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# Unifying the Poverty Line: A Critique of Maintaining Lower Poverty Standards for the Elderly

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**ABSTRACT.** Since 1982, the elderly poverty rate reported by the U.S. Census Bureau has fallen below the rate for the nonelderly population. This is cited as evidence of the success of U.S. social policies to benefit the elderly. But lower elderly poverty rates are an artifact of the fact that a lower, more stringent poverty line is applied to the elderly living in one- and two-person households, who constitute 85% of elderly persons. If the same poverty standard is applied to the elderly as to the nonelderly, the poverty rates are the same or slightly higher. The poverty line was originally based on the cost of an adequate diet. The lower standard for the elderly was based on the

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fact that the elderly consume fewer calories than nonelderly adults. This article shows there is no justification for this lower standard, and recommends its elimination. The overall nutrient requirements of the elderly are not lower, and the elderly spend a higher proportion of their budgets on food and on other necessities (shelter, health care) than the nonelderly. Alternative units of analysis examined under different income-pooling assumptions also show that poverty rates are not lower among the elderly than the nonelderly.

## INTRODUCTION

The poverty standard for the elderly is based on a more stringent criterion than that for the nonelderly population. Typically, to be counted as poor, the elderly must have *lower* incomes than the nonelderly. The rationale for a different standard for the elderly is that the poverty level is derived from the cost of an adequate diet, and the elderly have lower caloric needs on average than nonelderly adults. Thus, the argument goes, their overall cost of subsistence must be lower. This article reports that there is no basis for distinguishing between elderly and nonelderly adults in defining poverty. If anything, the evidence suggests that the elderly need higher incomes than other households—not lower—to achieve a comparable standard of living.

In the 1950s, when poverty rates began to be published, the elderly population (persons aged 65 and over) had a higher rate of poverty than the general population. Starting in 1982 and continuing to the present, the poverty rate for the elderly has fallen below the poverty rate for the country as a whole (U.S. Bureau of the Census, 1977; 1992). However, the lower poverty rate for the elderly is an artifact of having a different poverty threshold for the elderly. When the nonelderly threshold is applied to the elderly, their poverty rates are comparable to those of the nonelderly.

## CURRENT METHOD OF DETERMINING THE POVERTY THRESHOLD

How and at what level to set the poverty threshold is a matter of both philosophical and technical complexity (Ravallion, 1992;

Ruggles, 1990). There is a question whether poverty should be defined in terms of some absolute minimum needed for subsistence, or whether poverty should be defined (as suggested by Adam Smith in 1795) in relation to "the custom of the country." Virtually all categories of goods essential for survival (food, shelter, clothing) have a necessity and a luxury component, and it is often difficult to determine the cost of the minimum level of consumption of these goods needed for survival. Further, there is the question as to whether poverty should be defined in terms of the income level at which a household *could* purchase these goods (if income were allocated completely efficiently according to some outsider's definition), or the level at which the household in fact does meet its subsistence needs, given its own set of consumption preferences (Ravallion, 1992).

The current approach to setting the poverty threshold in the United States is based on the method developed by Mollie Orshansky in two articles published in the *Social Security Bulletin* in 1963 and 1965. The approach she recommended, adopted as federal policy in 1965, was that a household would be considered poor if it had to spend a larger share of its income on food than the average share of income devoted to food by American consumers. Note that under this approach, food is the very basis, the one empirically determined component of the poverty line. One possible justification for basing poverty calculations exclusively on food is that it is theoretically possible to derive estimates of minimum food needs from scientific data on nutritional requirements in a way that cannot be done for other basic needs such as shelter. Another is the widely shared perception that food is the most basic of survival needs, virtually a human right. Furthermore, the share of food in consumer budgets has long been recognized as a measure of relative affluence: the higher the share of a consumer's budget devoted to food, the more constrained is the budget.<sup>1</sup> This is because food is a necessity, but there are physiological limits on its consumption. As incomes rise, food needs and wants are satisfied, and consumers diversify their spending, increasing consumption of relative luxuries other than food. Probably, though, the main reason for selecting food costs as the basis of the poverty line was that there already

existed a convenient measure of the cost of an inexpensive, minimally adequate diet in the Economy Food Plan.

This Plan was developed by the United States Department of Agriculture (USDA) based on its periodic national food consumption surveys. The Plan, the lowest-cost of four plans developed for different levels of household food budgets, set a fixed dollar amount for the food budget. It then developed an actual dietary plan designed to depart as little as possible from existing American consumption patterns, while meeting most of the nutrient needs for calories, protein, and a number of micronutrients for which recommended dietary allowances (RDAs) had been established. When Orshansky was writing, the most recent available data on household income shares devoted to food were from the USDA's 1955 Household Food Consumption Survey. In 1955, the average family of three or more persons (averaged over all income levels) used one third of its after-tax income for food. Thus, the poverty threshold for such families was three times the cost of the Economy Food Plan.<sup>2</sup>

Because U.S. consumers as a group have the food consumption patterns of an affluent country, the Economy Food Plan, like the other plans, contains substantial quantities of meat and other animal products, as well as desserts and snack foods. A lower-cost diet based on grains and beans as staples could easily have been designed, but such a diet would have been—and may still be—unfamiliar and unacceptable to most American consumers, who also might not have the facilities, skills, or time to prepare it. Even as it is, the Plan is exceptionally difficult to follow. A 1982 study (Peterkin, Kerr, & Hama, 1982) found that of households with food spending at approximately the amount of the updated Economy Plan, called the Thrifty Food Plan, only 12% met the Recommended Daily Allowance (RDA) for eleven key nutrients.<sup>3</sup> Moreover, in 1977-78, according to the USDA Household Food Consumption Survey, 88% of households and 69% of low-income households spent more than the Plan amount on food (U.S. House, 1985, pp. 3,8). This suggests that the Plan is insufficient to assure dietary adequacy in the American setting.

The Census Bureau poverty threshold, however, is no longer directly based on the cost of the food plan. Rather, it is extrapolated,

based on the Consumer Price Index (CPI), from the original threshold computed in 1963. This means that updates take no account of changes in the composition of consumer expenditure, nor of the general rise in the standard of living since 1963, which has altered the public perception of what poverty means (Fisher, 1992b; O'Hare, Mann, Porter, & Greenstein, 1990; Ruggles, 1990).

The important points to note are three. One, the ability to purchase a minimally adequate diet is the very basis of the federal poverty standard, and has been so since 1965. Two, the cost of the food plan on which the poverty threshold is based was not (and should not be) scientifically derived by computing the cheapest possible sources of calories and other nutrients. Rather, it is based on customary dietary intake in the United States. And three, research indicates that the expenditure level presumed by the existing standard for a minimally adequate diet (the Economy Food Plan) is not adequate to insure nutrient sufficiency in American society.

### ***RATIONALE FOR A SEPARATE POVERTY THRESHOLD FOR THE ELDERLY***

The poverty threshold is adjusted for a household's size and for the age composition of its members. The logic underlying household-size adjustment is obvious: It takes more money to support a greater number of people. Since the poverty line is based on food consumption, the rationale for the age-related adjustment is that people with lower food requirements need less income to achieve a given standard of living. Both children and the elderly consume fewer calories than nonelderly adults, so the poverty threshold for them is adjusted downward accordingly.

This reasoning is fundamentally flawed, especially in regard to the elderly. First, it assumes implicitly that if one's food needs (caloric needs) are lower, one's nonfood costs (that is, the other two thirds of the budget) are also proportionately lower. There is no basis for this assumption. Second, it implies that food needs are fully reflected in caloric needs, but in fact other nutrient requirements (protein, vitamins, and minerals) may vary independently. Furthermore, the Economy Food Plan was never based on an abso-

lute calorie constraint, so that variations in calorie requirements are not necessarily directly reflected in food costs.

In the next two sections of this article, we test empirically the assumptions underlying the distinction between the elderly and the nonelderly poverty line: that the elderly have dietary requirements lower than the rest of the population; that the cost of meeting their dietary needs is less; and that the other, nonfood costs they face are also lower. If these conditions do not hold, there is no basis for using a different poverty standard for the elderly.

### *Nutritional Requirements of the Elderly*

One rationale for believing that the elderly had lower food needs than the nonelderly was that at the time the poverty standard was developed in the 1960s, 65 was the usual retirement age. It was believed that most people reduced their level of physical labor upon retirement, and so needed less food. The physical requirements of work have always been quite variable, but in the past three decades the nature of work has shifted away from heavy labor to more desk-based work. Physical activity of the U.S. population as a whole is much less than it was 30 years ago (Senauer, Asp, & Kinsey, 1991, p. 34), and thus the change from work to retirement status is less significant in its effect on energy output.

Current research shows that the elderly as a group do consume fewer calories than the nonelderly (McGandy et al., 1966; U.S.D.H.E.W., 1981). In normal adults, caloric requirements decline with age, partly because of reduced physical activity, and partly because of a lower basal metabolic rate (BMR), due to declining lean body mass (Shizgal, Martin, & Gimmon, 1992). The Baltimore Study of Men (McGandy et al., 1966) estimated that one third of the 600 calorie difference intake between young and old men was due to changes in BMR resulting from differences in lean body mass (LBM), possibly due to lower activity levels in the past. Two thirds of the difference between young and old men was due to a reduced current level of physical activity. Recent studies have found that exercise can forestall and even reverse the loss of LBM (Evans, 1992), with significant positive benefits for health and physical function. This suggests that elderly people who follow recommendations for increased

physical activity may have caloric needs higher than previously projected and approaching the levels of the nonelderly.

Hamish Munro and colleagues (1987) suggest that from the standpoint of health, it would be beneficial to increase both the physical activity of the elderly and their caloric intake. One reason is that as caloric intake falls, so does the intake of most other nutrients. And there is evidence of several micronutrients in which elderly Americans as a group appear to be deficient by established biochemical standards (NHANES I and II, 1982,<sup>4</sup> cited in Ausman & Russell, 1990).

Some micronutrient requirements apparently change as people age. For example, low blood concentration of the active form of vitamin D may result from a decreased capacity with age for conversion of the vitamin by the kidney. Reduced gastric function in the elderly may also result in lower absorption of vitamin B<sub>12</sub>. There is also some evidence of increased requirements for vitamin B<sub>6</sub>, calcium, iron, and zinc in the elderly (Munro, Suter & Russell, 1987) due to their decreased absorption (Ausman & Russell, 1990). While there may be some nutrients that the elderly absorb better than their younger counterparts, such as vitamin A and possibly vitamin E (Munro et al., 1987), nutrient needs in general do *not* decrease with age, and many may actually increase.

It is more difficult to consume adequate amounts of micronutrients when caloric consumption declines. Deficient intakes (that is, intakes significantly below the RDA) have been documented in the elderly for a number of vitamins and minerals, including vitamin D (Garry et al., 1982; Parfitt et al., 1982), vitamins C, and B<sub>6</sub>, and certain minerals (NHANES I). Zinc adequacy falls as total calorie consumption declines (National Academy of Sciences, 1980). Low calcium and iron intakes were documented in 24% to 77% of elderly subjects studied in NHANES I and II (Ausman & Russell, 1990).

The studies cited above are part of a body of research which indicates that the elderly do *not* have lower dietary needs than the rest of the population. Caloric intakes of the elderly are lower, but research suggests that lower intakes may not be nutritionally desirable, if increasing physical activity and burning more calories is a possible alternative. And while caloric intake declines with age,



most other nutrient needs do not decline, and some increase. Advances in nutritional science in the past three decades show that there is no rationale for having a lower poverty threshold for the elderly based on dietary needs.

### *Expenditure Patterns of the Elderly*

*Spending on Food.* The next step is to examine whether the elderly are in fact able to meet their dietary needs at a lower cost than the rest of the population. While the foregoing analysis suggests that there is no reason to expect a decrease in food expenditures among the elderly, there exist several data sources on actual food expenditure patterns that can be used to test this expectation empirically.

The original Orshansky poverty threshold was based on the average share of household income devoted to food, as measured from survey data taken in 1955. The share of total disposable household income devoted to food in the United States fell to 11.6% in 1991 (Putnam & Allshouse, 1992), although the proportion of income devoted to food is much higher in lower-income households, reaching 33% in households with incomes between \$5,000 and \$10,000.

Although the figure of 11.6% is the appropriate comparison for the 1955 figure used by Orshansky, its interpretation may be misleading, because it represents the aggregate total disposable income of all households in the United States, divided by the aggregate total expenditure of all households on food (consumed at home or away). Thus, the very high incomes of households in the top income brackets tend to skew the food-expenditure proportion downwards. Rather than summing all household food-consumption expenditures, and dividing by the sum of all households' incomes as Orshansky did, one can derive a more meaningful figure by taking the household as the unit of analysis, and measuring the average share of the household's budget devoted to food. That is, for each household, add all its consumption expenditures, and compute the proportion of this total expenditure that is accounted for by food. (Note that since most households spend less than 100% of their incomes, using expenditure as a base results in a share devoted to food that is higher than food expenditure as a share of income.)

Using data from the 1990-91 *Consumer Expenditure Survey*,<sup>5</sup> we find the average consumer unit<sup>6</sup> devotes about 19.5% of its budget to food (see Table 1). The budget share is (as expected) higher in lower-income units. Among units in the bottom 20% of per-capita spending, 25.5% of the budget goes for food.

These figures refer to all consumer units, of any age. If the calculation is restricted to elderly households, the numbers are quite different. Among units containing only the elderly (65 and older) or an elderly person with nonelderly spouse, the budget share devoted to food is 22.1%, a significantly higher<sup>7</sup> figure. The average consumer budget share devoted to food is significantly higher among elderly units no matter how such units are defined, whether among units with an elderly reference person<sup>8</sup> (irrespective of the ages of other members), or units containing any elderly person. By contrast, consumer units containing *no* elderly members spend a slightly smaller proportion of their budgets on food: 18.8%, compared with 19.5% on average.

The budget shares devoted to food in low-income units are quite similar regardless of the age composition. Compared with the average of 25.7%, low-income units with no elderly members devote 25.7% of their budget to food. Those containing only the elderly spend 25.6%; and those with an elderly reference person spend 26% of their budgets on food. These figures suggest that among low-income households, budget constraints impose similar spending patterns, irrespective of age.

The higher budget share devoted to food among the elderly is not explained simply by their smaller household size. While it is known that smaller households may have trouble realizing economies of scale in food purchasing, smaller consumer units (one or two members) in general spend about the same proportion of their budgets on food as do all consumer units: 19.2%, compared with 19.5%. Small consumer units with low income spend 24.8% of their budgets on food, a slightly lower figure than that for all low-income units, and slightly, though not significantly lower than that for elderly units by any definition.

Moreover, the higher food budget share of the elderly is not explained by the elderly spending more on food away from home. One might expect that the elderly, due to physical limitations or

TABLE 1. Budget Shares Devoted to Food, Housing and Health Care, by Type of Household (All and Low-Income)<sup>a</sup>.  
(Percentages)

All Incomes	All Households	Elderly Reference	Elderly Only	Any Elderly	No Elderly	All 1-2 Person Units
<b>Food</b>	<b>19.53</b>	<b>22.18</b>	<b>22.14</b>	<b>21.94</b>	<b>18.82</b>	<b>19.16</b>
At Home	15.22	18.50	18.43	18.23	14.31	14.43
Away	4.32	3.68	3.72	3.71	4.50	4.73
<b>Housing</b>	<b>33.21</b>	<b>35.61</b>	<b>37.55</b>	<b>35.12</b>	<b>33.39</b>	<b>35.24</b>
Shelter	19.31	17.76	19.23	17.63	19.82	20.23
Utilities	9.28	13.09	13.33	12.75	8.24	9.71
<b>Health Care</b>	<b>6.23</b>	<b>13.67</b>	<b>14.61</b>	<b>13.24</b>	<b>4.06</b>	<b>7.35</b>

Low Income (Bottom Quintile)	All Households	Elderly Reference	Elderly Only	Any Elderly	No Elderly	All 1-2 Person Units
<b>Food</b>	<b>25.74</b>	<b>25.95</b>	<b>25.60</b>	<b>25.76</b>	<b>25.74</b>	<b>24.81</b>
At Home	22.06	23.53	23.15	23.25	21.75	20.10
Away	3.68	2.42	2.44	2.50	3.99	4.72
<b>Housing</b>	<b>34.58</b>	<b>36.95</b>	<b>39.19</b>	<b>36.85</b>	<b>35.01</b>	<b>34.77</b>
Shelter	19.41	17.11	18.79	17.21	19.98	19.52
Utilities	11.55	15.45	15.67	15.23	10.59	11.81
<b>Health Care</b>	<b>5.55</b>	<b>13.66</b>	<b>15.65</b>	<b>14.07</b>	<b>3.43</b>	<b>7.45</b>

a. Average of 4 quarters, CES 1991

social isolation, might prefer to eat more meals out rather than prepare them at home. But this expectation is not confirmed by the data. Among all consumer units, on average, 22% of food spending is away from home, while units with an elderly reference person devote only 16.6% of their food budget to food away from home. The figures are similar for units consisting of only elderly members and for those containing any elderly. If the amount of food consumed away from home is an indicator of the budgetary flexibility to spend more on food, then elderly units appear to have less budgetary flexibility than other households.<sup>9</sup>

These differences are equally striking among low-income households. Among all consumer units in the bottom quintile of per capita expenditure, an average of 14.3% of the food budget is spent away from home. For low-income elderly units, the figures are 9.3% (elderly reference person), 9.7% (any elderly members), and 9.5% (only elderly members). The smaller size of elderly units does not account for the smaller share spent on food outside the home. Among all small households (one and two persons), almost a quarter of the food budget is spent away from home (24.7%), and even among low-income small households, the figure is 19.0%, compared with around 9.5% for the low-income elderly.

A number of factors may be associated with higher food costs of the elderly relative to the rest of the population. About 84% of the elderly live in one- or two-person households, compared with 34% of the U.S. population, and smaller households may have difficulty realizing economies of scale in food purchasing. Also, the elderly may need to buy more nutrient-dense foods to meet their dietary requirements on fewer calories. Beyond this, the elderly are more likely to have physical limitations that restrict their capacity to cook meals from scratch, possibly making them more dependent on convenience foods with a higher nutrient-per-dollar cost. And due to poorer health, they are more likely to require special, medically indicated diets, which may also have a higher cost. Whatever the reasons, the elderly clearly spend more of their income on food than the nonelderly.

*Spending on Other Basic Needs.* Beyond their higher costs for food, the elderly are likely to have higher expenditures for other necessities as well. Based on data from the 1990 Consumer Expen-

diture Survey (Bureau of Labor Statistics), health care accounts for a much larger share of the budgets of the elderly than of the general population (see Table 2).<sup>10</sup> Among all consumer units, health care represents 6.2% of total expenditure, compared with 13.1% in units with an elderly reference person. These data suggest that health care expenditures account for a significant proportion of the budgets of the elderly in spite of the availability of Medicare and Medicaid.

The share of household budgets devoted to housing is also higher among the elderly. On average, housing represents 33.2% of the budgets of all consumer units, but 35.6% of the budget in households with an elderly reference person, and 37.6 percent for households with only elderly members. The difference in housing costs between elderly and nonelderly households is accounted for not by the direct cost of shelter (rent or mortgage), but by the much higher budget share devoted to utilities. The main source of the difference may be the higher heating costs (and possibly also air conditioning) among the elderly, since physiological mechanisms for regulating body temperature become less effective with age, so the elderly tend to keep their homes at higher temperatures in winter and, if they can, cooler in extreme summer heat.

Food, housing, and health care, all basic necessities, account for a larger share of the budgets of elderly households than of nonelderly households. The categories on which elderly households spend less than nonelderly households include clothing, transportation, and entertainment. These items have a higher discretionary component, especially for those no longer working. The higher food costs of the elderly are thus not offset by lower costs in other major areas of necessary expenditure.

### **ALTERNATIVES TO THE CALCULATION OF THE ELDERLY POVERTY LINE**

#### ***Definition of the Household: Individual, Unit, Family***

There are several issues involved in defining a poverty threshold. Implicitly, it is accepted that money income is the measure to use, a reasonable assumption in an industrialized country like the United

TABLE 2. Poverty Rates of Elderly (65+) and All U.S. Persons, by Alternative Definition<sup>a</sup>.  
(Percentages)

Definition	Rate of Poverty Age 65+	Rate of Poverty All U.S.
1. Census elderly	11.9	13.1
2. Census, Unified (Nonelderly)	14.3	13.4
3A. Health & Human Services, Unit Income	17.6	15.9
3B. Health & Human Services, Family Income	12.8	12.9
4. Census elderly, Unit Income	16.5	15.2
5. Census nonelderly, Unit Income	19.6	16.8

6. Census nonelderly, Unit Income, 1/3 reduction for pooling	16.4	15.0
7. Multiplier $6.7 \times$ Thrifty Food Plan, Family Income	38.8	31.7
8. Multiplier $5.4 \times$ Thrifty Food Plan, Family Income	29.2	24.6

a. This table shows the poverty rates (percent of persons defined as poor) which would be obtained if each alternative definition were applied to the elderly and to the entire U.S. population. For example, Line 1 shows the percent of elderly persons defined as poor using the current Census Bureau poverty line for the elderly, and the rate of poverty in the general population which would be obtained if the threshold for the elderly were applied. The alternative definitions applied are (1) Census Bureau threshold for the Elderly; (2) Census Bureau threshold for the nonelderly; (3A) H.H.S. threshold based on income of elderly units (elderly person and spouse if present); (3B) H.H.S. threshold based on income of the entire household in which the elderly live; (4) Census Bureau threshold for the elderly, based on income of elderly units; (5) Census Bureau threshold for the nonelderly, based on income of elderly units; (6) Census Bureau threshold for the nonelderly, based on income of elderly units, with the threshold reduced by 1/3 for elderly units living in larger households; (7) A threshold calculated as 6.7 times the cost of the appropriate Thrifty Food Plan, based on family income; (8) a threshold calculated as 5.4 times the cost of the appropriate Thrifty Food Plan, based on family income.

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States. But whose income should be counted, and among what group of individuals should it be assumed to be shared? This is a particularly relevant question for the older population. If an elderly couple, for example, live in the home of a nonelderly relative/family, can it be assumed that the family's income is pooled with that of the couple, and used for the benefit of all equally? Or should the elderly couple be counted as a separate unit, living only on their own income? The Census Bureau definition assumes full pooling. This tends to overstate the well-being of the elderly couple if in fact they do not share all resources, and if their own independent income is lower than that of the family in which they reside. If the existing Census Bureau threshold were applied to elderly units (that is, the elderly person and spouse) rather than to households (that is, all members who reside together), the resulting poverty rate for the elderly would be significantly higher, at 16.5% (Table 2).

The Census Bureau defines a family as a group of individuals related by blood or marriage and residing together, and defines poverty based on the combined incomes of the whole family. This combined income is compared with the threshold, which is adjusted for the number of children under 18 and, in the case of one- and two-person families, the presence of elderly members. The Census Bureau's poverty thresholds are used for statistical reporting purposes, that is, to track changes in the numbers and percentages of poor people over time.

A different approach is taken by the U.S. Department of Health and Human Services (HHS), which sets poverty guidelines used by a number of public antipoverty programs<sup>11</sup> to determine program eligibility. HHS guidelines are based on the Census Bureau threshold,<sup>12</sup> but there is no adjustment for age composition; any unit of a given size has the same guideline level. This single guideline amount is determined by taking a weighted average of the various Census thresholds that would apply to units of a given size. This results in a guideline that is lower (more stringent) than the threshold for some households, and higher (more generous) for others. If this averaging approach were taken to report the elderly poverty rate, it would raise this rate, but it would also lower the reported poverty rate for nonelderly households. Based on data from the 1991 Current Population Survey, applying the HHS guideline level rather than the

Census Bureau threshold would raise the elderly poverty rate from 11.9% to 12.8%. This may be compared with the rate of 14.3%, which results if the nonelderly threshold is used. The overall U.S. poverty rate based on this guideline would fall, however, from 13.1% to 12.9%.

The HHS guideline defines income in terms of a consumer "unit," not a "family." In the case of the elderly, a "unit" would be an elderly individual or the individual and a spouse (not necessarily elderly), even if they reside in a larger household. The other members of the household are then counted as another unit. Poverty guidelines are applied separately to each unit based on its size and the income of its members. Considering elderly "units" as independent would significantly raise estimated poverty rates among the elderly. If the Census's elderly threshold is applied to these elderly units, the rate rises to 16.5%. If the nonelderly threshold is applied, the rate is even higher—19.6%, or almost one out of five elderly persons would be considered as living in poverty.

The unit definition just applied assumes that no income pooling takes place when elderly units reside within a larger household. In reality, the degree of income pooling of elderly units within larger families is likely to vary from one family to another. One way of adjusting for the possibility of income pooling is to take the approach used by Supplemental Security Income in determining program eligibility. This program lowers the eligibility criterion by one third for all elderly units living in larger households. Even with this assumption regarding pooling, though, treating elderly units separately results in a higher poverty estimate: 16.4% if the Census Bureau nonelderly threshold is applied, compared with 14.3% if the same threshold is applied to family income. Table 2 shows the elderly and total U.S. poverty rates for these variations in the method of calculating a poverty criterion.

Every one of these modifications results in a higher poverty rate for the elderly than that reported by the Census Bureau under its current procedures—sometimes dramatically so. Poverty rates for the elderly, when calculated in the same way as for the nonelderly, are not lower. In fact, in all but one comparison, the elderly poverty rate is higher than that for the general population.

UNIVERSITY OF CALIFORNIA

### *Choice of a Multiplier*

In 1955, about one third of total after-tax income in the United States was devoted to food. The comparable figure for 1991 was 11.6%. As explained earlier, this is an aggregate figure (total U.S. food expenditure as a percentage of total U.S. disposable income). Using the household as the unit of analysis, the average share of a household's income devoted to food is now about 15% (based on 1991 data). Using the same reasoning as Orshansky, the appropriate multiplier based on current data would be 6.7, rather than three. This would dramatically raise the poverty threshold and all reported poverty rates (see Table 2).

Instead of taking the *average* share of household income devoted to food, the share among only low-income households could be used. Orshansky (1965) specifically chose not to do this, arguing that low-income households already faced excessively constrained budgets. However, if the food share of households in the lowest income quintile (20% of all households) were used in the current context, this would yield a multiplier of 5.4, still producing a much higher poverty rate than currently reported.

Does it make sense to argue that the poverty rate among the elderly is really three times the rate reported by the Census Bureau (11.9%)—virtually the same as the level of 35% for the elderly in 1960? Is the situation of the elderly in 1992 really no better than it was in 1960? There is a paradox inherent in using the food share of income as the sole criterion for setting the poverty line. A declining food share is a sign of increasing affluence. Yet a declining food share also results in a higher multiplier and thus, all else equal, a higher poverty line and a greater proportion of the population in poverty.

The relative decline in the price of food since the 1960s does justify a somewhat higher multiplier. The CPI for food rose 401% between 1967 and December 1991, while the general CPI for urban consumers rose 413%. Further, the cost of other necessities has risen as that of food has fallen. The CPI for housing (shelter, utilities, operation) rose 438% between 1967 and 1991, while that for shelter alone rose 515% in the same period (Economic Report of the President, 1992).<sup>13</sup>

Moreover, the declining average budget share for food and the rising general standard of living that it implies suggest that the "custom of the country" is changing, so that some consumption patterns considered luxurious a generation ago are considered basic now. These considerations suggest that by any reasonable definition, the poverty rate is indeed higher than that reported by the Census Bureau. But, at the very least, there is no basis for counting poverty of elderly people differently from the rest of the population. By making two changes—unifying the threshold at the nonelderly rate and counting the income of units rather than entire households—the elderly poverty rate rises from 11.9% to 19.6%, 65% higher than the rate based on the standard for the elderly currently used.

### **POVERTY RATES UNDER ALTERNATIVE DEFINITIONS OF POVERTY**

Table 2 shows elderly poverty rates under the alternative assumptions discussed in this article, and compares them with the overall U.S. rate estimated, using the same assumptions. The most striking aspect of these figures is that every alternative elderly poverty rate is higher than the one estimated under current assumptions, which we have shown to be invalid.

The second point to note is that once the same threshold is applied to all groups equally, the elderly poverty rate is *not* lower than that of the general population, but is about the same. This represents considerable progress since the 1950s, when the elderly poverty rate was half again as high as that for the U.S. population—35.2% compared to 22.4% in 1959 (Census Bureau, 1977; 1992). Still, the evidence does not support the contention that the elderly as a group are economically better off than the general population.

### **CONCLUSIONS AND RECOMMENDATIONS**

#### ***Unifying the Poverty Line***

There exists no scientific, economic, or empirical justification for the assumption that elderly people have lower overall nutrient re-

quirements and hence lower food costs. Since this invalid assumption is the sole basis for a separate lower poverty threshold for the elderly, it follows that there is no valid reason to have separate elderly poverty thresholds. We therefore strongly recommend that the separate thresholds for the elderly living in one- and two-person households be eliminated. This change could be made immediately.

It would be a simple matter for the Bureau of Census to apply previously calculated nonelderly thresholds to existing data series to establish an adjusted time series for multi-year poverty comparisons. The nonelderly thresholds are already calculated annually and no new data handling would be required.

Conclusions based on poverty estimates derived from the separate elderly poverty thresholds do not reflect the true nature of elderly poverty in the United States and are therefore misleading. Moreover, policies developed on the basis of these estimates are likely to lead to misinformed targeting of effort and inefficient use of scarce resources.

One of the most significant demographic trends projected by the Census Bureau for the next century is large increases in the numbers of elderly Americans. As we enter the new century, effective provision for the health of all Americans, and especially the elderly, is a very urgent concern. This is one example of why accurate representation of the economic well-being and poverty status of elderly Americans is essential if policymakers are to make informed decisions.

### *A Reality-Based Poverty Line*

In the long run, if the idea behind establishing a poverty threshold is to determine the number of people who cannot achieve an acceptable standard of living because of their low income, the entire approach to calculating the threshold needs to be rethought. An expert panel of the National Academy of Sciences has been working on the issue, and this report was expected to be available in mid-1994. One alternative to the current approach, which has been suggested by a number of experts in the field (Greer & Thorbecke, 1986; Ruggles, 1990), would be to use information on actual household expenditure patterns and living standards from currently available surveys to determine the level of income at which a household

has a given probability of achieving a specified minimally acceptable level of well-being. Statistical techniques unavailable in 1965 now make it possible to use food consumption surveys, for example, to identify the level of income at which a household would have a probability of meeting its nutrient requirements. Possibly, other indicators of living standards—such as housing quality—also could be incorporated into the calculation. But if food continues to be seen as “the most basic of basic needs,” this approach could be applied to food consumption criteria alone. It is likely that the resulting poverty threshold would be higher than the current one, but this method of calculation would be a more empirically defensible approach to computing a poverty threshold.

## ENDNOTES

1. This is known in economics as Engel's Law: as income rises, the amount of income devoted to food rises at a decreasing rate, so the budget share devoted to food falls.

2. The figure of one third (0.27 for two person households) was calculated as a share of after-tax cash income. The Census Bureau, in assessing poverty rates, uses pre-tax income because that figure is more readily available from the Current Population Survey, the data source for calculation. This, of course, yields a more conservative estimate of the prevalence of poverty, since pre-tax income is higher. In 1963, low-income households paid about 1% or less of their income in taxes, so the difference was not so significant when the decision was made. In 1987, the figure was 4% to 6% (Ruggles, 1990). Smeeding (1983) estimated that poverty rates would rise by 10% on average if after-tax income were used (Morris & Williamson, 1986).

3. The number of micronutrients included in the calculation of the dietary plans has been increasing over the years, as nutritional information and computing capacity have expanded (Cleveland & Peterkin, 1983).

4. NHANES refers to the National Health and Nutrition Examination Survey conducted periodically by the National Center for Health Statistics, U.S. Department of Health and Human Services. NHANES I was conducted between 1971 and 1974. NHANES II was conducted from 1976 to 1980.

5. Weighted sample, simple average over four quarters.

6. The CES collects data on consumer units, not households. A consumer unit is an individual living alone or a group of two or more individuals living together and sharing expenses.

7. By t-test;  $p < .001$  for all quarters.

8. The reference person is the member listed first in the CES household list. This person is usually thought of as the head of household, though that ambiguous term is no longer used.

9. Other explanations are that the elderly, less likely to be working full-time, have less reason to eat out; also, it may be more difficult for them to go out due to physical limitations.

10. This excludes health insurance payments.

11. The guideline is used to determine eligibility for a number of USDA programs, including Food Stamps, WIC, School Feeding, and others. Welfare, SSI, and Section 8 housing assistance, among others, use different criteria, as does Medicaid. Programs also use widely varying definitions of income and of family or household (Fisher, 1992a).

12. The guideline is computed from the threshold by taking the (weighted average) threshold of two years previous and multiplying it by one year's change in the Consumer Price Index-Urban. Then the guidelines are adjusted so that the difference from one family size to the next is the same: the simple average of the threshold differences (Fisher, 1991). The Census thresholds for a given year are reported in late summer of the following year, while HHS needs a current guideline for eligibility determination.

Another difference between the threshold and the guideline is that the guideline is 10% higher for Alaska, and 25% higher in Hawaii.

13. For example, in a study of New York state food-pantry users, households with incomes between 50% and 90% of poverty spent 64% of their incomes on food; those with incomes below 50% of poverty spent 70% (Clancy & Bowering, 1992).

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