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# LIFE-CYCLE ASPECTS OF POVERTY AMONG OLDER WOMEN

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ABSTRACT

In this paper we focus on the relationship between a woman's economic status earlier in life and her poverty status in old age. Previous research on the determinants of poverty among aged women has documented the socioeconomic and demographic correlates of the poor, and has examined the financial impact of adverse late-life events such as widowhood, deterioration of health, and loss of employment. Using data from the National Longitudinal Survey of Mature Women, we find that most women who experience these types of adverse events in their later years do not become poor and that a large majority of older NLSMW respondents who were poor in 1991-2 were poor earlier in their adult lives. Whether women are impoverished by adverse late-life events depends on their economic resources just prior to the event. But, the financial resources available in old age, in turn, depend very much on their long-term economic status throughout much of their adult lives. This article underscores the fact that for most older women these adverse events do not appear to precipitate poverty spells -- at least not within the first couple of years -- and directs attention at longer term circumstances that make some women more vulnerable.

During the past 30 years there has been a substantial improvement in the absolute and relative economic status of the aged population. Radner [1995] documents the large increases in the real (*i.e.*, adjusted for inflation) money incomes of the elderly from 1967 to 1992: inflation-adjusted median pre-tax money income of family units (*i.e.*, families and unrelated individuals) with a head aged 65 or older increased 69 percent. The ratio of the median incomes of aged to nonaged family units rose by 35 percent during this time period. Income inequality among aged units fell substantially over this time interval as well. Lower income aged family units experienced large relative real income gains. Radner reports that mean real income for the lowest income quintile rose by 79 percent over the 25 years, compared to 43 percent for the highest income quintile. These improvements in the economic position of the elderly are reflected in the secular trend in the U.S. government's official poverty rate for persons aged 65 or older.

Since 1966 the overall poverty rate for the elderly has fallen from 28.5 percent to 11.7 percent in 1994 and has markedly improved relative to the poverty rate of the nonaged adult population, as shown in Table 1. Reasons for the improvement in the economic status of the aged population are thought to lie primarily with increased Social Security benefits -- particularly for the low-income elderly -- but also include increased income from private pensions and assets (Radner [1995]; Social Security Administration [1996]). These statistics confirm the popular view that, indeed, the nation's elderly have fared well in recent decades.

Despite this overall picture of prosperity among the elderly, the gains that have accrued to the aged in aggregate have not been equally shared by men and women. Older women are twice as likely to be poor as are aged men. Minority women are at an even greater disadvantage. The nature of the problem can be seen more clearly in Table 2, which examines 1994 poverty rates for the older population in somewhat more detail. Several

features of the pattern of poverty among older women are prominent. Married couples are considerably less likely to be poor than are unmarried individuals. Irrespective of age and race, unmarried men are strikingly worse off than married men. Unmarried older women experience even higher poverty rates than do unmarried older men. Poverty rates for aged blacks and Hispanics are uniformly much higher than for white men and women of similar age and marital status. Controlling for marital status, it is not clear from these statistics that poverty rates increase with age.

Why is the incidence of poverty among aged women disproportionately high? Much of the writing on the topic concentrates on two kinds of explanations. The first type identifies living conditions or personal characteristics that appear to be associated with poverty, such as advanced old age or the circumstance of living alone. The second type of explanation centers on particular events such as earnings loss due to unemployment or retirement, widowhood, or deterioration of health that are plausibly linked to the onset of poverty among older women. That is, the explanations center on specific events that occur during old age that cause poverty, or at least result in a pronounced decline in economic well-being. Yet, for most women these types of events do not appear to be associated with a subsequent poverty episode.

In this article, we focus on the relationship between a woman's economic status earlier in life and her poverty status in old age. The central idea is that poverty in old age is likely to be linked to conditions and events that occur earlier in life. It is these personal histories that leave some women more vulnerable than others as they enter their retirement years. Poverty may, in fact, be virtually unavoidable for many women given their lifelong experiences. Thus, the economic status of many poor older women may simply reflect the

cumulative effect of weak employment histories, financial and marital instability, and an overall lack of opportunity for asset accumulation and provision for retirement. This research examines the extent to which poverty among older women is the result of specific events that happen in old age or is more likely to be a continuation of earlier life circumstances.

Much of the public discussion of older women's poverty is motivated by statistics of the type presented in Tables 1 and 2. That is, the problem is identified on the basis of statistics that describe their economic status at a point in time. Only through longitudinal data -- that is, data that are collected repeatedly over time for a particular sample of respondents -- can the causes of old age poverty be clearly identified. Whether old age poverty happens primarily because of events that happen in later years or as a natural continuation of earlier life disadvantage is important to know in attempts to formulate public policies that address the problem. In the first instance, if specific events that happen in old age are viewed as the primary causes of the problem, then attention is more usefully directed at remedies for inadequacies in private and social insurance provisions. Appropriate policy proposals might include amendments to Social Security, Medicare, or Unemployment Insurance, changes in private pension law, or reform of the health care industry as it pertains to the treatment of the aged. In contrast, a finding that old age poverty is largely a continuation of earlier life financial difficulties would likely shift attention to policies that affect incomes directly (*e.g.*, welfare programs, enforcement of adequate child support and alimony payments) as well as indirect means of increasing family incomes (*e.g.*, education, training programs, improved access to child care, transportation allowances, and job placement services). We return to these ideas in the concluding section.

We are not the first authors to explore these issues, although data limitations have often precluded others from examining the main focus of this article: the link between women's earlier life financial circumstances and their eventual economic status in old age. Four types of studies have some bearing on the research presented here and helped prompt our own interest in the topic. The first group of studies examines the extent and causes of poverty experienced by nonaged U.S. women. Research on poverty in the mid-1970s revealed a disproportionate increase in the percentage of the poor who were women, leading to the coining and popularization of the term "feminization of poverty." Because the rise in women's poverty rates was associated with the growth in female-headed families, much of the research centered on families with young women raising children without a resident adult male, and on women in the early stages of their adult lives. Bassi [1988] and Lamison-White [1992], among others, have pointed to factors that appear to be associated with the relative increase in poverty rates experienced by nonaged adult women as compared with similarly aged men, and factors that are associated with these trends. The increase in the number of female-headed households and the concomitant increase in out-of-wedlock births imposed on many women a primary responsibility for child rearing. Dependence on low-paying jobs with little or no earnings growth as a result of low levels of human capital and occupational segregation further contributed to the poverty status of nonaged women (Bassi [1988], Danziger *et al.* [1982], Heath and Kiker [1992], Kniesner *et al.* [1988], Sawhill [1988], Thomas [1994]). These findings point to events and circumstances that could have a lasting impact on the economic status of women entering old age.

A second strand of the poverty literature comprises cross-sectional studies in which the economic status of older women is measured and correlates of poverty or low income

status are identified. Authoritative reports of this nature are regularly produced by the Bureau of the Census and Social Security Administration (*e.g.*, Bureau of the Census [1996], Social Security Administration [1996]). The relatively high poverty rates for elderly women living on their own has been recently explored by Waehrer and Crystal [1995], who note the importance of shared living arrangements that provide an important source of economic support for aged widows. Much of the relevant scholarly literature is ably summarized by Holden [1989].

A third group of studies consists of dynamic models of specific events (*e.g.*, widowhood, onset of poor health) that are likely to trigger either entry into poverty or a deterioration of financial circumstances for older women. These studies typically use longitudinal data to compare the economic status of women before and after events occur that are likely to affect family income levels. Research has clearly demonstrated the adverse and frequently immediate economic consequences for older women of divorce (Crown *et al.*, [1993]), widowhood (Bound *et al.* [1991], Burkhauser *et al.*[1988], Burkhauser *et al.* [1991], Holden *et al.* [1986, 1988], Zick and Smith [1986,1991]), the onset of poor health (Moon and Juster [1995]), and declines in wage incomes (Burkhauser and Wilkinson [1983], Burkhauser *et al.*[1988]). Some research has also explored instances in which poor older women exit poverty through public income transfers or shared living arrangements (Bound *et al.* [1991], Dodge [1995]).

Finally, there has been some previous research that directly links the earlier life economic status of older women with their economic status in old age. Parsons [1995] has examined transitions into and out of poverty for midlife and older women and documented the disproportionate persistence of poverty for black women. The incidence of lifelong

poverty experienced by some women that is reported in Parsons's research is confirmed in our own study, which utilizes the same data source. Parsons also found evidence linking the onset of poverty among older women with the termination of marriages, either by divorce or widowhood, and the reduction in income associated with a husband's retirement. The orientation of the research reported in this article is quite different from the Parsons study. The focus here is on the correlates and determinants of poverty for women who have reached the beginning of old age, here defined as age 62. The types of long-term poverty experiences of middle-aged women that are the central concern in the Parsons study are considered here as a determinant of the economic status of these same women in old age.

A recurring theme in previous research on aged women's poverty is that if specific late-life events cause poverty among older women, then this consequence strongly depends on family resource levels prior to the event. The feminization of aged poverty most likely occurs at a stage well before the realized rates of aged poverty and reflects, in general, fewer lifetime opportunities for provision of retirement income security. To disentangle the effects of late-life events from earlier-life experiences on older women's poverty would typically require information about their economic circumstances over a fairly long time period prior to old age. Yet, the data used in most previous studies of this type have restricted the investigators to examining family finances during the period immediately prior to the event. It is our intention to take a much longer view that examines the economic circumstances of women for most of their adult lives.

To conduct research of this type one would ideally observe a large, representative group of women over many years, recording details of their economic lives from early adulthood through their retirement years. Over the course of many decades one would learn

how their economic circumstances evolve and perhaps identify factors associated with economic success or financial difficulties. Although no such data source actually exists, the research described in this paper was, in part, motivated by the gradual development of a database that has many characteristics of the ideal. The research we report in this article was conducted using the National Longitudinal Survey of Mature Women (NLSMW), a survey of the economic lives of 5,000 American women spanning three decades. At the time of the first interview in 1967, sample respondents were aged 30-44. By 1992, the most recent interview for which data were available for this study, the nearly 3,000 women who remained in the sample were aged 55-69. During the 1967-92 interval, the NLSMW respondents were interviewed 16 times, and provided an enormous amount of information about their personal backgrounds, families, living arrangements, education and training decisions, work behavior, income sources, and retirement plans. The resulting data provide a unique opportunity to examine the economic circumstances of older women born in 1923-37 and to identify the demographic and behavioral antecedents of late-life economic status. This data source has comparative advantages over other data sets that might be used for comparable analyses. For example, the Panel Study of Income Dynamics (PSID) offers an equally long statistical record of the lives of older men and women, but has far fewer observations for these specific birth cohorts of women. The Survey of Income and Program Participation (SIPP) has superior data on income and wealth but lacks the NLSMW's sample size for these cohorts and measures respondents' incomes for a much shorter reference period, 32 months. In sum, despite some shortcomings of its own, the NLSMW provides a unique opportunity to explore how earlier life circumstances are linked with women's economic status in old age.

The remainder of this article is organized as follows. Section I explains how this research utilizes the NLSMW data set to determine the economic status of sample respondents during the survey's reference years. The main focus is on the incidence of poverty among women aged 62 or older in 1991-2. The socioeconomic and demographic characteristics and financial circumstances of low income respondents are contrasted with those of the older women who are financially better off. This material is similar to other analyses of economic status in that it examines the poverty status of older women during a single year and relates this status to a set of plausible determinants. In Section II of the article, attention is shifted to a longer term perspective on the economic status of the NLSMW sample. We present statistics that summarize the respondents' poverty status over the 1966-92 period, a timespan that constitutes the bulk of their adult lives. Correlates of long term poverty status are examined and discussed, and the relationship between earlier life poverty spells and poverty in old age is documented. Section III documents the occurrence of a small set of important late-life events that are often depicted as proximate causes of old age poverty. These events include widowhood, divorce, the deterioration of health, and a reduction in income associated with retirement. This analysis shows that these events, in and of themselves, are not very good predictors of old age poverty. Rather, our results point to the superior predictive power of a summary measure of a woman's earlier long-term economic status in explaining her poverty status in old age. Section IV summarizes and concludes.

## I. Characteristics of poor older women in the NLSMW

We begin this section of the article by examining the economic status of older women as documented in the NLSMW. Attention is directed at economically disadvantaged older

women; that is, those women whose financial circumstances are such that they would be judged poor, or nearly so, by U.S. Federal government standards are of primary interest. In this article older women are defined as those women who have attained age 62, the earliest age at which they could begin to receive Social Security retirement benefits. The oldest of the NLSMW respondents attained age 62 in 1985 and by the 1992 interview half of the survey respondents had reached this age.

We begin with a brief description of the procedures and conventions that were adopted in using the NLSMW data to construct the poverty statistics presented below. First, to make the statistics somewhat comparable with those presented in other studies, we use the general methodology for setting poverty thresholds used by the Census Bureau, but implement several modifications. At present, the official Federal government poverty thresholds are increased each year to reflect any price inflation that has occurred. These thresholds differ among families depending on the age of the head, family size, and number of children in the family under age 18. Although the basic methodology of the official poverty measure has not changed since 1965, there have been various modifications in the details. For example, the annual updating of the thresholds to compensate for price increases used to be based on the increase in the cost of the "economy food plan;" it is now based on the increase in the Consumer Price Index for urban consumers (CPI-U). Further changes have eliminated the separate thresholds for rural families and dispensed with the idea of different thresholds depending on the gender of the household head. Because our purpose is to determine which sample respondents appear to have encountered financial hardship during the survey years -- and not necessarily to apply the contemporaneous official poverty threshold to annual income data -- we made the 1993 poverty thresholds retroactive, deflating

them by the CPI-U series. Therefore, conceptually we apply the current methodology to past years. Another important departure from official practice is that food stamp income is included in our annual family income total. In computing their annual estimate of the number of U.S. poor, the Census Bureau omits in-kind income from family income totals, counting only money income. Since the 1971 amendments to the Food Stamp Act, food stamps have been very much the equivalent of cash for most recipients.[1] Accordingly, food stamp income is included in our family income totals. We believe that this treatment provides a better description of a family's financial resources but has the adverse effect of further reducing the extent to which our poverty estimates might be comparable to official Census figures. Finally, to assess the economic status of the NLSMW respondents in various years, the respondents' annual family income figures were divided by the relevant threshold to compute income-to-poverty ratios (IPRs) for particular survey years. Following convention, women are "poor" if their IPR is less than 1, and "near-poor" if $1 \leq \text{IPR} < 1.25$.

Two other features of the NLSMW data posed difficulties for this study. First, although 16 interviews were conducted with the Mature Women from 1967-92, the income data for some years proved to be highly suspect, particularly for those years in which

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[1]Prior to the 1971 amendments, eligible households had to buy their full food stamp allotment. The 1971 changes reduced or eliminated the purchase requirement for many low-income households and instituted a variable purchase option by which families could purchase less than their full allotment. A further change in the program implemented in 1979 converted the previous "bonus value" of the food stamp transfer (*i.e.*, the difference between the face value of the food stamp allotment and the purchase price paid by the recipient) to the value of the new food stamps. For example, if under the old program rules a family had to pay $200 for $500 worth of food stamps, an eligible family would now simply be given $300 in food stamps. These changes have made food stamps equivalent to cash for most users.

interviews were conducted by telephone.[2] The figures reported in this paper focus primarily on data collected during the in-person interviews in years 1967, 1969, 1971, 1972, 1977, 1982, 1987, 1989, and 1992. In all in-person interview years, the total family income (TFI) variable is calculated as the sum of all income components reported during the interview. If values were missing for any component of TFI, then the observation for that year is treated as missing and is discarded in the analysis. There were numerous such deletions and, as a result, roughly 30 percent of the sample was lost in each year.[3] Another problem stemmed from the wording of the survey questions about family income. NLSMW interviews were generally conducted during the summer months and most of the time asked about income received during the previous calendar year. Through 1989 all in-person interviews used the previous calendar year as the reference period. The 1992 in-person interview asked for information concerning the last 12 months, a period spanning roughly mid-1991 to mid-1992. To determine poverty status for this 12-month period, the arithmetic mean of the 1991 and 1992 annual thresholds was used.

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[2]Interviews were conducted in 1967, 1968 (a brief mailed questionnaire), 1969, 1971, 1972, 1974, 1976, 1977, 1979, 1981, 1982, 1984, 1986, 1987, 1989, and 1992.

[3]In an effort to retain a larger sample, alternative TFI calculations were attempted. Including income components only when they were available and setting their values to zero otherwise produced sample poverty rates that were very much higher than those estimated for the same time periods using Current Population Survey data. The simple summation approach was therefore abandoned. For the other survey years when information was collected over the telephone, the nature of income-related questions was less comprehensive and provided fewer details. This made calculation of the TFI variable even more elusive. Therefore, none of the telephone interview years were used to determine family income and poverty status. Despite these shortcomings, income data from the telephone interviews are useful when some individual components of income are needed. For example, wage income, which is reported in all the surveys, is used to determine our measure of lifetime labor market attachment, a variable that is used in this article.

The specific procedures used to create our data set are described in an unpublished appendix to this article, available on request from the authors.

Table 3 displays poverty rates and IPRs computed for the 9 in-person survey reference years. In each year, the sample consists of survey respondents who provided complete income information for that year. Except for the 12-month period that straddles 1991 and 1992, all figures pertain to annual income received by a woman's family during the designated calendar years.[4] Table entries are weighted percentages in which the weights account for oversampling of minorities and sample attrition through time.[5] The column labeled "% Poor" displays computed poverty rates for the NLS Mature Women in each of the years. These NLSMW-based rates can be compared with official Census Bureau rates published for the 9 reference years. Our poverty rates are lower by 3.4 percentage points, on average, than the Census Bureau estimates for females (all ages), and display the same downward trend in the 1970s followed by an increase in the 1980s.[6] In light of the high poverty rates for American children, who represent a sizeable component of the overall female population, it is unsurprising that the poverty rates for a subset of adult women are somewhat lower.

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[4]Here and in the remainder of the article "families" include respondents who do not live with any other family members. They meet the Census Bureau definition of unrelated individuals residing in a household and are treated here as single-person "families."

[5]The weights used throughout this study are supplied by the Center for Human Resource Research at The Ohio State University as part of the public-use data set. These weights were not adjusted for our deletion of cases for which there were incomplete or missing data.

[6]Ideally we would compare our figures with official poverty rates produced for women in the same birth cohorts for all survey reference years. Published rates for these specific cohorts were not available, but rough comparisons are possible. For instance, in 1991-2 the NLSMW respondents were aged 54-69 and their estimated poverty rate was 12.7 percent. The Census Bureau's Series P-60 Reports for 1991 and 1992 indicated that for women aged 55-64, the poverty rates were 12.1 and 12.2 percent, respectively. Similar comparisons were made for three other reference years (1981, 1986, and 1988) and the average discrepancy was 2.0 percentage points. When the NLSMW-based rates are compared with Census Bureau poverty rates for the general population (all ages), our rates are about 1.8 percentage points lower, on average, and again display similar trends.

Table 3 statistics also provide an overview of the distribution of income during the 9 reference periods. Table entries (Columns 2-8) represent the (weighted) percentages of the women whose IPRs fall in the specific ranges indicated by the table's top margin. By definition, individuals with family incomes at Levels 1 and 2 are "poor" and, by convention, individuals whose IPRs fall in the 1.00 - 1.24 interval (Level 3) are "near-poor." In all years excepting 1981, roughly 4-5 percent of the NLSMW respondents who were not poor were nearly so. Towards the other end of the income distribution, in all reference years over 60 percent of the women in these birth cohorts had incomes that exceeded twice the relevant poverty threshold (Levels 6 and 7). As these cohorts have grown older, the percentage of women whose family incomes were at least 3 times the poverty threshold is noticeably higher than in the early years, a circumstance that mostly reflects increased earnings with age.

In any examination of the economic status of the NLSMW cohorts over time, it is important to consider the potentially confounding effects of sample attrition over the life of the survey. The sample was initially chosen in the late 1960s to be generally representative of the civilian, noninstitutionalized population of American women born in 1923-37. To enable researchers to make valid statistical inferences in instances of different experiences and outcomes for whites and blacks, black women were deliberately oversampled. The sampling weights used in the calculations in this article take this initial oversampling into account and adjust the impact of each respondent's data values so that weighted sample mean values are intended to approximate population values. In addition, however, the sample has decreased through time as individuals have left the survey for various reasons. The reasons for attrition of the sample include death, a failure of the interviewer to locate respondents, and respondents' refusal to participate in further interviews. By 1992, 2,953 (58.1 percent)

of the original 5,083 respondents continued their participation in the survey. In order to keep the sample representative of the general population, the sample weights are adjusted for each interview to reflect changes in the composition of the active sample. Previous examination of the reweighting procedure has concluded that these compensating changes in individual sampling weights leave the sample representative [Center for Human Resource Research, 1995]. Reweighting is carried out on the basis of race, length of time of residence at the domicile at the initial interview, and the respondent's education level.

Of concern to us is the extent to which poor and low-income respondents might be more likely to leave the survey over time. This differential attrition might occur for various reasons. One reason is that low incomes are associated with higher mortality rates. In addition, the poor tend to be more transient and are often difficult to locate for interviews. If poorer respondents have been more likely to leave the sample, then the NLSMW-based poverty rates that we calculate will underestimate the true rates experienced by these cohorts in the general population. The extent to which this has occurred in the NLSMW data is unclear, but there is a basis for optimism that the problem is not severe. Extensive research on the determinants of individual income and earnings has shown education, age, gender, and race to be strong predictors. As such, reweighting of the NLSMW sample that explicitly (and implicitly in the case of age and gender) controls for these predictors probably lessens the impact of any differential attrition by low-income women from the survey. Nonetheless, to the extent to which the regular sample reweighting imperfectly controls for this problem, our poverty rate figures for later sample years probably underestimate the prevalence of poverty among NLSMW cohorts in later years.

Differences in the economic status of older women can be distinguished by both the

amounts of income received and the sources of that income. Statistics on the income of the older population typically show that the lower income elderly derive a large majority of their income from Social Security and other public transfer programs such as Supplemental Security Income and food stamps [Social Security Administration, 1996]. The interview at which the oldest of the respondents first attained age 62 occurred in 1986, a year in which interviews were conducted by telephone. By the time of the 1992 interview, 1,469 (*i.e.*, 50 percent) of the nonattriters had reached age 62. Table 4 summarizes the economic status of the NLSMW respondents as reported at the 1992 interview, and compares the economic status of women aged 62 or older with that of the younger women in the sample (then aged 55-61). The older group's computed poverty rate was 12.7 percent, nearly the same as the 12.8 percent derived for the younger group.[7] Table 4 consolidates the data for the poor and near-poor for the 55-61 and 62-69 age groups, comparing income sources and average annual income amounts with those reported by women designated as "all others" (*i.e.*, IPR $\geq$ 1.25).

Entries in Table 4 are weighted arithmetic mean amounts of total income and its components received by the NLSMW respondents and their families in 1991-2.[8] Aside from

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[7]Of the 1,469 women aged 62+ in 1991-2, only 983 report complete income data and our poverty statistics are computed on the basis of data for this subgroup. Of these 983 cases, 184 women (18.7 percent) were identified as poor. Applying the sample weights produces a poverty rate of 12.7 percent. Of 1,484 women below 62 years of age, 1,002 report complete income data of which 181 report being poor. The unweighted and weighted poverty rates for this group are 18.1 and 12.8 percent, respectively.

[8]In-person interviews have collected information for a variety of income sources. Earnings for the respondent and spouse include wages and salary income as well as income reported from business or professional practice in the last 12 months. Asset Income is available as joint family income from sources such as farm, rent, dividends, and "other" which includes royalties, annuities and contributions of family members living elsewhere. Pension Income captures forms of retirement income such as private pensions, Federal, state

confirmation of the old saw "the rich are different -- they have more money," there are several features of these statistics worthy of comment. Perhaps most notable for the younger cohorts (*i.e.*, respondents younger than age 62) is the importance of labor market earnings for women who report family incomes in which their IPR $\geq 1.25$ (*i.e.*, the "all others" group). In addition, the role of women's labor market activity in generating total family income is substantial and compares very favorably with the male contribution towards family income. The bottom two lines of the table provide information about the financial importance of Social Security (including retired-worker, spouse, and survivor benefits) and Railroad Retirement benefits ($N^{w/oSSR}$), and total government transfer payment ($N^{w/oAllG}$) inclusive of Social Security and Railroad Retirement benefits. Table entries in these two lines indicate how many women would be included in that column's economic status if there were no government transfers of the type indicated. For example, if there were no Social Security or Railroad Retirement payments to the families of the younger cohorts, the number of women living in poor and near-poor families would have increased from 248 to 304, a 23 percent increase. Eliminating government cash transfers and food stamps would have increased the number of NLSMW respondents aged 55-61 who were poor or near-poor by 34 percent. As

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and local government, military and union pensions, and individual retirement accounts (IRAs) as well as other miscellaneous pension income sources. Social Security income includes Old Age and Survivors Insurance payments and Railroad Retirement benefits. Other government transfers include various sources of disability income such as Social Security disability income, Veterans' Compensation, Worker's Compensation, and other forms of disability income. Both unemployment compensation as well as supplemental unemployment benefits are reported in the government transfer component. Other cash transfers that are included are food stamps, Aid to Families with Dependent Children (AFDC), and Supplemental Security Income (SSI). To maintain clarity we report aggregate amounts for respondent and spouse, though both retirement income and government transfers are reported separately for each person in the NLSMW. The final component includes private transfers such as alimony, child support payments, and other family members' incomes.

one might expect, the importance of Social Security and other government transfer payments to women aged 62-69 and their families is even greater. The elimination of Old-Age and Survivors Insurance or Railroad Retirement benefits would have increased the number of these older women who were poor or near-poor by 281 -- a 105 percent increase, while eliminating all government transfers of cash and food stamps would result in a 114 percent increase. As Table 4 indicates, earnings become a far less important source of income for women and their families as they advance into their 60s, and Social Security becomes a critical component. For the poor/near-poor group of women aged 62+, Social Security and other government cash transfers constituted 80 percent of family income on average, while composing only 33 percent of total income for all other women, although the dollar value of these transfers is considerably higher for the higher income group. Private transfers (Alimony, Child Support and Other family members' income), while vastly different in magnitude, constitute about 12 percent of total income for both the aged poor/near-poor and all others. The gap in asset and pension income between the poor/near-poor and all others is conspicuous. In fact, the average income received by the higher income older group solely from private pensions nearly equals the average total income reported for the poor/near-poor group. The Table 4 income figures confirm a finding that is routinely reported by the Social Security Administration in the biennial publication *Income of the Population 55 or Older* (Social Security Administration [1996]). When the income of the lowest quintile of aged units 65 or older[9] is compared with incomes received by the two highest quintiles, it is clear that poorer families receive nearly all of their income via government transfers, particularly

[9]In these reports "aged units aged 65 or older" are defined as married couples living together where at least one person is aged 65 or older, or unmarried persons who are 65 or older.

Social Security benefits, while higher income families typically receive their income from more sources.

As has been consistently demonstrated in the annual reports of the Bureau of the Census on the poverty status of the U.S. population, economic status is predictably correlated with certain characteristics of individuals and their families.[10] Table 5 compares how some of these characteristics differed, on average, between poor/near-poor and all other women in 1991-2 in the NLSMW database. Again, the sample is divided into two groups: the younger Mature Women aged 55-61, and the older group aged 62+. Table 5 delineates two or more categories for each of the following characteristics: the woman's level of education (years completed), health,[11] reported marital status at the 1992 interview, living arrangement, region of the country,[12] race, pension receipt and number of children. This last item was asked of the respondent in 1977. Because it does not include adopted children or stepchildren, it serves as a less than perfect proxy for the respondent's child care responsibilities. Pensions include those earned by either the respondent or her husband. Entries in Table 5 represent the percentage of respondents with the indicated age-range/economic-status category for each characteristic.

Some of these characteristics are time invariant (*e.g.*, race, and usually education) while others are time-varying correlates over which the respondent has varying degrees of control (*e.g.*, health, region, marital status). It is unsurprising that Poor & Near-Poor status

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[10]The Census Bureau's poverty estimates are released each year in the *Current Population Reports*, Series P-60.

[11]The survey provides self-reported responses of excellent, good, fair, and poor, which were collapsed to form the two broader categories displayed in Table 5.

[12]South vs. nonsouth was the extent of regional information available in the NLSMW public-use file.

is positively associated with lower education levels, poorer health, being unmarried, and being nonwhite. We also find that poverty is associated with living in the south, little private pension income, living alone, and having 5 or more children. This last finding might indicate that large families impede both family earnings and the accumulation of resources to finance retirement, ultimately contributing to the poverty of mothers in old age.

The results of Tables 4 and 5 indicate the economic status of the NLSMW cohorts in 1992, at ages 55-69, and identify some associated factors. In the next section we look at longer term measures of poverty that cover much of the adult lives of these cohorts and relate these earlier life measures to their late-life economic status as recorded for 1991-2.

## II. Assessing poverty status over the life cycle

We now move from the cross-sectional, or snapshot, view of aged poverty presented in Tables 3-5 to assessing poverty status over the entire 27-year period (*i.e.*, 1966-92) covered by the survey. Again, although the NLSMW data collection effort obtained income information for 16 of these years, the analysis presented here focuses on the income reported at the 9 in-person interviews, which still span the whole 1966-1992 period. To determine lifetime poverty status, we consolidate and classify respondents' poverty status for 9 interviews into four categories: Never Poor (IPR never measured less than 1), Briefly Poor (IPR $<1$ during 1-2 reference years), Often Poor (IPR $<$ 1 in 3-4 reference years), and Predominantly Poor (IPR $<$ 1 in 5 or more reference years).[13] Again, it should be emphasized that the 9 reference years that are examined are not consecutive, and are sometimes separated by as much as 5 years. Thus, a finding that a woman is poor in 3 or 4

[13]Additional details on how years of poverty are determined, counted, and categorized are described in the unpublished data appendix.

reference years often indicates that she is observed as poor at "spot checks" that span a decade or more. Furthermore, many women interviewed in 1992 are missing income data for one or more of the in-person interview years, either due to missed interviews or failure to provide information about one or more income sources during an interview. The lifetime poverty classification procedure adopted here and in the remainder of the article ignores missing information; we simply count the number of interviews at which a woman is demonstrably poor. This procedure causes us to undercount the lifetime incidence of poverty among the 1992 survey respondents in that it implicitly assumes nonpoor status when family income data are missing.[14]

Table 6 presents lifetime poverty measures tabulated by race for the Mature Women who were aged 62 or older by the 1992 interview. Twenty-nine percent of the women in these birth cohorts have been poor during at least one reference period. The differences by race are striking. Among older black women, more than 60 percent have endured at least one spell of poverty. This result is unsurprising in light of the large differences in education and employment opportunities available to older black and white women. Herz [1988] notes

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[14]The extent of missingness in the income data is cause for some concern. Of the 1,469 women aged 62 or older at the1992 interview, 90 percent have family income data missing for 1 or more of the 9 in-person interview reference years. The average missingness in a given reference year is 31 percent. On a positive note, 50 percent of the sample members have income data for 7 or more of the 9 reference years, while only 6 percent of the sample has income data for 3 or fewer years.

Because the identification of women who are poor during the reference years is so central to this research, imputation of missing income amounts was considered. Sample attrition and our imposition of age restrictions together reduce the useable sample size substantially, and make the computed poverty rates for the remaining observations quite sensitive to the imputation method selected. Any imputation approach that might be employed would have its own limitations and, in our view, would further cloud interpretation of the results. Therefore, we opted for the more conservative treatment of the data reported in the text.

that in 1987 black women aged 55 or older were 3 times as likely as white women to be in service occupations (for example, household workers), whereas white women were almost 3 times more likely than black women to be in administrative support (*i.e.*, clerical) occupations. The Herz study notes the narrowing occupational differences between younger cohorts of black and white women which may be a harbinger of improved relative economic conditions for future generations of older black women.

Table 7 presents correlates of lifetime poverty status grouped by the categories of Never Poor, Briefly Poor, Often Poor and Predominantly Poor for women aged 62 or older at the 1992 interview. We consider the role of primary factors such as children, marital history, education, and labor force attachment.[15] The likelihood of a woman experiencing a poverty spell over the life cycle increases with the number of children. When the NLSMW cohorts were aged 20-39, the household division of labor was more rigidly defined than it is now. The customary effect of younger children was to reduce labor supply during the earlier part of their mothers' worklives and thereby reduce lifetime labor market experience. Also, the presence of children altered family consumption and saving. Smith [1989] illustrates the the complex set of financial adjustments required by the presence of children as well the negative cumulative effects of child rearing on women's wages. He makes use of previous research that used 1976 PSID data to study wages of married women to report that a typical American woman who raises 2 children loses, on average, 4.5 critical years of labor market work.

Educational attainment has always been a strong predictor of earnings. The results of

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[15] A further cross tabulation by race would have shed additional light on the relative strengths of these poverty correlates, but the low numbers of observations in each category precludes such an analysis.

Table 7 show that low levels of education -- particularly when completed years of schooling are 8 or less -- are strongly associated with one or more poverty spells.[16] The rise in returns to skill in recent decades, especially for college education, is well-documented (Katz and Murphy [1992]). The added rewards to schooling along with a declining tendency for married women with higher earning husbands to limit employment (Goldin [1990]) explain why we observe only a tiny fraction of highly educated women experiencing substantial poverty.

One factor of interest in assessing lifetime poverty experiences is the role played by a woman's marital history. With marital status information recorded at 15 of the interviews, we are able to summarize -- albeit crudely -- a respondent's marital history with a Percent Married variable. Percent Married is defined as the ratio of the number of years that a person reports being married to the number of years for which marital status information is available for the respondent. Preliminary examination suggested that the data values for Percent Married could be conveniently summarized by the 4 categories displayed in Table 7: Never Married, Infrequently Married (married no more than half the time), Mostly Married (married more than half the time, but not always), and Always Married. Family income adjusted for family size is, on average, higher for married couples than for unmarried women, especially given the historically weak labor market histories of older women. For older persons, the Social Security income for a married couple is at least 1.5 times that of a nonmarried person, whereas poverty thresholds rise by only 26 percent. Staying married is a successful and effective anti-poverty device, a result which is substantiated by the numbers in

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[16]The small number of cases in which women had 17+ years of schooling in the Often Poor and Predominantly Poor categories led us to combine the 13-16 and 17+ years of schooling into one category.

Table 7. Although the never married group has the largest propensity of being predominantly poor, those infrequently married have a greater likelihood of experiencing one or more episodes of poverty.

The long time span tracked by the NLSMW data set also allows examination of the role of long-term labor force attachment. Other researchers have used tenure on a job or actual/predicted work experience variables to study labor market attachment. Here we construct a measure of Labor Force Attachment as follows: If the respondent reported wage or business income during an interview, then she is considered a labor force participant in the reference year. There are a total of 16 years of information available.[17] Unlike total family income, the wage and/or business income component is available for a relatively large percentage of respondents -only 4 percent of the sample on average reported these components as missing. The total number of years in which the respondent participates is divided into 4 categories of Labor Force Attachment: Weak (0-2 years of labor force participation), Moderate (3-7 years of labor force participation), Predominant (8-13 years of labor force participation), and Strong (14 or more years of labor force participation). As expected, women who display the greatest accumulated labor market experience have the lowest likelihood of being poor at any point in their lives. Typically, the more continuous the participation in the work force, the higher the wage growth. In contrast, those who report 2 years or less of labor market activity in the entire survey period, face a 40 percent chance of being poor 1 or more times.

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[17]The 1968 survey collected very limited information from the respondents. Marital status and wage income are not available. In the 1971 survey, questions were asked about income in the 1969 calendar year. This explains the discrepancy in the total number of years available to assess marital status and labor force attachment.

Why are some women more vulnerable in old age? Most previous research centers on specific events or circumstances that arise in old age that trigger the onset of poverty, or at least are associated with a pronounced decline in economic well-being. Yet, for most women these same conditions do not appear to cause any noticeable financial hardship. Presumably their personal economic histories result in some women being more at risk of poverty as they enter their retirement years. Table 8 shows how the economic status of the oldest NLSMW women (aged 62-69) in 1991-2 relates to a summary measure of their economic status over the period 1966-89. The women's personal histories were categorized as before: Never Poor, Briefly Poor (income below poverty line in 1 or 2 interviews), Often Poor (income below our poverty threshold in 3 or 4 interviews), and Predominantly Poor (income below poverty threshold in 5 or more interviews).[18] Table entries indicate the percentages of women who occupy each category. Almost 13 percent of the sample were poor and 7 percent near-poor in 1991-2. The economic histories of these women strongly predict their financial circumstances at age 62+. Seventy-five percent of women who were poor in 1991-2 had earlier documented poverty spells. Only 4 percent of women who had never experienced poverty were poor in 1991-2, while 60 percent of women who had been predominantly poor were still poor in 1991-2. In Section III we further examine the explanatory power of women's earlier life financial status relative to the incidence of potentially impoverishing events in old age.

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[18]Note that for Tables 8 through 10, the lifetime poverty status is calculated in a slightly different way than in Tables 6 and 7. Because we are interested in relating *prior* lifetime poverty experience to *current* (*i.e.*, 1991-2) poverty status, the lifetime measure is now determined on the basis of poverty reported at *8* in-person interviews conducted in 1967-89, and not on the basis of all 9 such interviews. Missing income data is treated in the same manner as described earlier in the discussion of Table 6.

## III. The Dynamics of Poverty Among Older Women

The personal characteristics of older women that are correlated with poverty and near-poverty status (shown in Table 5) -- especially poor health and the circumstance of living alone -- suggest that many older women might become poor due to particular "traumatic events" that befall them. A woman's economic status could deteriorate as a consequence of the loss of her husband through death or divorce, the onset of a major health problem for her or her husband, the involuntary loss of employment by her or her husband, or a loss of earnings associated with her own or her husband's retirement. In this section we report on the extent to which poverty at age 62+ among the NLS Mature Women can be linked to any of a small set of traumatic events that might be expected to worsen their economic status. To accomplish this task, ideally we would like to measure respondents' economic status every year and note those instances where women either became poor or, at least, experienced a notable decline in their income-to-poverty threshold ratio. Once the timing of the deterioration of the respondents' economic status had been determined, we could then examine their lives during an immediately earlier time interval (say, two years) to determine whether the deterioration appears to be linked, at least in time, with one or more traumatic events. Although this procedure would not identify causation *per se*, widespread incidence of the onset of poverty closely preceded by a traumatic event would lend plausibility to a view that the event had probably played some role.

In formulating a research strategy it is important to consider the nature of the dynamic by which a traumatic event might inflict lasting financial harm. The most straightforward cases to identify would be those situations in which a seemingly stable financial status is measured prior to the occurrence of a traumatic event. After the event we

could measure the new financial status after an appropriate time interval has passed, which would then allow a comparison of post- and pre-event circumstances. Any observed change in financial status might then be attributed to the occurrence of the event. Several factors potentially cloud the interpretation of results from this type of exercise. First, there is always the problem that other ignored or unobserved factors could be at work that also affect economic status. The effect of these other confounding influences might be falsely attributed to the traumatic event. For example, a nonpoor married woman might become widowed and also incur large investment losses within a short time span. So, we might attribute her worsened financial circumstances to widowhood although the situation is more accurately explained by her lower investment income. Similarly, confounding influences might mask the adverse economic consequences of a traumatic event. For example, widowhood might leave an older woman so destitute that her adult children permit her to move into their home and share living expenses. In this case we might find no deterioration or even an improvement of financial status due to unexamined behavior that offsets the otherwise adverse impact of widowhood.

Perhaps even more of an obstacle is the fact that the economic consequences of many adverse events do not play out as tidily or quickly as the researcher's ideal example would have it. In some instances anticipated traumatic events might cause a woman's financial status to deteriorate in advance of their occurrence. An example might be a husband whose lingering illness and eventual death depletes the family's financial resources well in advance of his passing. In other instances the financial consequences of a traumatic event might take many years to be fully realized. For instance, widowhood might result in the surviving wife slowly depleting family assets over a number of years to maintain living standards, and cause

her to become poor only after many years have passed. These uncertain dynamics pose something of a dilemma for the researcher. If before-and-after observations are made on the financial circumstances of women relatively close to the traumatic event, the chances of confounding factors being responsible for any change in economic status are lessened; however, the chances are increased that the full financial consequences of the traumatic event are not measured. But, if the observation periods before and after the traumatic event are increased to allow for effects to be more completely observed, the probability of occurrence of confounding influences also increases, also increasing the chance that any effect solely attributable to the traumatic event is mismeasured.

Finally, nearly all databases that might be used in this type of investigation are likely to contain information that limits the extent to which the timing of events can be determined. It is often difficult to ascertain the real economic impact of someone's self-reported health problem, to say nothing of dating the onset of the condition. Often information about family and household composition does not exactly match up with the reference period for income. Burkhauser *et al.* [1986] showed how survey procedures can artificially increase the number of newly widowed and divorced women who appear to be poor. They pointed out that if a woman interviewed in year *t* has lost her husband due to either death or divorce within the past year, she reports data about her family size and composition at the time of the interview (*i.e.*, year *t*), but the survey often records her family's income for year *t-1* and excludes any income generated by the husband, even if he was alive for the entire year. The basic problem stems from using information about family composition and family income from

different periods to gauge financial status for a single period.[19] In general, because no longitudinal survey has the resources to ask the most comprehensive set of questions on a frequent, recurring, basis, it is inevitable that determining the sequence and timing of a set of events is somewhat inexact. Information recorded for different reference periods must be combined to make judgments about economic status for a single period.

The upshot is that even data sets that continuously measure economic status from year to year pose a troublesome set of empirical problems to overcome if one is interested in linking the occurrence of traumatic events with changes in financial well-being. The difficulties are compounded in the NLSMW database because respondents have not been surveyed every year, nor have interviews occurred at regular fixed time intervals. Interviews were conducted in 1982, 1984, 1986, 1987, 1989, and 1992 but, as indicated earlier, the quality of the family incomes data was found to be unreliable for the 1984 and 1986 telephone interviews. As a result, for survey respondents who were still active sample members at the 1992 interview, there is potentially (*i.e.*, assuming no missing data) good family income data for the reference periods 1981, 1986, 1988, and the 12-month interval 1991-2. With only this periodic snapshot of family income available, it is not possible to determine the precise year in which a woman might have become poor. For instance, if a respondent is present for all interviews and is judged to be poor only in 1991-2, it is unclear when her poverty spell began in the 1989-92 time interval. Of course, if for whatever reason she was not interviewed in 1989, or has missing income data for that year, the time

[19]Burkhauser *et al.* also demonstrate how combining family composition information with family income data for different periods in this manner leads to an overstatement of the number of exits from poverty one year after widow/divorced status is first reported in panel data sets.

interval during which the woman might have become poor is even longer.

The degree to which particular types of traumatic events can be identified and dated varies in the NLSMW data set. It is a relatively simple matter to document and date marital transitions during the 1967-92 survey years in light of the regular appearance of a sequence of questions about marital status and changes in marital status in nearly all of the questionnaires. In the interest of simplifying the analysis and treating ostensibly similar financial circumstances in the same manner in light of the small overall sample size, we combine the "separated" and "divorced" NLSMW marital status categories and designate all women in either category as "divorced." This consolidation modestly lowers the number of older women who we report as becoming divorced or widowed because the pool of married women is undercounted.[20]

The health status of respondents and their spouses is inherently more difficult to measure. Because we are interested in the consequences of a deterioration of health on family income, the analysis uses information about whether a health condition prevents or limits work for either the respondent or her spouse (if married). Individuals who report this type of health limitation also provide information about when the problem first occurred. Self-reported health measures have well-known shortcomings. A specific health problem can have very different effects on capacity to work depending on an individual's age, occupation, and attitude towards work. Therefore, onset of an identical health condition can elicit very different reactions to questions about whether health status limits work. In addition, some nonworking individuals probably claim that health prevents them from working because this

[20]As defined here, "widowhood" occurs only when the husband of a currently married woman dies.

is viewed as a socially acceptable reason for withdrawing from the labor force. Despite these flaws, it is still plausible that many older individuals who report the onset of a health problem that limits work will also incur a decline in family income.

An important potential cause of reductions in family income is retirement, either on the part of an older woman or her spouse. Unlike divorce, death, or poor health, retirement is usually viewed as a voluntary act, especially now that mandatory retirement policies are mostly forbidden by law. If retirements are voluntary, it is sensible to question whether it is very likely that workers would choose to retire into a life of poverty. There are several scenarios under which this might occur. First, some retirements, although technically voluntary, might be prompted by changes in personal health, reduced rates of compensation, or by a deterioration of working conditions. Any of these circumstances might prompt an individual to retire even though the resulting financial circumstances might not seem attractive. Second, it is probably the case that some retirees misjudge their retirement resources, sometimes as a direct result of poor planning, or possibly due to an unforeseen financial setback. In fact, *un*retiring is a fairly common phenomenon and one popular reason is that retirees return to the labor force because of a desire or need for additional income. Thus, although retirement should not be viewed as traumatic in the same way as the previous types of events, declining economic status can probably be associated with retirement in a minority of occurrences. For this reason, we examine this link in the NLSMW data.

Although retirement is largely a voluntary act, unemployment is often viewed as decidedly involuntary. Our efforts to examine the impact of unemployment on economic status were unsuccessful in cases of both the respondents and their husbands. In the later interview years of the survey, relatively few women report unemployment and the number

of weeks of unemployment that they report pertains to the entire interval between surveys. Therefore, the relatively small number of women involved and our inability to date the occurrence of the unemployment spell(s) led us to forgo the inclusion of any unemployment information for the respondents. In addition, the survey contains even less information on the unemployment experiences of husbands. In 1992 no information was gathered on the number of weeks that husbands were unemployed, ruling out the possibility of studying the impact of husbands losing jobs late in the survey period. In the end the decision was made that the data set simply could not support any useful analysis of late-life unemployment.

Our concern is with the determinants of poverty for older women and the extent to which entry into poverty can be linked with the occurrence of six traumatic events documented in the NLSMW data set: divorce, widowhood, onset of health problems for either a woman or her spouse, and retirement by either a woman or her spouse. We focus on the economic status of women aged 62 or older. Because the NLSMW cohorts were born in 1923-37, the oldest women in the sample attained age 62 in 1985. Accordingly, in this section of the article we examine the economic status of women aged 62+ in 1986, 1988, and 1991-2, again restricting our analysis to respondents who remained active members of the panel through the 1992 interview. Table 9 indicates that the number of respondents who had attained age 62 rose from 446 in 1986 to 1,469 in 1991-2.

Table 9 displays statistics for three 1-year periods (1986, 1988, and 1991-2) on the recent occurrence of any of the 6 traumatic events for women who were aged 62+ in each reference year. By "recent occurrence" we mean that the event happened either concurrently with or in the 2-year period prior to the reference year. For example, we observe a woman's economic status in 1986 and determine whether she experienced any traumatic

event in the 1984-6 time period. The incidence of traumatic events is noted separately for women categorized as poor and non-poor.[21] Table 9 displays both raw unweighted sample counts and weighted counts.[22] In a given reference year, it is possible for respondents to have experienced multiple recent traumatic events (*e.g.*, onset of a health condition that limits work *and* retirement). Multiple occurrences for a particular reference year were relatively infrequent and happened most often in 1986 (about 8 percent of respondents) and least frequently in 1991-2 (less than 1 percent of respondents). To examine whether differences in the incidence of traumatic events for the poor and nonpoor were meaningful, weighted counts were converted to sample proportions and t-tests were conducted to ascertain whether differences in sample proportions between the poor and nonpoor groups were statistically significant (Allen [1966], pp. 165-7). The statistical results are denoted by asterisks shown in the upper half of Table 9, which displays the information for the respondents who are poor. These findings are decidedly mixed. Divorce has occurred infrequently among the NLSMW respondents during the 1984-92 interval. Nonetheless, poor women had statistically significant higher rates of recent divorce in 1988 ($\alpha$ = .10) and in 1991-2 ($\alpha$ = .01). Widowhood has been more common than divorce in later years in the NLSMW. Recent widowhood was relatively more frequent among poor women in 1988

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[21]Several points should be noted about this analysis. First, it would have been preferable to link the traumatic events to the *onset* of poverty rather than to poverty status. Unfortunately, missing income data for 1986-92 so dramatically reduced the sample size that this preferred approach was abandoned. Our analysis of these poverty transitions did reveal a pattern of results quite similar to what is reported here. Second, when the respondents were classified as poor/near-poor vs. other nonpoor, Table 9 entries changed only slightly.

[22]Sample attrition, age restrictions, and missing income data combine to reduce sample size and cell counts to uncomfortably small levels. Accordingly, the reader is cautioned against treating weighted counts and proportions based on weighted sample counts as reliable population estimates.

($\alpha$ = .01), but unexpectedly occurred at a statistically higher rate ($\alpha$ = .01) among the nonpoor in 1991-2. Earlier studies have reported evidence that links widowhood and poverty entry (Bound *et al.* [1991], Burkhauser *et al.*[1988], Burkhauser *et al.* [1991], Holden *et al.* [1986, 1988], Zick and Smith [1986,1991]).

The only other difference that was statistically significant at the .10 confidence level was for the recent deterioration of a spouse's health in 1986. Here, too, the result was that the nonpoor subsample was more likely to have reported a recent health problem than were the poor respondents. There are several possible explanations for this finding. First, the onset of a major health problem for a husband might prompt the wife to work more in order to replace lost income or maintain necessary employer-provided health insurance. Second, because the women analyzed here are at least 62 years old, Social Security and other public transfers might be available to them and their husbands, who are likely to be older. These transfers are very likely to cushion any adverse financial impact of poor health (See Table 4). Finally, our particular measure of health deterioration (onset of a work limitation) is a potentially flawed indicator of a person's true health condition and medical need. Some husbands who would otherwise choose not to work in any event might claim that deteriorating health is the primary cause.

As suspected, retirement appears to be an unreliable indicator of subsequent poverty. Differences between the poor and nonpoor sample respondents were never statistically significant at even the .10 confidence level. Very small sample sizes for all 6 of these events render any inferences quite fragile.

On the basis of results presented in Table 9 and the empirical work of other researchers, it appears that traumatic events that happen in old age are sometimes associated

with poverty among aged women, but that it is often incorrect to characterize these events as causal. A large majority of older women is not poor. Most traumatic events happen to them and do not appear to lead to economic hardship. Rather, there is a group of women whose economic status through much of their adult lives is tenuous at best, and these women enter their later years already poor, or so ill-prepared to finance retirement that they easily slip into poverty when further adverse circumstances arise.

Although several studies have examined the incidence and timing of late-life traumatic events on aged poverty and reported strong positive correlations, they have also acknowledged the important but mostly unexamined role of economic conditions prior to these events. Bound *et al.* [1991], Holden *et al.* [1986], and Smith and Zick [1994] report that the economic status prior to widowhood is a strong determinant of status during widowhood. Although widowhood has been the primary focus of most investigators, Burkhauser and Duncan [1989] examine the role of other events such as divorce, retirement, unemployment, health, loss of asset income over the life course and conclude that women, like men, are well protected from work-related events but unlike men, are much more vulnerable to family events or household compositional changes. Because the NLSMW allows us to examine both earlier-life economic status and late-life events, we are able to measure and compare the separate roles that both types of events play in explaining aged poverty.

Table 10 displays the results from a simple Analysis of Variance (ANOVA) procedure, which provides a convenient framework for directly comparing the relative importance of the earlier-life economic status (Table 8) and the late-life events (Table 9) in explaining the economic status of the older NLSMW respondents in 1991-2. The ANOVA

model is designed to apportion the total measured variation in the phenomenon of interest -- here, whether a woman aged 62 or older is poor in 1991-2 -- into component parts that can be attributed to different sources. Several explanatory variables are used to measure the sources of variation in 1991-2 poverty status. Antecedent explanatory factors include age, race, education, total number of children, marital history (see Table 7), labor force attachment (see Table 7) and whether previously poor (see Table 8). Late-life events include divorce, widowhood, own and spouse's health problems, and own and spouse's retirement. All of these events except for retirement occur concurrently or in the 2-year period prior to the 1991-92 survey. Retirement for self and spouse may have occurred anytime beginning 1985, when the oldest women turned 62 years old. To apportion the roles of early- and late-life events on aged poverty correctly, we show results from two models that differ primarily in the definition of antecedents. Because the measure of earlier life poverty is so strongly associated with demographic characteristics, we exclude this variable in Model A. A separate analysis shows that education and total number of children explain more than a third of the variation in Previously Poor. Thus, Model B includes Previously Poor in the set of antecedents, but excludes education and total number of children. Race and lifetime marital history have a large impact on being previously poor but we include them in Model B because of their possible independent role in explaining aged poverty.

The relatively large explanatory power of earlier-life events in explaining aged poverty is noteworthy. Both models point to the much larger role of Antecedents, although inclusion of the Previously Poor variable in Model B does provide for a better fit as shown by the higher $R^2$. Of the Antecedents, Education and Race in Model A, and Previously

Poor and Race in Model B, have the strongest impacts.[23] The Labor Force Attachment variable plays a small role probably because it does not differentiate between women with high and low annual earnings; it merely indicates the extent to which there was at least some labor force participation in various years. Many women within these birth cohorts may have worked extensively in part-time employment during their worklives, earning relatively small amounts of annual income. Also, many women in these cohorts, whether part-time or full-time employees, worked in low-wage occupations. In any event, low earnings generate little or no capacity to provide for retirement income security. In either characterization of the model (*i.e.*, prior poverty experience or demographic and behavioral characteristics), earlier-life conditions in general appear to be strong precursors of poverty status in old age.

The small and relatively weaker showing of late-life events should be interpreted with caution. Earlier in this section we noted the shortcomings of identifying and measuring the economic consequences of these events. In part because of the limited sample size, the number of women aged 62 or older who experienced any of the 6 events investigated here is not very large. In addition, we would have preferred that the NLSMW sample be even older. The oldest women in the sample were aged 69 in 1992 and, consequently, we were unable to track the economic status of sample members beyond the first several years of old age. This limitation of the sample is troubling given that official poverty statistics indicate that older women's poverty rates rise with age. Data collected for the NLSMW cohorts at interviews subsequent to 1992 (not available for this study) will help rectify this deficiency, as most of the story of the financial well-being in old age for the NLSMW respondents

[23]Details on the role of each of the components of Antecedents and Late-life events are provided in the unpublished Data Appendix.

remains to be recorded. The availability of additional years of data seems unlikely to negate the strong evidence in Table 10 of the role of earlier-life economic well being on late-life economic conditions.

## IV. Conclusion

This article has emphasized that the financial status of older women is best understood within the context of their long term economic circumstances. Our NLSMW-based results are consistent with those obtained by other researchers in describing the attributes and correlates of poverty. In addition to providing a cross-sectional perspective on poverty among older women in the later survey years, the longitudinal aspect of the data set allowed us to examine earlier, long-term aspects of the economic lives of the survey respondents. Despite some shortcomings in the data for our purposes, the results show the strong and statistically significant role of earlier-life economic well-being. These results are consistent with a somewhat comparable longitudinal study by Parsons [1995], which also showed that most poor older women had low incomes in mid-life, with at least 40 percent reporting previous episodes of poverty. In addition to the role played by personal characteristics such as race and education level, our research also confirms that marital status changes are critical to unraveling the causes of female aged poverty.

In so far as we are limited to studying older women only in early old age (that is, aged 62-69), these results indicate that most women who experience traumatic events in their later years do not become poor and that a large majority of older NLSMW respondents who were poor in 1991-2 were poor earlier in their adult lives. Whether women are impoverished by adverse late-life events depends on their economic resources just prior to the event. But, the financial resources available in old age, in turn, depend very much on

economic status over the long run, prior to old age. Some of the evidence presented here, but mostly elsewhere, clearly indicates that widowhood and divorce bring about economic hardship for many women. Nonetheless, this article underscores the fact that for most older women these events do not appear to precipitate poverty spells -- at least not within the first couple of years -- and directs attention at longer term circumstances that make some women more vulnerable.

It is also important to note that although this study has documented the occurrence of six types of events that can cause the onset of poverty for women in their 60s, for many women these adverse events occur earlier in life -- not in old age -- and these occurrences may cause lasting financial harm. In fact, many older women who report earlier life poverty episodes incurred these financial difficulties precisely because of events such as widowhood, divorce, and unemployment that happened when they were younger. Because our focus has been on the effect of "late-life events," and not on traumatic events experienced anytime during adulthood, this analysis has simply categorized women with earlier life poverty spells as Previously Poor -- for whatever unidentified reason. The point is that traumatic events of these types have been the object of considerable research and discussion, and seem to be mostly insurable either by private institutions or through social insurance programs. Social Security currently insures a limited number of adverse events that occur earlier in life by awarding benefits to the disabled, to the spouses of disabled beneficiaries, and to survivors. Social Security does not, however, have the broader aim of insuring women's long-term financial success throughout their adult lives; rather, it insures a limited number of events and circumstances that often cause financial distress.

We believe that the findings reported in this article have implications for the

formulation of policies intended to alleviate poverty among older women. Social Security provides the main source of money income for the low-income elderly. Note, however, that under current law Social Security benefits are an earned right in which benefit amounts are determined by the lifetime earnings histories of individuals and their spouses. Because our results indicate that old-age poverty is strongly linked to financial status over many years earlier in life and largely represents a continuation of low economic status, minor adjustments in the current rules for translating earnings histories into Social Security benefit amounts are likely to have only modest effects on the incidence of poverty and near-poverty in old age. Rather, effective anti-poverty policies directly targeted at older women might involve at least one of three strategies. First, one might consider Social Security program reforms that alter the link between program benefits that women receive and earlier-life earnings, placing an increased emphasis on benefit adequacy. Polices of this type include establishment of a minimum benefit at or near the poverty threshold, perhaps by awarding some component of benefits on the basis of labor force participation rather than earnings levels, or assigning higher weight to low earnings in the determination an individual's benefit amount. The latter change would increase the extent to which Social Security redistributes income from higher to lower income workers and their spouses.

Alternatively, a second strategy would address older women's income needs more directly through increased public transfers via other programs such as Supplemental Security Income. Effective welfare programs targeted at the elderly would provide a means-tested guaranteed annual income that meets the Federal government's poverty threshold. This approach would share some of the problems of other welfare programs (*e.g.*, possible nonparticipation by eligibles, social stigma, disincentives to save for retirement), but not all

of them. In contrast to younger poor adults, the elderly -- particularly those aged 70 or older -- are not usually viewed as likely to improve their incomes appreciably through work and earnings. Also, concerns about the creation of disincentives to accumulate assets for retirement might be slight in that the evidence here indicates that a large majority of these women had sufficiently low lifetime incomes so that there was always, at best, a modest capacity for retirement saving.

A third strategy encompasses more limited proposals that target specific groups of women thought to be particularly vulnerable in old age such as widows and other unmarried older women, or women at very advanced ages (say, age 80 or older). Recently discussed proposals of this type include an automatic increase in monthly benefit amounts received by beneficiaries who attain some specified advanced age (say, 80 or 85), elimination of the widow's limit,[24] or a cost-neutral shift of benefits from married couples to survivors (Sandell and Iams [1997]). Policy changes that are more limited in scope must necessarily be subjected to questions about their likely impact on the overall poverty rate for older women, on the incidence of poverty in the specific population subgroup of interest, and on the target effectiveness of the proposal (*i.e.*, the degree to which higher benefits are received by the individuals who need them).

Of course, the strong link between earlier life financial status and eventual poverty status in old age also lends support to policies that increase the income generating capacity of women earlier in their adult lives. It would appear that programs and incentives that reduce poverty among women prior to old age might have beneficial effects that last beyond normal

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[24]Under current law a widow's benefit is permanently lowered if her husband begins receiving reduced Social Security retired-worker benefits before age 65.

worklives into the retirement years.

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## Table 1: Poverty Status of Persons, By Age and Sex, Selected Years, 1966-1994

[percentages below poverty line]

| | 1966 | 1970 | 1975 | 1980 | 1985 | 1990 | 1994 |
|---|---|---|---|---|---|---|---|
| **Nonaged Adults** | 10.5 | 9.0 | 9.2 | 10.1 | 11.3 | 10.7 | 11.9 |
| **All Aged** | 28.5 | 24.6 | 15.3 | 15.7 | 12.6 | 12.2 | 11.7 |
| **Aged Men** | 23.7 | 19.0 | 11.4 | 10.9 | 8.5 | 7.6 | 7.2 |
| **Aged Women** | 32.1 | 28.4 | 18.1 | 19.0 | 15.6 | 15.4 | 14.9 |

Source: *Current Population Reports: Consumer Income,* Series P-60, No. 189

*1992 Green Book, Current Population Survey*, March 1995

Note:

1) Table entries represent the percentage of the civilian noninstitutionalized population in the designated groups with money income below the Census Bureau's official poverty line.

2) "Nonaged" refers to persons aged 18-64 years old. "Aged" refers to persons aged 65 years or older.

**Table 2: Percentages of Older Persons in Poverty, 1994**

| | | | NonMarried | | |
|---|---|---|---|---|---|
| | **All** | **Married** | **All** | **Men** | **Women** |
| **All Races** | | | | | |
| **55-64** | 10.88 | 6.24 | 22.89 | 20.01 | 24.48 |
| **65-74** | 10.12 | 4.50 | 20.21 | 15.22 | 22.06 |
| **75-84** | 12.80 | 4.65 | 20.12 | 13.88 | 21.74 |
| **85+** | 18.03 | 7.03 | 20.87 | 16.83 | 21.86 |
| **White** | | | | | |
| **55-64** | 9.13 | 5.67 | 19.36 | 18.43 | 19.91 |
| **65-74** | 8.45 | 3.96 | 17.30 | 11.45 | 19.41 |
| **75-84** | 11.33 | 4.27 | 18.00 | 11.23 | 19.70 |
| **85+** | 16.80 | 6.18 | 19.62 | 14.93 | 20.77 |
| **Black** | | | | | |
| **55-64** | 24.32 | 11.46 | 37.09 | 27.42 | 41.68 |
| **65-74** | 26.00 | 9.55 | 38.59 | 35.50 | 39.96 |
| **75-84** | 29.28 | 6.04 | 39.84 | 32.57 | 42.35 |
| **85+** | 29.99 | (**) | 32.29 | (**) | 31.08 |
| **Hispanic** | | | | | |
| **55-64** | 22.64 | 15.42 | 35.84 | 32.49 | 37.41 |
| **65-74** | 22.27 | 10.55 | 34.69 | 26.12 | 38.98 |
| **75-84** | 23.58 | 14.04 | 29.68 | (**) | 35.37 |
| **85+** | 22.10 | (**) | 24.15 | (**) | (**) |

Source: *Current Population Survey*, March 1995

Note:

1) Individuals of Hispanic origin may be of any race.

2) Table entries represent the percentage of the civilian, noninstitutionalized population in designated groups with money income below the Census Bureau's official poverty line.

3) (**) denotes fewer than 75,000 weighted cases.

## Table 3: Distribution of Reported Income, 1966-92

[percentages]

| Year | % Poor | Level 1 (<0.75) | Level 2 (0.75-0.99) | Level 3 (1.0-1.24) | Level 4 (1.25-1.49) | Level 5 (1.5-1.99) | Level 6 (2.0-2.99) | Level 7 (3.0+) |
|---|---|---|---|---|---|---|---|---|
| **1966** | 12.8 | 8.3 | 4.5 | 5.2 | 5.5 | 15.5 | 27.6 | 33.5 |
| **1968** | 11.9 | 7.3 | 4.6 | 4.4 | 5.8 | 14.1 | 26.9 | 36.9 |
| **1970** | 11.3 | 7.1 | 4.2 | 4.6 | 4.9 | 10.2 | 24.9 | 44.1 |
| **1971** | 10.5 | 6.7 | 3.8 | 4.0 | 4.8 | 10.8 | 23.2 | 46.8 |
| **1976** | 8.8 | 5.3 | 3.4 | 3.9 | 3.8 | 8.0 | 20.5 | 55.0 |
| **1981** | 9.4 | 5.7 | 3.7 | 3.0 | 4.5 | 7.7 | 18.1 | 57.3 |
| **1986** | 13.0 | 7.9 | 5.1 | 4.6 | 4.6 | 8.6 | 18.4 | 50.8 |
| **1988** | 12.7 | 6.5 | 6.2 | 5.0 | 4.9 | 9.0 | 18.1 | 50.3 |
| **1991-2** | 12.7 | 7.7 | 5.0 | 5.3 | 5.8 | 10.2 | 20.7 | 45.2 |

Source: *NLSMW*

Note:

1) Percentage are derived using NLSMW weights

2) The sample of observations used to compute each year's statistics comprises respondents who provide complete income information for that year.

3) The numbers in parentheses displayed in the top margin define the Income to Poverty Ratio (IPR) ranges for different levels of family financial status. That is, the numbers are ratios of family income to the family's poverty threshold. Those with ratios less than 1 are classified as "poor" whereas those at level 3 are classified as "near poor."

## Table 4: Sources of Family Income, 1991-92

[Average Annual Amounts in Dollars]

| | less than 62 years | | 62 years or over | |
|---|---|---|---|---|
| | POOR & NEAR POOR (IPR < 1.25) | ALL OTHER (IPR ≥ 1.25) | POOR & NEAR POOR (IPR < 1.25) | ALL OTHERS (IPR ≥ 1.25) |
| **Sample Size** | 248 | 754 | 267 | 716 |
| **Earnings** | | | | |
| **Woman** | 1015 | 11567 | 195 | 3867 |
| **Spouse/ Partner** | 310 | 15692 | 30 | 3430 |
| **Asset Income** | 245 | 4379 | 151 | 3846 |
| **Pension Income** | 260 | 5253 | 179 | 6042 |
| **Social Security OASI/RR benefits** | 1691 | 2630 | 4457 | 9414 |
| **Other Govt. Cash Transfers** | 1744 | 1366 | 892 | 675 |
| **Other** | 1170 | 5210 | 762 | 3556 |
| **Total Income** | 6435 | 46099 | 6666 | 30830 |
| $N^{w/oSSR}$ | 304 | 698 | 548 | 435 |
| $N^{w/oAllG}$ | 333 | 669 | 571 | 412 |

Source: *NLSMW*

Note:

1) Average Income amounts are calculated using NLSMW weights.

2) Sample consists of 1991-2 observations of survey respondents who report complete income information. Table entries are dollar values that are averages for the entire sample, regardless of whether a particular kind of income was received.

Definitions:

| | |
|---|---|
| IPR: | Income to Poverty Ratio |
| Poor & Near Poor: | Incomes below 1.25 of the poverty line |
| All Others: | Incomes greater than or equal to 1.25 of the poverty line. |
| $N^{w/oSSR}$ | Number of poor/non-poor without Social Security OASI/Railroad Retirement Benefits included in Total Income. |
| $N^{w/oAllG}$ | Number of poor/non-poor when Social Security OASI/Railroad Retirement Benefits and all other Government transfers are excluded from Total Income. |
| Earnings: | Includes Income from wages and salary from business, professional practice or partnership. |
| Asset Income: | Income from r Rent, Interest, Dividends, Farm and Royalties. |
| Pension Income: | Income from all private and government pension receipts including IRA/Keogh accounts but excluding Social Security Income. |
| Social Security OASI/RR Benefits: | Social Security Old Age and Survivors Insurance payments (Retired Worker, Spouse and Survivors benefits) and Railroad retirement Benefits. |
| Other Govt. cash transfers: | Disability Income (Social Security, Veteran's Compensation, Worker's Compensation and Other), Food Stamps, AFDC, SSI and Unemployment including Supplemental Unemployment Compensation. |
| Other: | Alimony, Child Support and Other Family Members' Income. |

Total Income may not add up to the total of the reported income components due to rounding.

## Table 5: Correlates of Old Age Poverty, 1991-92

[Column Percentages]

| | less than 62 years | | less than 62 years | |
|---|---|---|---|---|
| | Poor & Near Poor (IPR < 1.25) | All Others (IPR ≥ 1.25) | Poor & Near Poor (IPR < 1.25) | All Others (IPR ≥ 1.25) |
| **Sample Size** | 248 | 754 | 267 | 716 |
| | 100% | 100% | 100% | 100% |
| **Education** | | | | |
| **0-8** | 25.6 | 4.7 | 36.2 | 9.2 |
| **9-12** | 64.6 | 60.8 | 54.5 | 61.9 |
| **13-16** | 8.1 | 28.4 | 7.5 | 23.7 |
| **17+** | ** | 6.2 | ** | 5.2 |
| **Health** | | | | |
| **Exc/Good** | 53.0 | 81.7 | 50.0 | 74.4 |
| **Fair/Poor** | 47.0 | 18.4 | 50.0 | 25.7 |
| **Marital** | | | | |
| **MSP** | 39.9 | 71.3 | 26.1 | 59.5 |
| **Widow** | 23.4 | 10.2 | 46.2 | 28.9 |
| **Divor** | 20.7 | 13.6 | 19.5 | 7.4 |
| **Separ** | 7.6 | 1.8 | 3.3 | 1.1 |
| **Never** | 8.0 | 3.1 | 4.8 | 3.2 |
| **Region** | | | | |
| **South** | 46.6 | 29.7 | 47.1 | 31.5 |
| **Non-South** | 53.5 | 70.3 | 52.9 | 68.5 |
| **Race** | | | | |
| **White** | 64.5 | 91.9 | 77.5 | 93.8 |
| **NonWhite** | 35.5 | 8.1 | 22.5 | 6.2 |

| | | | | |
|---|---|---|---|---|
| **Pension** | 15.5 | 35.9 | 24.5 | 56.3 |
| **No Pension** | 84.5 | 64.1 | 75.5 | 43.8 |
| **Living Arrangement** | | | | |
| **Alone** | 39.3 | 18.2 | 17.1 | 11.4 |
| **W/ Spouse** | 39.9 | 71.3 | 26.1 | 59.5 |
| **Other** | 20.8 | 10.5 | 56.9 | 29.2 |
| **Children** | | | | |
| **None** | 8.8 | 8.6 | 13.5 | 10.2 |
| **1-2** | 27.2 | 28.4 | 26.4 | 31.8 |
| **3-4** | 29.1 | 41.6 | 27.1 | 38.9 |
| **5+** | 35.0 | 21.4 | 33.0 | 19.1 |

Source: *NLSMW*

Note:

1) Percentages are computed using NLSMW weights.

2) Poverty Status is determined as of the 1992 interview. The income to poverty ratio (IPR) for those who are poor and near poor is $< 1.25$ and for all others it is greater than or equal to 1.25. The sample size represents the unweighted cases. The sample consists of observations of 1991-2 survey respondents who report complete income information. Table entries represent the percent of the poor-near poor/all others in the two age groups who have the listed characteristics.

3) ** Fewer than 10 unweighted cases.

4) COLUMN sums for each variable for each age group may not add to 100% due to rounding.

Definitions:

| | |
|---|---|
| IPR: | Income to Poverty Ratio |
| Education: | Years of Education |
| Health: | Self reported Measures of Health |
| | Exc/Good: Excellent or Good |
| | Fair/Poor: Fair or Poor |
| Marital: | |
| MSP- | Married with Spouse Present |
| Divor- | Divorced |
| Separ- | Separated, Married Spouse Absent |
| Never- | Never Married |

Pension includes sources such as income from private employers, unions, military and all levels of government as well as from IRA and Keogh plans.

Living Arrangements: Those living with spouse may live in households with additional members.

Number of Children: This was asked in 1977. In a 1982 question on additional children born in the past 5 years, only 12 responded in the affirmative.

## Table 6. Lifetime Poverty Status, 1966-92.

[Percentages]

| Lifetime Poverty Status | All* | White | Black |
|---|---|---|---|
| Sample size | 1,469 | 1,079 | 374 |
| Never Poor | 71.1 | 74.0 | 39.1 |
| Briefly Poor | 19.4 | 18.5 | 28.2 |
| Often Poor | 6.4 | 5.4 | 17.3 |
| Predominantly Poor | 3.2 | 2.0 | 15.4 |

Source: *NLSMW*

Note:

1. Percentages are computed using NLSMW weights.
2. The 9 in-person interview years from 1967-92 are used to determine Lifetime Poverty Status. The statistics are calculated for respondents aged 62 or older who were interviewed in 1992. Table entries represent the percentage of all/white/black women who are in the designated categories of Lifetime Poverty Status.
3. Lifetime Poverty Status is calculated as follows: Never Poor, Briefly Poor, Often Poor, and Predominantly Poor indicate 0, 1-2, 3-4, and 5+ reports of poverty-level family income, respectively, at the 9 in-person interviews.

*4. All includes White, Black, and Other races, which constitute 90, 9, and 1 percent of the sample, respectively.

## Table 7. Correlates of Lifetime Poverty

[Percentages]

| | LIFETIME POVERTY STATUS, 1966-92 | | | |
|---|---|---|---|---|
| | Never Poor | Briefly Poor | Often Poor | Predominantly Poor |
| **No. of Children** | | | | |
| 0 | 80.2 | 9.7 | 6.1 | ** |
| 1 to 2 | 75.2 | 20.2 | 3.8 | 1.0 |
| 3 to 4 | 73.4 | 19.9 | 5.0 | 1.2 |
| 5+ | 55.1 | 22.1 | 13.2 | 9.7 |
| **Lifetime Marital Status (years married)** | | | | |
| Never | 58.8 | 18.6 | 12.6 | 10.2 |
| Infrequently | 51.7 | 27.9 | 14.6 | 5.8 |
| Mostly | 63.4 | 26.8 | 6.8 | 3.0 |
| Always | 82.3 | 13.7 | 2.8 | 1.3 |
| **Education (Yrs. in school)** | | | | |
| 0 to 8 | 45.6 | 21.3 | 17.2 | 15.9 |
| 9 to 12 | 71.2 | 22.0 | 5.3 | 1.5 |
| 13+ | 85.6 | 11.6 | 2.1 | 0.6 |
| **Labor Force Attachment (%)** | | | | |
| Weak | 59.4 | 23.5 | 10.4 | 6.7 |
| Moderate | 71.0 | 18.5 | 7.1 | 3.5 |
| Predominant | 70.1 | 21.9 | 5.8 | 1.6 |
| Strong | 83.4 | 12.8 | 2.1 | 1.2 |

Source: *NLSMW*

Note:

1. Percentages are calculated using NLSMW weights.
2. The statistics presented here are calculated for women interviewed in 1992 who were aged 62 or older.
3. ** denotes fewer than 10 unweighted cases.
4. Definitions:

No. of children: Based on the number of children born to the respondents and does not include adopted children. (Question was asked in 1977.) A 1982 question asked about additional children born since 1977, but only 12 women responded in the affirmative.

Lifetime Marital Status: A maximum of 15 years of marital status information is available. Lifetime Marital Status is constructed by taking the number of years that the respondent reported "Married" as her marital status as a percentage of the total number of years for which her marital status is reported. These percentages are divided into four categories: Never Married (married 0 years), Infrequently (married at least once but less than or equal to 50 percent of the time), Mostly (married more than 50 percent of the time, but not always), and Always (married 100 percent of the time).

Education: There are very few cases of women with more than 17 years of schooling in the Often Poor and Predominantly Poor subgroups. Therefore, those with 13+ years of schooling are not further broken down into 2 groups as in Table 5.

Labor Force Attachment: A total of 16 years of information is used to determine long-run labor force participation. If the respondent reported wage or business income at any interview, attachment was assigned for that reference year. The attachment categories were defined as Strong (14+ years of work), Predominant (8-13 years), Moderate (3-7 years), and Weak (0-2 years).

## Table 8. Relating Current (1991-92) Economic Status to Lifetime Poverty Status

[Percentages]

| Lifetime Poverty Status | 1991-92 Economic Status: Poor (IPR < 1.0) | Near Poor (1.0 <= IPR < 1.25) | All Others (IPR >= 1.25) | TOTAL |
|---|---|---|---|---|
| **Never Poor** | 3.0 | 3.5 | 63.4 | 69.8 |
| **Briefly Poor** | 4.7 | 1.8 | 14.5 | 20.9 |
| **Often Poor** | 3.0 | 1.0 | 2.0 | 5.9 |
| **Predominantly Poor** | 2.1 | 0.4 | 1.0 | 3.5 |
| **TOTAL** | 12.7 | 6.5 | 80.9 | 100.0 |

Source: *NLSMW*

Note:

1. Percentages are calculated using NLSMW weights.
2. Table entries represent the percentage of 1992 survey respondents aged 62 or older with the designated combinations of lifetime and current-period (1991-2) poverty status. Cell entries do not sum to column/row totals due to rounding.
3. Definitions:

IPR: Income to Poverty Ratio
Poor: Income below poverty line
Near Poor: Income greater than or equal to the poverty line and less than 125 percent of the poverty line.
All others: Income greater than or equal to 125 percent of the poverty line.

4. Incomes from the pre1991-92 years (that is, for the 1967-1989 in-person interview years) are are used to determine lifetime poverty status. Lifetime Poverty Status categories are defined as: Never Poor (never observed poor in an interview year), Briefly Poor (poor in 1-2 interview years), Often Poor (poor in 3-4 interview years), and Predominantly Poor (poor in 5 or more interview years).

**Table 9. Linking Poverty Status at Age 62+ with Traumatic Events**

| | YEAR | | | | | |
|---|---|---|---|---|---|---|
| | 1986 | | 1988 | | 1991-92 | |
| | Unweighted | Weighted | Unweighted | Weighted | Unweighted | Weighted |
| Number of Women Aged 62+ | 446 | 2,421,925 | 835 | 4,484,322 | 1,469 | 7,978,481 |
| Who are poor | 51 | 226,512 | 101 | 386,409 | 184 | 661,577 |
| Recently divorced | 0 | 0 | 2 | 6,911 * | 3 | 8,386 ** |
| Recently widowed | 5 | 12,510 | 14 | 50,928 ** | 8 | 23,050 ** |
| Own health deteriorated | 8 | 28,526 | 9 | 31,556 | 11 | 32,943 |
| Spouse's health deteriorated | 1 | 1,019 * | 3 | 12,073 | 1 | 6,268 |
| Recently retired | 4 | 15,913 | 2 | 4,120 | 0 | 0 |
| Spouse recently retired | 7 | 25,775 | 1 | 1,083 | 0 | 0 |
| Who are not poor | 226 | 1,234,582 | 381 | 2,106,377 | 799 | 4,626,570 |
| Recently divorced | 2 | 9,741 | 1 | 7,700 | 0 | 0 |
| Recently widowed | 14 | 75,740 | 21 | 108,156 | 38 | 206,590 |
| Own health deteriorated | 34 | 181,310 | 42 | 247,938 | 37 | 209,616 |
| Spouse's health deteriorated | 17 | 99,894 | 20 | 115,337 | 24 | 135,262 |
| Recently retired | 19 | 104,896 | 16 | 92,340 | 0 | 0 |
| Spouse recently retired | 25 | 143,594 | 1 | 6,890 | 1 | 7,802 |
| With incomplete incomes data | 169 | 960,831 | 353 | 1,991,536 | 486 | 2,690,334 |

Source: *NLSMW*

Note:

1. "Recent" refers to events that occur concurrently with or in the 2-year period prior to the reference year.
2. Asterisks denote that poor and non-poor weighted sample proportions differ at the .10 (*) and .01 (**) levels of significance.

**Table 10. Explaining Late-life Poverty by Antecedents and Late-life Events: ANOVA Results**

| | MODEL A (with earlier-life individual chararacteristics *excluding* poverty experience) | MODEL B (with select earlier-life individual characteristics *including* poverty experience) |
|---|---|---|
| **Explained Sum of Squares** | | |
| **Antecedents** | 30.91 [44.70] ** | 42.36 [78.77] ** |
| **Late-life Events** | 1.98 [2.86] ** | 1.99 [3.08] ** |
| **Residual Sum of Squares** | 106.95 | 104.44 |
| **Total Sum of Squares** | 140.56 | 149.56 |
| $R^2$ | 0.24 | 0.30 |
| **Sample size** | 941 | 983 |

Source: *NLSMW*

Note:

1. These statistics are calculated for 1992 interview respondents aged 62 or older for whom requisite income information is available.
2. The dependent variable is a binary poverty indicator for respondents aged 62 or older in the 1992 interview. Antecedent explanatory variables are education, age, race, total number of children, marital history, labor force attachment, and the number of times a respondent was previously poor. The explanatory variable for labor force attachment is defined as the percentage of total completed interviews at which the respondent reported earnings or business income. Marital history is indicated by the Lifetime Marital Status variable defined in the notes to Table 7. This variable measures (categorically) the percentage of completed survey interviews at which the respondent indicated that she was married. Previously Poor counts the number of times the respondent reported poverty in the 8 in-person interview years from 1967-89 (See notes to Table 8). Late-life events include divorce, widowhood, onset of own or a husband's health problem, and own or a husband's retirement. Divorce, widowhood, and health problems refer to events that occurred in the 2-year window prior to the 1991-2 reference period. Retirement may have occurred anytime since 1985, when the oldest respondents attained age 62.
3. Model A includes all antecedents mentioned in 2) except for the Previously Poor variable. To study the impact of prior poverty experiences, this variable is included in Model B. In a separate analysis, the results of which are included in the unpublished Data Appendix, more than a third of the total explained variation attributable to Previously Poor is explained by education and total number of children. Therefore, in Model B we include Previously Poor but exclude education and total number of children. All late-life events are included in both models.
4. Figures in parentheses are F values. ** indicates statistical significance at the .01 level.
5. The explained sum of squares was calculated using a regression approach in which the effects of each of the two sets of explanatory factors, Antecedents and Late-life Events, are assessed simultaneously. The model's Explained Sum of Squares (ESS) can be decomposed into three components, the first uniquely attributable to Antecedents, the second uniquely attributable to Late-life Events, and the third explained jointly through covariation between the two sets of factors. The ESS magnitudes associated with joint effects in Models A and B are quite small, 0.73 and 0.77, respectively.

# DATA APPENDIX

"Life-Cycle Aspects of Poverty Among Older Women"
by S. Choudhury and M. V. Leonesio

The primary data source for this research was the 1967-92 waves of the National Longitudinal Survey of Mature Women (NLSMW). This data set, along with those of three other original NLS samples, was designed primarily to track the labor market experiences of specific birth cohorts (in this case women born in 1923-37) through time.

The first part of this project involved documenting in the NLSMW all instances in which women resided in poor families. To do this we constructed family income histories for each woman and then compared income in each reference year with a poverty threshold. The official government poverty thresholds vary each year as the CPI-U increases, and the thresholds are different across families depending on age of the householder or family reference person, family size, and number of children under 18. We developed a SAS program routine that assigned the correct poverty threshold to a woman's family for all 16 survey reference years from 1966-1992. This routine was subsequently combined with the earnings history information to create income-to-poverty-threshold ratios (IPRs).

## Poverty thresholds

Although the basic methodology of the official poverty measure has not changed since 1965, there have been several modifications. Examples: 1) The annual updating of the thresholds used to be based on the increase in the cost of the economy food plan. Now it's the increase in the CPI-U. 2) There used to be separate thresholds for rural families. 3) The thresholds used to differ depending on the gender of the family head. If we wanted to determine accurately whether a woman's family was considered officially poor in some past year, we would have to consult the matrix of official poverty thresholds for that year, select the appropriate poverty line, and compare her family's income to that specific threshold. This potentially involved a lot of keypunching from various sources that published the annual thresholds and was deemed unnecessary for our purposes.

We took the 1993 official thresholds as published in the Census Bureau's Series P-60 Reports, and used the CPI-U to backcast what the thresholds would have been had current rules always been in force. Therefore, a single threshold matrix and the CPI-U series enabled us to backcast the entire set of threshold matrices.

### *Identifying the family head*

Once the poverty threshold matrix was established, the next task was to determine which poverty line figure was appropriate for the respondents during each year. The most difficult aspect proved to be the determination of the identity and age of the householder or family reference person. There were several reasons why this proved to be highly problematic in many instances. Perhaps most important was the fact that respondents were seldom asked a direct question about their relationship to the head of household, and even

when asked, data were sometimes reported as missing. Sometimes the age variable was missing for an individual who appeared to be the family head. And, over the life of a panel spanning four different decades, there are many reported changes in household size and composition which sometimes make living arrangement unclear. For example, sometimes it was clear that a respondent had moved into a home that included both an aged parent and an adult child. Under the circumstances it was often unclear who the householder was.

A laborious process of trial and error led us to adopt the following series of rules for determining the age of the householder. Note that not all rules could be applied in all years, since many of the necessary variables were missing in some interviews. In parentheses we note which rules were applied in which interviews. The rules are listed in the order that they were implemented. The order is important, because if a household head is chosen based on the first rule, none of the following rules are considered.

Rules

If there are more than 2 people in the household, we don't have to know how old the head is in order to assign poverty thresholds. (Applies in all interviews.)

No other adults in the family. Respondent is head. (Applies in all interviews.)

Respondent identifies self as head. (1967, 69, 71, 72, and 77 interviews.)

Respondent identifies husband as head. Husband is chosen as head. (1967, 69, 71, 72, and 77 interviews.)

Respondent identifies sibling as head. Oldest brother is chosen as head. (1967, 69, 71, 72, and 77 interviews.)

Respondent identifies sibling as head. Oldest other sibling is chosen as head. (1967, 69, 71, 72, and 77 interviews.)

Respondent identifies child as head. Oldest son is chosen as head. (1967 and 77 interviews.)

Respondent identifies child as head. Oldest other child is chosen as head. (1967 and 77 interviews.)

Respondent identifies parent as head. Father is chosen as head. (1967, 69, 71, 72, and 77 interviews.)

Respondent identifies parent as head. Oldest other parent is chosen as head. (1967, 69, 71, 72, and 77 interviews.)

Respondent was head in previous interview. She has not moved, but has changed marital status. Respondent is head. (All except 1967 interview.)

Respondent was not head in previous interview. She has not moved, but has changed marital status. If previous head is still present, keep as head. (All except 1967 interview.)

Same as previous, but catches husbands that would be missed because of changes in 1992 variables. (1992 interview only.)

Respondent was not head in previous interview. She has not moved, but has married since previous interview. Previous head is no longer present, so new husband is chosen as head. (All except 1967 interview.)

Respondent is married-spouse-present and husband is the only other adult present. Husband is chosen as head. (All interviews.)

Marital status has not changed, respondent has not moved. If previous head is present, keep as head. (All except 1967 interview.)

Same as previous, but catches husbands that would be missed because of changes in 1992 variables. (1992 interview only.)

Marital status has not changed, respondent has not moved, previous head is no longer present. Husband is chosen as head. (All except 1967 interview.)

Respondent is married-spouse-present, buying/renting her home, and other adult(s) are present. Husband is chosen as head. (1967, 71, 72, 77, 82, 87, and 89 interviews.)

Respondent is married-spouse-present, not buying/renting her home, and other adult(s) are present. Father is chosen as head. (1967, 71, 72, 77, 82, 87, and 89 interviews.)

Respondent is married-spouse-present, not buying/renting her home, and other adult(s) are present. Other oldest parent or parent-in-law is chosen as head. (1967, 71, 72, 77, 82, 87, and 89 interviews.)

Respondent is not married-spouse-present, is buying/renting her home, and other adult(s) are present. Respondent is chosen as head. (1967, 71, 72, 77, 82, 87, and 89 interviews.)

Respondent is not married-spouse-present, not buying/renting her home, and other adult(s) are present. Oldest other adult present is chosen as head. (1967, 71, 72, 77, 82, 87, and 89 interviews.)

Everyone in the household is under 65, so assume head is under 65. (Applies in all interviews.)

Everyone in the household is over 65, so assume head is over 65. (Applies in all interviews.)

Respondent has moved and is receiving rent. Respondent is chosen as head. (1992 interview only.)

Respondent has moved and is receiving no rent. Other adult in household is chosen as head. (1992 interview only.)

Respondent has not moved and was married-spouse-present in previous interview. Respondent is chosen as head. (1992 interview only.)

Respondent has not moved and was not married-spouse-present in previous interview. Respondent was previous head and is chosen as head now. (1992 interview only.)

Respondent has not moved and was not married-spouse-present in previous interview. Respondent was not previous head, so other adult in household is chosen as head now. (1992 interview only.)

We produced 2 years of information based on one interview, so if head was chosen for one year and not the other, it is copied to missing year. (1974, 79, 84, 92 interviews.)

A telephone interview was followed one year later by in-person interview. If head was assigned for in-person interview, but missing from telephone interview, copy head to missing year. (1976, 81, 86 interviews.)

After the application of these rules, there were still nearly 800 instances of where the age of the householder was undetermined during the 16 survey reference years. There were several reasons why the sequential application of all of these rules fails to identify householder's age in numerous cases. In a few instances there were missing ages. But, looking at the Household Record for R for other years made it possible to spot what appeared to be the same person at another point in time and pick up the age at that interview.

The most common problem seemed to be an over-65 "other relative" living in the household along with several other people. If the elderly relative turned up only once and appeared to live with a traditional family that could be identified in surrounding interviews, we assumed that the householder was under age 65. If the elderly relative was repeatedly listed first on the Household Record card and R said she paid no rent or mortgage, then we assumed that the householder was aged 65 or older. Particularly in the early years of the survey, there seemed to be living arrangements that suggested that grandparents were living in the house. We looked at Household Record card data for other interview years to get a sense of whether R moved in with grandmother and grandfather or if grandmother and grandfather moved in with her.

In addition, note that at three different junctures in the 1967-92 period, a telephone interview

was followed one year later by an in-person interview. If the head was assigned for the telephone interview and not for in-person interview, the head was assumed to be the same for the missing year. (1977, 82, 87 interviews.)

Any remaining unresolved cases (appx. 200) were assigned on a case-by-case basis by Leonesio by examining joint multi-year patterns of R's age, marital status, family size, and family composition indicators.

*Poverty threshold for reference periods that straddle two calendar years*

Data from 16 interviews conducted over the period 1967-92 were available for our analysis. Although for reasons cited in the text the published article uses income data only from the in-person interview years, we explored the possibility of including data for telephone interview years as well. Seven of the 16 interview years (*i.e.*, 1974, 1976, 1979, 1981, 1984, 1986, and 1992) collected income data for a 12-month period that straddled two calendar years, raising the question of what poverty threshold to use when the reference period does not coincide with a calendar year. Assume that we have income data for a 12-month period that straddles years $t$ and $t - 1$, where the reference period is approximately July to the following June. To determine the family's poverty status for this 12-month period, in most cases it makes sense to compare income to the mean of the annual thresholds for the two years. This procedure would seem not to work well in cases where inflation was high in the second year, and most of the increase in the price level occurred in the second half of that year -- that is, during the six months after the straddled reference period. In that particular case, simply averaging the two annual thresholds would overestimate the conceptually correct poverty line, thereby inflating the poverty count for the reference period. A better procedure in those years would be to use the monthly CPI figures to adjust the threshold for year $t$ downward.

Our straddle years and 2nd-year inflation rates are:

| Period | Year 2 inflation |
|---|---|
| 1973-4 | 11.0 |
| 1975-6 | 5.8 |
| 1978-9 | 11.3 |
| 1980-1 | 10.3 |
| 1983-4 | 4.3 |
| 1985-6 | 1.9 |
| 1991-2 | 3.0 |

These figures indicate that perhaps 1974, 1979, and 1981 pose problems. We checked the monthly CPI-All Items index for urban consumers during the relevant months. The computed quarterly rates of inflation were:

| | Jan-Apr | Apr-Jul | Jul-Oct | Oct-Jan |
|---|---|---|---|---|
| 1974 | 3.0 | 2.8 | 3.4 | 2.0 |
| 1979 | 3.3 | 3.5 | 3.0 | 3.5 |
| 1981 | 2.4 | 2.8 | 2.0 | 0.8 |

From these figures we concluded that there is no problem with inordinate amounts of inflation occurring in the later half of the second of our straddle years. Therefore, for the entire NLSMW it should be acceptable to use the means of the poverty thresholds for the two straddle years to estimate an appropriate threshold for the 12-month reference period.

**Family incomes data**

In-person interviews were conducted in 1967, 1969, 1971, 1972, 1977, 1982, 1987, 1989 and 1992. In 6 other years (1974, 1976, 1979, 1981, 1984, and 1986) the survey gathered information from the respondents via the telephone. In 1968 a brief mailed questionnaire was used. All of the in-person interview years collected information on the previous calendar year except for the 1992 survey, which asked about the previous 12 months.

A major distinction between the three types of interviews (in-person *vs.* telephone *vs.* mailed questionnaire) is the nature and extent of detail of information available on components of total family income. Naturally, the in-person interviews were able to gather more complete information on sources of income. The Center for Human Resources Research at The Ohio State University used these components to create a "Total Family Income" Key Variable (TFI) which is provided on the public-use data file. The details (*i.e.*, computer programming code) of the construction across the years are roughly similar and are provided in the NLS documentation. All reported income components are summed to provide a measure of total family income. Where one or more income component is not available, TFI is set to zero. Adopting this method results in a loss of several hundred observations each survey year. An alternative method is to sum up all components where available and set a component's value to zero where it is reported missing. Although such a step increases the sample size, it produces far greater poverty rates/statistics in the sample of women. This leads us to believe that a simple summation procedure is not desirable even at the cost of losing observations. In the same vein, the NLS survey of 1992 (unlike any previous survey) provides the results of a simple sum of income components but warns against its shortcomings.

Our simple summation procedure matched the results generated by the Ohio State staff in all but a handful of cases each survey year.

**Some Auxiliary Results**:

A1. Sources of Variation in Old Age Poverty

Table 10 in the paper summarizes the role of antecedents and late-life events in old age poverty, using a ANOVA framework. In the following table we provide a breakdown of those summary impacts and present the contribution of the individual components of antecedents and late-life events in explaining old age poverty.

**Table A1:**
**Sources of Old Age Poverty : Antecedents and Later-life Events**
**ANOVA Results**

| Source of Variation | Explained Variation<br>Model A | Explained Variation<br>Model B |
|---|---|---|
| Antecedents: | | |
| Education | 6.18<br>(7.32)** | — |
| Labor Force Attachment | 2.37<br>(4.53)** | 1.74<br>(4.02)** |
| Age | 0.03<br>(0.49) | 0.27<br>(1.57) |
| Marital History | 7.94<br>(8.30)** | 3.66<br>(5.83)* |
| Children | 0.56<br>(2.20)* | — |
| Race (Black) | 2.03<br>(4.20)** | 0.40<br>(1.92) |
| Previously Poor | — | 16.41<br>(12.35)** |
| Later-life Events: | | |
| Divorce | 1.11<br>(3.11)* | 1.47<br>(3.70)** |
| Widowhood | 0.19<br>(1.28) | 0.17<br>(1.26) |

| | | |
|---|---|---|
| Own Health Problems | 0.17<br>(1.22) | 0.23<br>(1.47) |
| Spouse Health | 0.10<br>(0.95) | 0.02<br>(0.38) |
| Own Retirement | 0.11<br>(0.99) | 0.04<br>(0.61) |
| Spouse Retirement | 0.37<br>(1.80) | 0.11<br>(1.01) |
| Sample Size | 941 | 983 |
| $R^2$ | 0.24 | 0. 30 |

Source: *NLSMW*

Note:

1. The sample consists of 1992 interview respondents aged 62 years or older for whom requisite income information is available.
2. The dependent variable is a binary poverty indicator. The explanatory variables as well as Models A and B are described in the notes to Table 10.
3. Explained Variation is calculated as the Sum of Squares attributable to each individual factor. The sums of these variations attributable to the individual components do not add up to the explained variation for the Antecedents or Late-life events taken as a whole, as reported in Table 10 in the paper. This is not unexpected because antecedents (or late-life events) considered as a whole also account for the covariation among its different components. This covariation may be positive or negative. Theil [1971] states that, in general, the total *incremental* contribution of the explanatory variables differs from the total contribution of the explanatory variables taken as a whole, with the difference being of either sign. See pages 164-171 of Theil for further explanation.
4. The numbers in parentheses are t-values. * and ** indicate statistical significance at the .05 and .01 level.

A2. Sources of Variation in Lifetime Poverty

The following table presents the results that explain our choice of explanatory variables in Model B in Table 10 of the paper, which uses select earlier-life characteristics, the "previously poor" variable and late-life events in explaining old age poverty. This table shows the results of a regression of the previously poor variable on earlier-life characteristics. Education and total number of children explain more than a third of the

variation in old age poverty and are therefore excluded from the antecedents in Model B. Although race and marital history play a large role, these are included in the set of antecedents in Model B because of their possible direct impact on old age poverty.

**Table A2:**
**Sources of Lifetime Poverty**
**ANOVA results**

| Source of Variation | Explained Variation |
|---|---|
| Education | 182.12<br>(11.12)** |
| Labor Force Attachment | 79.87<br>(7.34)** |
| Age | 5.68<br>(1.96)* |
| Marital History | 262.77<br>(13.34)** |
| Children | 317.47<br>(14.69)** |
| Race (Black) | 153.31<br>(10.20)** |
| Sample Size | 1456 |
| $R^2$ | 0.44 |

Source: *NLSMW*

Note:

1. Dependent Variable (Previously Poor) is a discrete variable that measures prior poverty experience. It is calculated for the period 1967-1989. It measures the number of recorded instances of poverty, ranging from 0 to 8 (using 8 years of in-person interview information on total family income). The sample consists of 1992 survey respondents aged 62 years or older.
2. Explained Variation is calculated as the Sum of Squares attributable to each individual factor. The numbers in parentheses are t-values. * and ** indicate statistical significance at the .05 and .01 level.

**References:**

THEIL, HENRI: *Principles of Econometrics*, John Wiley and Sons, New York, 1971.