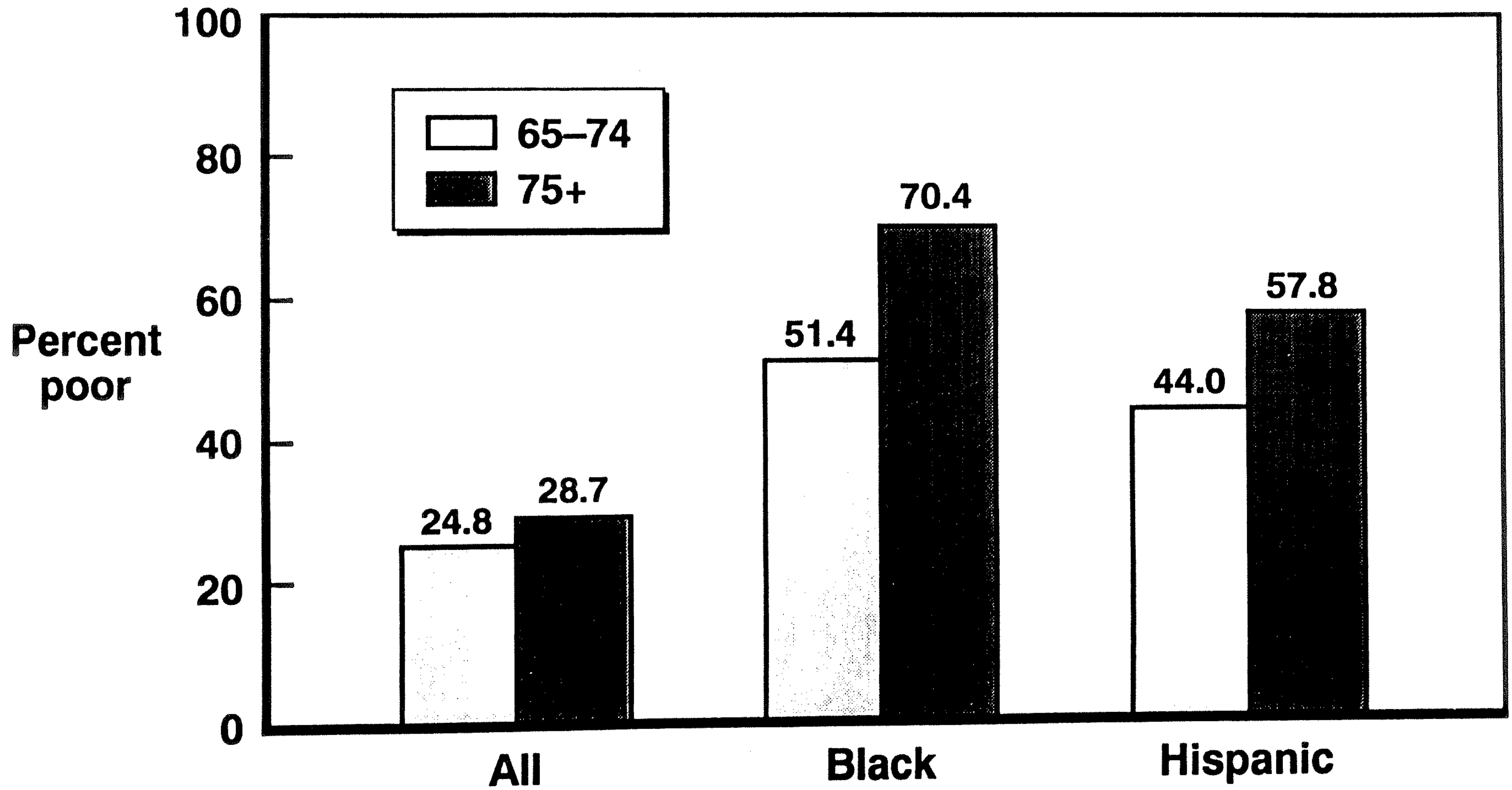
Table 3

Percent of Persons in Poverty by Definition of Income (1990)

	Age Group				
	65-74	75+	Under 18	25-44	All
Conventional Money Income	9.7	16.0	20.6	10.4	13.5
Minus Taxes Plus Transfers	7.3	12.9	15.1	8.6	11.0
Plus Imputed Return on Housing	4.9	8.2	14.2	8.1	9.8

Table 4

Who Are the Elderly Poor
Poverty Rates 1990 for Non-Married Women



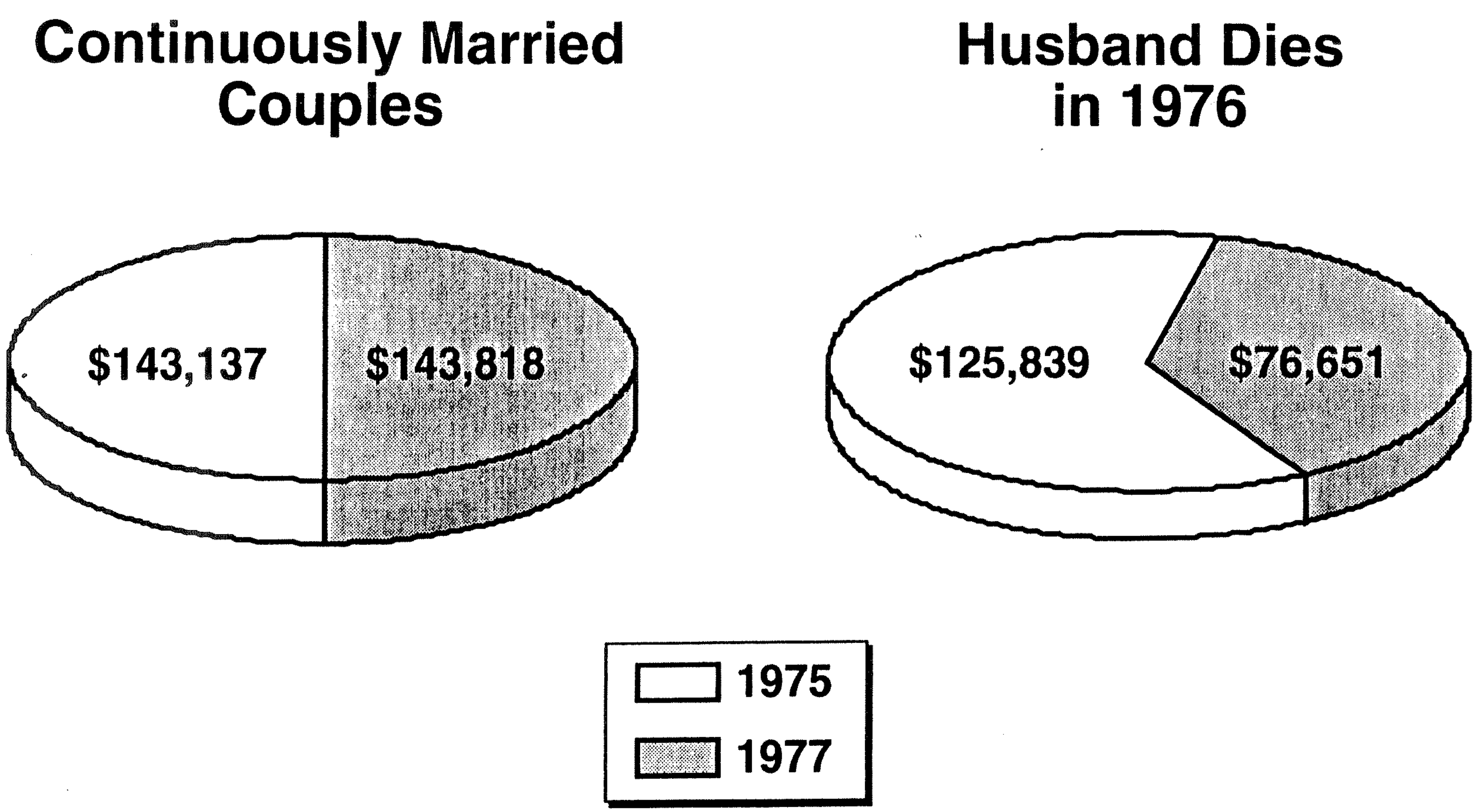
among households in excellent health. In sharp contrast, households in poor health saw their already low asset levels diminish further.

The most straightforward mechanism for this association is that wealthier people enjoy better health and live longer and healthier lives. Increased wealth can improve health and lengthen longevity for a number of reasons—better access to medical care, reduced risk behaviors, and a better diet and nutrition to name just a few. In research that is part of the RAND Center for Aging Research, Lillard and Weiss (1992) estimate that even after they control for the reverse effect of health on wealth greater economic resources still reduce mortality risks. But does poor health also threaten the wealth accumulated by the elderly over their lifetimes? This research by Lillard and Weiss indicates that even after one accounts for the influence of wealth or health and eliminate other factors that might influence both, poor health has a direct and quantitatively large impact on the economic resources of the elderly. For many couples, when one of the spouses becomes ill, wealth growth ceases as the couple must use all the subsequent wealth increases to compensate for their lost sources of income and to finance their increased medical needs. To put it another way, an episode of poor health essentially wiped out the entire future growth in assets of a couple over the next 10 years.

Some reasons why widows are so vulnerable is more apparent from Figure 2, which contrasts the wealth of couples who remain together with that of another family in which the woman became a widow. This table, based on the important work of Hurd and Wise (1989), suggests that the increased poverty of widows reflects three forces. First, the widowed women were less well off even before their husbands died. Second, less wealthy families are more likely to experience a death of a spouse and transit into widowhood. Finally, a large fraction of the assets of an older family vanishes when the husband dies. This includes part of his social security wealth, but also, for many families, his pension wealth or the annuity income associated with it disappears when the husband dies.

Figure 2

Effect of Widowhood on Wealth
Husband Dies in 1976



SOURCE: Hurd, Wise

These behaviors are even more complex, since work at RAND indicates that marriage and mortality themselves are closely intertwined. As we all know, the observed relation between marriage and mortality may reflect two distinct effects—a selection effect where those least likely to die marry, and a productive effect where marriage itself (through the combination of financial resources or the care of a spouse) enhances longevity. Similarly, the end of a marriage through divorce, separation, or death (with its accompanying stress and financial depreciation) may shorten life.

For example, according to recent research by Lillard and Waite (1992), continuously married men have the highest probability of surviving and never-married men have the highest mortality risks. This disparity with married men rises continuously over ages, strongly suggestive of a productive effect of marriage. Additional evidence in support of the productive effect of marriage comes from their finding that married men can mitigate the risks by living with another adult. These transitions out of marriage are important because they speak directly to the role of marriage in affecting subsequent health.

These new research findings are just a start in our collective attempt to unravel the complexities of the interactions between economic well-being and health functioning among older Americans. One constraint on further progress has been the quality of the underlying data. In the past, datasets with state-of-the-art health measurement typically had very limited economic information, while those surveys that were known for the quality of their economic information were dismissed as inferior in their health data. In the next section, I deal with some exciting new data collection efforts that will go a long way toward solving this problem.

NEW DATA COLLECTION EFFORTS

The research I have just finished summarizing was largely based on the best data sets on aging available during the 1980s; in particular, the original Retirement History Survey, the SIPP, and PSID. In recent years, concerns about these data have been raised because of their timeliness, the quality of much of their non-economic data, and what was left out of these surveys.

Fortunately, there are three new surveys on the horizon that will eventually transform scientific and policy work on aging. These new surveys combine state-of-the-art health and economic information. Since they are longitudinal panels, they also allow for the joint modeling of health and retirement as the dynamic processes they truly are. To link individual behavior to public policy instruments, respondents were matched to key administrative records such as social security and Medicare. Finally, the generations were connected and the complete end of the life-cycle is spanned by the new surveys.

Three new surveys will eventually transform scientific and policy work on aging. The first of these are two RAND supplements to the Panel Study of Income Dynamics. The PSID is hands down the premier longitudinal economic data set in the United States. Each year for the last 24 years, it has collected high-quality and detailed information on each respondent's income and labor force behavior. At irregular intervals, health and wealth modules (of somewhat lesser quality) were fielded. Now, we have almost a quarter century of complete economic and labor force history for the 7000 families (and 35,000 individuals) currently in the survey.

Equally important, PSID has followed all relatives of the original respondents and folded them into its longitudinal design. Thus, a 12-year-old child of a 45-year-old parent in 1968 would now both be members of the panel at ages 36 and 69 respectively. Since this panel is ongoing, it offers an unprecedented opportunity to understand transfers and interactions of the extended American family as the original parents age. In the last few years, RAND staff developed two important supplements to the PSID. The 1990 supplement concentrating on the health of older respondents had three parts. The first was a self-administered questionnaire to all respondents 50 and over. They were asked detailed questions on their physical and mental health functioning and status, the existence of chronic conditions, and their health risk behaviors. The second part was a telephone survey for all individuals 65 and over. They were asked about health care utilization and expenditures, nursing home and hospital admissions, and all sources of time and money support in times of poor health from their families. Finally, PSID records were linked to Medicare files. This data, which will be released in the public domain in the next year or two, represent a quantum leap in research possibilities.

The 1991 RAND supplement focused on the 7200 parents of the PSID respondents. Panel members were asked about the health status, chronic conditions, and disabilities of all parents of both the husband and wife. All nursing home and hospitalization episodes were recorded, as well as all time and financial support given. The unique feature of this supplement is the extensive reliance on proxy responses to document the lives of the elderly population. Fortunately, the unique design of the PSID allows for a detailed evaluation of accuracy of these proxy responses. Many of the elderly parents for whom we are asking their adult children to describe their parents health and economic conditions are also PSID respondents themselves. For this subsample, their own assessments can be checked against the proxy answers of their adult children. The value of this RAND PSID supplement is potentially quite large. For example, it is one of the few data sets that provides sufficient sample size to analyze the determinants of nursing home entry. It also links to an unique way the generations. Mature adult children may often make the critical decisions about living arrangements, health, economic well-being of their frail elderly parents.

The second new initiative is the Health and Retirement Survey (HRS), the first round of which went into the field in the fall of 1992. HRS is a national panel of 8000 households in their pre-retirement years (ages 51–61). Because of their increasing importance in the policy debate, both blacks and Mexican Americans are over sampled. Given its focus on the pre-retirement years, not surprisingly the principal objective of HRS is to monitor the causes and consequences of retirement. However, health functioning has been raised to equal status. This is not simply because health is an important conditioner of retirement. Rather, this dual status of health and economics results from a conviction that these outcomes are closely intertwined and by a desire to monitor future health transitions, especially as respondents eventually enter their post- retirement years. The eventual hope is that this sample will serve as the basis for a long-term epidemiological assessment—one which would have unprecedented background information.

HRS instruments will span the spectrum of behaviors of interest—on the economic side work, income, and wealth; on the functional side, health and cognitive status, disability, and mental well-being. The household survey will also be linked with the major administrative records—social security and eventually as the respondents age, with Medicare files.

The major people gap left from these first two initiatives are the oldest-old. There are too few such people in the PSID, and it will be the better part of two decades before the HRS sample ages into this sub-population. This leads me to the third of the recently proposed NIA initiatives—the health and asset dynamics of the oldest old (AHEAD). This sample, derived from the same screen as the HRS, includes 7,000 respondents 70 and older, a large number of whom will be over 85. Currently, an oversample of the black population will be conducted.

Given the different age span, the objectives of this survey shifts toward the key concerns in this segment of the life cycle. To what extent are the transitions in physical and cognitive functioning related to economic resources and inter-generational transfers? Who are the people vulnerable to Medicaid spend-down and how does that spend-down take place—through the sale or transfer of assets or through consumption? Finally, what are the key early markers of successful aging and how can they be sustained and enlarged? The survey instruments here will monitor the key outcomes-- objective and subjective measures of health and economic status. Time and money transfers between the generations will be captured, and those who move into nursing homes will be followed.

Finally, as with the other two initiatives, AHEAD will be linked to key administrative files—including Medicare, Medicaid, and the National Death Index.

CROSS-NATIONAL RESEARCH ON AGING

The final section of this paper deals with how well new directions in aging research will transfer to other cultural settings, especially those in the developing countries. Reservations about the ability to transfer span the complete spectrum—the questions that are important to ask, the theoretical and modeling approaches to be explored, and the kind of data to be collected. Although it is always a bit misleading and unfair to summarize a wide diversity of views as if they fall neatly into bipolar camps, it does sharpen the issues.

At one end of the spectrum are "research globalists" (including this author), analytical models in hand ready and willing to export them to all parts of the globe. At the only extreme are "cultural isolationists." To them, each country and setting is unique with a distinct mosaic of history, culture, and institutions. In their view, it produces more harm than insight to force onto developing countries behavioral models derived from and more suited to the United States.

We may well have been too cautious on this issue of transference. Institutions in developing countries indeed are quite distinct, and they need to be understood before deciding how they should be incorporated into any analytical structure. Similarly, some survey questions in the form that we ask them in the United States may be simply absurd in many other parts of the world. But, with all that said, people are people—they have similar goals and needs and face constraints in achieving those objectives. To put it most simply, they try to strive for what is desirable and avoid what is costly.

One point that should not be controversial is that aging and health is the emerging issue in the third world. The demands placed on health care systems in the developing countries will grow dramatically in the coming decades. Not only will the capacity of their systems have to expand dramatically, but the type and mix of services will have to change to serve an older population with a markedly different pattern of diseases.

The Indonesian Example

This point can be illustrated with one developing country, Indonesia, that RAND is currently studying intensively. One reason for their increased concern about the elderly is purely demographic. As in many other developing countries, Indonesian birth rates have been declining rapidly and will continue to do so for the foreseeable future. At the same time, mortality risks at all ages have been falling rapidly. The demographic consequence is certain—a dramatic tilt in the age structure toward the old. In Indonesia, the size of the population of those age 60 and over will quadruple over the next 30 years, while that of younger people will stabilize. These shifts in Indonesia's age structure combined with other likely demographic trends-- increased urbanization and rising incomes—foretells a need for a very different public health system than the one that exists there today. As demonstrated in Figure 3a, health risks will shift dramatically from the acute infectious diseases of the young—diarrhea, respiratory infections, and measles—toward the more chronic non-infectious diseases of the old—heart disease and cancer.

Figure 4 highlights the pressures that are being placed on the Indonesian medical system by the aging of their population. Inpatient admissions will almost quadruple among those age 60 and over. With this dramatic shift in patient mix, the Indonesian health system may well have to be revamped from top to bottom. Both the existing personnel and the physical facilities are geared for a much different population of patients than that which will exist tomorrow. Moreover, this tomorrow is not in some distant future, a problem safely put aside for the next generation. As we can see from Figure 3b, these changes are already well underway. Mortality rates for acute infectious diseases fell by a third between 1985 and 1990, and by 1995 chronic disease mortality may well outrank deaths due to infectious diseases.

Figure 3a

Specific Causes of Mortality
Present and Projected

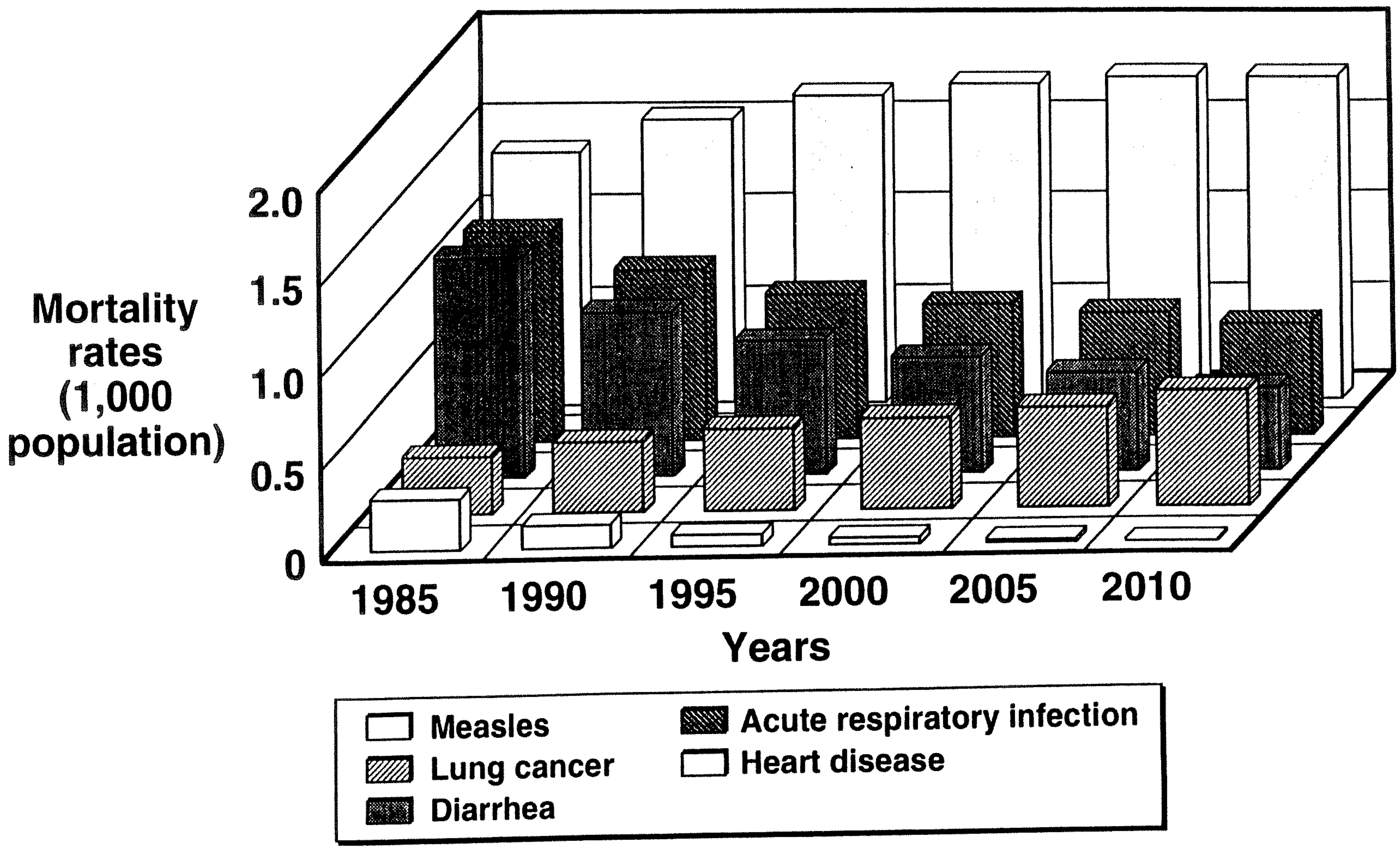


Figure 3b

Types of Mortality
Present and Projected

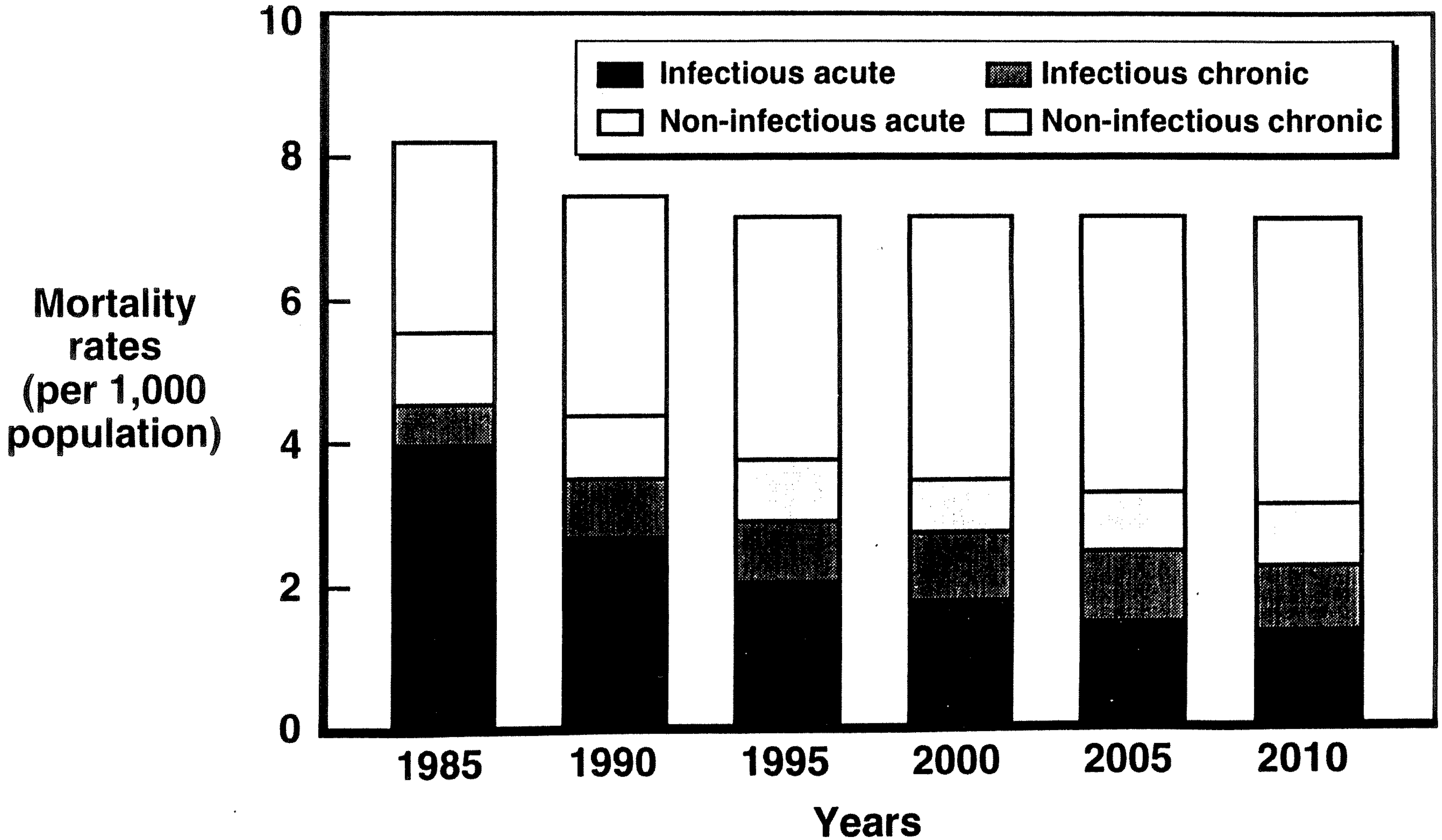
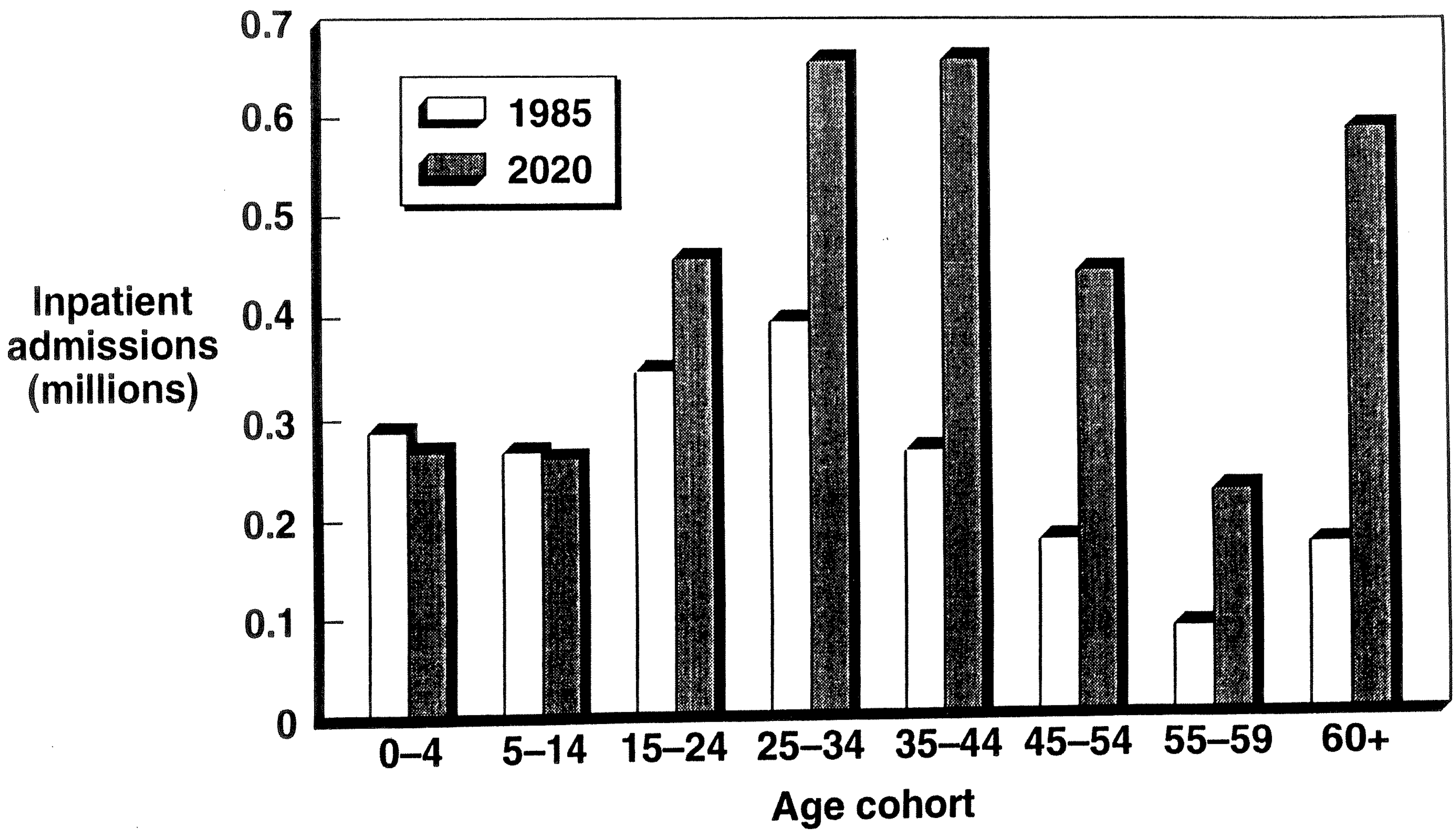


Figure 4

Inpatient Admissions by Age Cohort
Indonesia, 1985 vs. 2020



Cross-National Similarities in Behaviors

One objection often raised against the globalist view is that the underlying behaviors are fundamentally different across diverse national settings. However, evidence is accumulating indicating that this objection is not based on a solid empirical footing. For example, data from three quite diverse countries (see Gertler et al., 1992) illustrate across-national similarities in health behaviors of older people. The three countries are the United States, Malaysia, and Jamaica. The outcomes they highlight are the effect of economic resources (as measured by education) and health and sex differences in health functioning. As shown earlier, more schooling improves health status and reduces mortality in the United States. But does the association transfer to other nations—nations with very different levels of economic development and with quite distinct health problems?

In both of these developing countries, education has a strong persistence and positive impact on health status and functioning. Although education levels are lower in these countries than in the United States, Gertler et al. show that in each case more schooling improves health for both men and women. The positive effect of schooling on health persists across the components included in the standard activities of daily living (ADLs). Whether ADLs measure difficulty with vigorous activities, with walking up stairs, or bending, schooling improves health. Rising schooling levels and the higher economic wealth that flows from it are one of the underlying reasons why health levels have been improving in many developing countries.

Another research finding that persists across many diverse cultural settings is sex differences in health. Probably the most often repeated sex health statistic is that virtually throughout the world, male life expectancies fall short of those experienced by women. With this as their basis, unfortunately some have jumped to the conclusion that health status is persistently better for women than for men. This conventional wisdom may well be wrong. In virtually all other dimensions of health that Gertler and his colleagues examine (that is, excluding mortality), the sex bias in health favors men.

For example, Jamaican women at all points in the life course are significantly more likely to be in fair or poor health than are Jamaican men. In addition, if poor health is used as a marker of onset, aging takes place at a much younger age than it does in the United States. More than 15 percent of men in their fifties report themselves in fair or poor health in Jamaica, and one in every three women in that age range do so. The situation in Malaysia is quite similar. At all the age groups shows, Malaysian women are in poorer health than Malaysian men. In addition, the fraction of the youngest old in poor health is extremely large.

If this world tour is completed with a return ticket to the United States, these sex differences in reported health are not simply a by-product of the lower living standards in developing countries. Nor are these differences a result of a single unrepresentative measure of health outcomes. These sex differences persist throughout all the activities of daily living and in all three countries.

In a final example, let's examine the important dual relation between health and income that was noted earlier for the United States. In this case, the research is from yet another setting—Sierra Leone. There the interest centered on the same question—does poor health, in this case moderate malnutrition, lower incomes and productivity of adult farm labor? If anything, the potential impact of health on income is even more direct and immediate in such settings. When physical labor is the most important production input, poor health means that energy levels are difficult to sustain, bouts of sickness are more frequent and crop output falls. But as discussed in the research survey for the United States, causation may well run in the other direction. Better-off farmers have better diets, and their nutrition levels are lower.

In Strauss' research (1986), he estimated the impact of adult nutrition levels on farm output. As was the case in the United States, Strauss found that both directions of influence between economic status and health were important in Sierra Leone. Increases in income had a significant and large impact on nutrients available, and subsequently on health states. In addition, he estimated that the lack of nutrients significantly reduced farm output. A ten percent rise in calories raises output by three percent. Not surprisingly, these effects were much larger for the poorly nourished. The effects themselves are quite important. In order to achieve the same impact by manipulating agricultural prices, it would be equivalent to a drop in stable prices by almost half.

The New International Surveys

The similarity of research questions on aging issues across national boundaries has been matched by common research constraints. Even more so than in the United States, inadequate data has been the major limitation on research on aging in developing countries. In most third world countries, research and data collection has focused on the other end of the life-cycle-fertility and family planning or infant nutrition and mortality. The major multinational surveys—the World Fertility Surveys and the Demographic and Health Surveys—give little information about what life is like for older people in these countries. Unfortunately, as argued earlier, the policy issues of the next decades will reflect a very different demographic time bomb than the one for which policy-makers have been preparing. The loud ticking they should now be hearing is the count of the aging of their populations. However, they now have little data to prepare themselves for that certain demographic reality.

In light of this reality, a growing number of researchers have been involved in significant new data collection efforts in many developing countries. While these efforts are unrelated administratively, they are linked by a common set of themes and concerns. First, they all strive to have adequate samples of the elderly population. More importantly, they have learned the painful lessons of the earlier U.S. surveys of the elderly by integrating health, social support and economic modules into a single survey design. Finally, they do not repeat another earlier mistake by recognizing that the elderly do not live in isolation and that the generations must be linked.

While there are a number of such efforts, the character of these new surveys can be illustrated by the Indonesian Family Life Survey (IFLS), currently being conducted by RAND. The IFLS sample includes over 7000 households across geographic areas spanning over 94 percent of the Indonesian population. The unique feature of its sample design for research on the elderly is that the IFLS contains two related samples. The first sub-sample is well within the mainstay of the traditional demographic surveys by sampling all ever married women less than 50 years old. The innovation is that all seniors in those households (those over 50 years old) are also given a full set of survey instruments. In addition, a separate sample of individuals over fifty who are not co-resident with a married woman less than 50 is conducted. In combination, these two samples constitute a random sample of the senior population in Indonesia. However, by linking with the ever married women's sample, generations have been effectively linked.

This linkage is important because the well-being of many older persons in these countries depends critically on their interactions with their kin. In many instances, older parents will live with their adult children when their own work careers end and their health deteriorates. Even when they live apart, transfers of time and money between the generations of the extended family are frequent and quantitatively large. In such situations, analyzing the well-being of the elderly by sampling only the elderly makes little sense. In the IFLS, respondents were queried about their health status (using a culturally adapted set of ADL's), and their health care utilization. Rich and detailed data are also available on the underlying determinants of these outcomes, including retrospective information on income and wealth, social support networks, and the quality and quantity of health care facilities with which the respondents interact. Detailed recording of all the transfers of time and money between the generations in the year before the survey are also available.

My optimism about the future stems from the fact that the IFLS is but one example of many such innovative surveys that are springing up around the world. Just as the new U.S.-based surveys will revitalize aging research in this country, these new international surveys will revolutionize transnational research on aging.

The first area with new research findings concerns the retirement transition where a number of economic studies demonstrated that the sharp drop in employment among older men was largely due to financial incentives implicit in private pension plans and social security. The second substantive area concerns the ability of older Americans to sustain adequate income, an ability that has increased significantly over time. In spite of the general improvement in the economic status of the elderly population, many older people are economically vulnerable. This vulnerability is related to key demographic transitions, particularly those with poor health and the death of a spouse. Finally, an important new research area involving social scientists is beginning to have some success in unraveling the two-way causality involving the dual relation of health and wealth.

CONCLUSION

This paper argues that socioeconomic research on aging is poised for significant new scientific breakthroughs. These advances will start with important new substantive insights about the determinants of healthy aging among older Americans. The insights will be made possible in part by some new multi-purpose surveys that will in time have a revolutionary impact on behavioral research on aging.

One important departure from the past is that these new advances in theory, method, and data are rapidly moving across national boundaries. Because of their rapidly changing age structure, aging is fast becoming the emerging policy issue in developing countries. These countries will have even less time than was available in the United States to adapt their institutional structures toward the health and income problems of the elderly. Fortunately, they will be able to learn from the U.S. experience. Recent research has shown that in contrast to the expectations of many that underlying behaviors of the elderly are quite similar across quite different countries. To cite one example, the empirical strong association of education with health status apparently persists across cultural settings as distinct as the United States, Malaysia, and Jamaica. We will soon be able to determine whether these similarities persist across more complex modeling of behavior, because a powerful new group of surveys of older populations are emerging in many developing countries that parallel the best new U.S. surveys.

BIBLIOGRAPHY

Gertler, Paul, O. Rahman, J. Strauss, D. Ashley, and K. Fox, "Gender Differences in Adult Health: An International Comparison," RAND, 1992.

Hurd, Michael D., "Research on the Elderly: Economic Status, Retirement, and Consumption and Savings," *Journal of Economic Literature*, Vol. 28, No. 2, June 1990.

Hurd, Michael D., and David A. Wise, "The Wealth and Poverty of Widows: Assets Before and After the Husband's Death," in David Wise (ed.), *The Economics of Aging*, Chicago: University of Chicago Press, 1989.

Lillard, Lee A., and Yoram Weiss, "Uncertain Health and Survival: Effects on End of Life Consumption," RAND Center for Aging Studies, 1992.

Lillard, Lee A., and Linda J. Waite, "Till Death Do Us Part: Disruption and Mortality in Later Adulthood," RAND Center for Aging Studies, 1992.

Recommendations to the NIA Extramural Program on Priorities for Data Collection in Health and Retirement Economics, Report of the Ad Hoc Advisory Panel to the Behavioral and Social Research Program, National Institute on Aging, May 1988.

Strauss, John, "Does Better Nutrition Raise Farm Productivity?" *Journal of Political Economy*, Vol. 94, 1986, pp. 297-320.

Ward, Michael P., "The Effect of Social Security on Male Retirement Behavior," RAND, June 1984.

Wise, David A. (ed.), *The Economics of Aging*, Chicago: University of Chicago Press, 1989.