

---

# Income and Living Arrangements Among Poor Aged Singles

by Thomas Tissue and John L. McCoy\*

---

It is generally agreed that income plays an important part in determining the living arrangements of unmarried old persons. Numerous studies of later life have concluded that large numbers of old persons live with their friends, adult children, and other relatives simply because they cannot afford to maintain separate homes of their own. The literature contains few references, however, to the effect of income change on the living arrangements of persons after they have become old and poor. This article focuses on the correlates of living arrangements among unmarried older welfare recipients in 1973, and then examines the effect of income change on living arrangements in 1974. Logit analysis identifies several patterns of household change associated with income increase and decrease but, overall, the capacity to care for oneself was the best predictor of living arrangement in 1974.

---

The living arrangements of the Nation's elderly poor are often determined by income. Cross-sectional—that is, point-in-time—surveys show that the poorest aged reside in shared households more often than elderly persons with higher incomes. Moreover, the steady and substantial increase in the real income of old people over the past several decades has been accompanied by an impressive rise in the proportion of single-person households among the aged.

On the other hand, comparatively little is known about the effect of altering people's income after they have become old and poor. Is household composition determined by habit and noneconomic factors at this late date, or will significant numbers of the unmarried elderly poor actually change their living arrangements if their income goes up or down? This article addresses that question with data gathered in a large, two-stage panel survey of the Nation's public assistance recipients. It presents findings on their living arrangements in late 1973, discusses the concomitants of living alone and with others at that time, summarizes the changes in living arrangements and income that occurred over a 12-month period, and examines the effect of income change upon individual decisions to set up (and give up) a home of one's own in later life. The article

concludes by discussing the probable outcome of future increase in means-tested benefits for the aged poor.

## Background

All other things being equal, old persons seem to prefer living alone in their own homes to sharing a place with their grown children or other family members. Young persons do not plan to live with their children when they themselves grow old, and younger heads of households quite often reject the notion that aged parents should move in with their adult sons and daughters. The preferred arrangement appears to be "intimacy at a distance"—living within easy visiting range of friends and relatives but in a home of one's own.

The complaints about shared households are familiar ones. Older persons say that they feel useless, unwanted, or just in the way. The division of authority and responsibility for household operation is difficult, at best, when an older woman moves in with her grown daughter or daughter-in-law, and close and prolonged contact with small children can tax the affections of even the fondest grandparent. Worst of all perhaps, shared households in old age may constitute a public admission of dependency. As Hess and Waring point out, the current generation of old persons consists of men and women who "... have internalized the great

---

\* Division of Supplemental Security Studies, Office of Research and Statistics, Office of Policy, Social Security Administration. This article is Report No. 10 of the Survey of Low-Income Aged and Disabled.

American virtues of independence and self-reliance and consider making a home with an adult child only as a last resort."<sup>1</sup>

In view of the problems associated with joint households and the professed lack of enthusiasm for them, why do so many old persons share a home with someone else? Loneliness, recent bereavement, and filial affection must play some part, but considerations of money and health seem paramount. Generally, people can stretch their income by living together in one large household instead of several small ones. The larger unit produces important economies of scale with respect to food and shelter costs, provides a form of insurance against temporary interruptions in personal income, and often guarantees access to a shared pool of appliances and other household amenities that is beyond the resources of a single family member living alone. Furthermore, combined households practice income and resource sharing that usually improves the financial welfare of the added member at the expense of the primary unit. Thus, low-income older persons have a clear economic incentive for sharing the homes of others, particularly if the others are better off financially.

For the frail and sick, a combined household is both an assurance that someone will be on hand in case of a medical emergency as well as a continuing source of routine care and assistance with the chores of daily living. These themes—money and health—appear repeatedly in the discussion of old persons' living arrangements. As expected, the poor and the sick live in the homes of relatives more frequently than do healthier, financially secure old persons.

Over the past several decades, the rate at which unmarried old persons live with relatives has declined appreciably. For never married, divorced-separated, and widowed women over age 65, the proportion living with relatives dropped from 58 percent in 1940 to 29 percent in 1970.<sup>2</sup> Between 1940 and 1970 was, of course, a historical period in which the social security system grew to maturity and a time of rapidly expanding means-tested welfare programs for older persons. The effect on the income of the aged was considerable. The elderly experienced a 38-percent increase in real income over the period 1952-72.<sup>3</sup> During the 1960's the incidence of poverty among the aged dropped by 30 percent.

The joint emergence of these two trends—increased

personal income and increased rates of single-person households among the aged—did not go unnoticed. Orshansky observed that, "... more and more people, particularly women, are being enabled to maintain a household in their old age because they now have some income."<sup>4</sup> Rivlin asserts that, "Rising incomes, including transfers, have enabled Americans to increase their consumption of a luxury good—the luxury of living apart from their relatives,"<sup>5</sup> while Lampman flatly concludes, "... there can be no doubt that social security and public assistance benefits have enabled old people and women heading families to live and be counted separately as low-income households."<sup>6</sup> Taussig goes so far as to suggest that the social security program enjoys the support of workers not because it will some day provide old-age benefits to them but because it relieves them of the responsibility to share homes and income with their aged parents today.<sup>7</sup>

There is, in short, an extensive literature that attests to the importance of personal income in determining how and with whom older persons live. That money matters seems indisputable by now. Equally clear, however, is the fact that very little is known about the way households are formed and dissolved in old age and the specific circumstances under which income exerts its influence on these decisions. Previous research does not help much in predicting whether or not income manipulation will produce a demonstrable change in household composition within a particular population of low-income elderly. It is fairly certain that the living arrangements of the poor were never dictated solely by their poverty. The elderly poor suffer a great many disadvantages and handicaps beyond low income. Compared with other old people, they are not only poorer but sicker too. There is no guarantee that raising their income will permit very many of them to establish homes of their own—making them richer does not make them healthier or better able to care for themselves.

Neither is it absolutely clear that declining poverty rates for old people were the sole or even the major reason for the upswing in single-person households over the past few decades. Expansion of the income-transfer programs was not the only event of that historical period. Previous studies have identified major demographic trends that manifest themselves in a sharp increase in the number of old people relative to the

<sup>1</sup> Beth B. Hess and Joan Waring, "Changing Patterns of Aging and Family Bonds in Later Life," *The Family Coordinator*, October 1978, page 305.

<sup>2</sup> Frances Koblin, "The Fall in Household Size and the Rise of the Primary Individual in the United States," *Demography*, February 1976, page 136.

<sup>3</sup> Jennifer Warlick, *The Relationship of the Supplemental Security Income Program and Living Arrangements of the Low-Income Elderly*, paper presented at the annual meetings of the National Conference on Social Welfare, August 1979.

<sup>4</sup> Mollie Orshansky, "Recounting the Poor—A Five-year Review," *Social Security Bulletin*, April 1966, page 32.

<sup>5</sup> Alice Rivlin, "Income Distribution: Can Economists Help?" *American Economic Review*, May 1975, page 5.

<sup>6</sup> Robert Lampman, "What Does It Do For the Poor—A New Test for National Policy," *The Public Interest*, winter 1974, page 72.

<sup>7</sup> Michael Taussig, "Long Run Consequences of Income Maintenance Reform," in *Redistribution to the Rich and the Poor*, Kenneth Boulding and Martin Pfaff (editors), Wadsworth, 1972, pages 376-386.

number of adult children with whom they might live.<sup>8</sup> Glick notes that today's aged were born into families that typically produced five children, but the next generation had only three, while those of childbearing age now are likely to have just two.<sup>9</sup> It seems fair to hypothesize that changes in the Nation's age structure, life expectancies, and levels of functional capacity, for example, also accounted for the shifts in living arrangements so often attributed to economic factors.

There is reason to suspect that the household choices of old persons are influenced by available income. But there is little direct evidence with which to confirm the suspicion, particularly as it relates to the change in living arrangements that can be induced by income manipulation alone.

### Survey Data

The financial circumstances of a great many old persons changed abruptly on January 1, 1974. Those receiving old-age assistance were transferred en masse to a new Federal income-maintenance program called supplemental security income (SSI). Operated by the Social Security Administration, SSI introduced nationally uniform eligibility criteria, standard administrative procedures, and a guaranteed minimum income for all eligible persons. For recipients in States with the lowest welfare payment standards, the shift to SSI was sure to produce substantial income improvement immediately.

As part of a larger study of SSI's impact on its prospective clientele, Bureau of the Census enumerators conducted lengthy personal interviews with 5,192 aged welfare recipients during the last 3 months of 1973. These interviews emphasized income and assets but also gathered detailed information on household composition, health, housing, diet, and social activity. They provide a rich body of data for describing the circumstances of aged welfare recipients immediately before their transfer to SSI. Followup interviews were completed with 4,599 (89 percent) of the initial cohort during October, November, and December of 1974. Of the original sample, 308 died in the year following the first interview, 205 were institutionalized, and 80 were "lost" for miscellaneous reasons such as failure to locate and refusals to be reinterviewed. The same questions were asked in 1974, in addition to questions pertaining specifically to SSI. The analysis that follows is based on the responses of 3,305 aged persons who were receiving public assistance in 1973, and not living with a spouse in 1973, and successfully reinterviewed in 1974. Thus, it excludes married persons and those who failed to complete both interviews.

<sup>8</sup> Mary Jo Bane, *Here To Stay: American Families in the Twentieth Century*, Basic Books, 1976, and Frances Kobrin, *op. cit.*, pages 127-138.

<sup>9</sup> Paul C. Glick, "The Future Marital Status and Living Arrangements of the Elderly," *Gerontologist*, June 1979, pages 301-309.

The data were collected within a stratified, multi-stage cluster design in which the probability of selection varied considerably by geographic region. These data were adjusted for the differential selection features of the sampling design. Each case carries a normalized or relative weight reflecting its initial probability of inclusion in the sample.<sup>10</sup>

### Living Arrangements in 1973

Examined separately, the 1973 data confirm most of the conventional wisdom as it pertains to living arrangements in old age. Roughly 60 percent of the unmarried sample was living alone at the time of the 1973 interview. Of those sharing a home, the majority did so with one or more of their adult children. The demographic correlates of living arrangements were quite similar to those identified in Chevan and Korson's analysis of widows.<sup>11</sup> Compared with the aged in shared accommodations, people who lived alone were younger and better educated (table 1). They were also more likely to be male, white, childless, and residing in urban areas. Although all of these differences are significant at the 0.01 level, the percentage point differences are typically modest. Widowhood per se was not associated with living arrangement. Widows and widowers lived alone at virtually the same rate as divorced, separated, and never married persons.

<sup>10</sup> For details of the survey and the sampling procedures, see Erma Barron, "Survey Design, Estimation Procedures and Sampling Variability" (SLIAD Report No. 5), Social Security Administration, 1978; Thomas Tissue, "The Survey of Low-Income Aged and Disabled: An Introduction" (SLIAD Report No. 1), *Social Security Bulletin*, February 1977, pages 3-11.

<sup>11</sup> Albert Chevan and J. Henry Korson, "The Widowed Who Lived Alone: An Examination of Social and Demographic Factors," *Social Forces*, September 1972, pages 45-53.

**Table 1.**—Living arrangements, by demographic characteristics, 1973

Characteristic	Living alone	Living with others	Correlation coefficient <sup>1</sup>
Number reporting .....	1,932	1,373	.....
Percent:			
Aged 75 and over .....	48	52	-0.039 (.01)
With less than 7 years formal education ...	49	60	-.103 (.001)
Female .....	79	83	-.042 (.001)
Other than white .....	26	34	-.094 (.001)
With at least one living child .....	72	79	-.076 (.001)
Living in rural places .....	15	22	-.097 (.001)
Widowed .....	73	72	.012 ( >.05)

<sup>1</sup> Level of significance in parentheses calculated by student t with N-2 degrees of freedom.

Aged welfare recipients are more frail and physically infirm than most of the old people in this country.<sup>12</sup> Within the welfare population, however, some recipients were better able to care for themselves than others. As anticipated, the self-care capacity of those in solitary living arrangements were clearly superior to persons living with others (table 2). They were better equipped to do their own grocery shopping, prepare their own meals, wash their own clothes, do light housework, and take care of themselves when ill with a minor illness. Those in shared accommodations were consistently less able to deal with these basic tasks of daily living without regular assistance from others.

Those who lived alone also maintained a more active social life (table 3). Greater numbers of them belonged to formally organized clubs or lodges and to informal social groups that visited or went on outings from time to time. They also maintained higher rates of contact with persons in the immediate neighborhood as well as with friends who did not live nearby. They did not, however, see relatives or entertain visitors in the home any more frequently than did older singles in shared households. The latter were not uniformly reclusive, but they did occupy a comparatively narrow sphere of social involvement and interaction. Persons who lived with others did not seem to get out very often.

The income hypothesis is borne out too. Aged singles living alone enjoyed a clear financial advantage over those living with others. Their average monthly cash income was dreadfully low (\$157) when judged by any objective standard, but it was still higher than that available to persons who shared a home (\$135). If the needs and income of others in the household are disregarded, it is apparent that the vast majority of the unmarried aged in shared homes would have fallen

<sup>12</sup> John L. McCoy and David L. Brown, "Health Status Among Low-Income Elderly Persons: Rural-Urban Differences" (SLIAD Report No. 4), *Social Security Bulletin*, June 1978, pages 14-26.

**Table 2.—Living arrangements, by self-care capacity, 1973**

Self-care capacity	Living alone	Living with others	Correlation coefficient <sup>1</sup>
Number reporting .....	1,932	1,373	.....
Percent able to do without assistance—			
Grocery shop .....	66	42	0.241 (.001)
Prepare own meals .....	92	64	.353 (.001)
Do own laundry .....	73	47	.259 (.001)
Dust and clean home .....	90	66	.299 (.001)
Care for self with minor illness .....	71	46	.253 (.001)

<sup>1</sup> Level of significance in parentheses calculated by student t with N-2 degrees of freedom.

**Table 3.—Living arrangements, by social activity, 1973**

Social activity	Living alone	Living with others	Correlation coefficient <sup>1</sup>
Number reporting .....	1,932	1,373	.....
Percent:			
Who belong to—			
Formally organized club, lodge, society .....	19	12	0.094 (.001)
Special circle of friends .....	30	21	.102 (.001)
Who saw in past month—			
Neighbors .....	80	69	.133 (.001)
Friends (other than neighbors) .....	63	51	.124 (.001)
Relatives (nonhousehold members) .....	59	60	-.007 (>.05)
Who entertained friends or relatives in the home in past month .....	37	36	.011 (>.05)

<sup>1</sup> Level of significance in parentheses calculated by student t with N-2 degrees of freedom.

below the official poverty line if they had tried to live alone on the income available to them personally. Their individual poverty rate was appreciably higher—by 10 percentage points—than that of aged recipients who maintained a separate home (table 4). Cash income, of course, is not the only benchmark for assessing financial security. Henretta and Campbell argue for the inclusion of net worth in the analysis of economic status in later life.<sup>13</sup> As they point out, the level of living available to old persons is not merely a function of income but is also influenced by the amount of their liquid assets and the ownership of property that can be mortgaged or sold. On both counts, older recipients who lived alone were better off than those living with others. They were more likely to own the homes in which they lived and to have assets (exclusive of the home) with cash value greater than zero.

<sup>13</sup> John C. Henretta and Richard T. Campbell, "Net Worth as An Aspect of Status," *American Journal of Sociology*, March 1978, pages 1204-1223.

**Table 4.—Living arrangements, by financial status, 1973**

Financial status	Living alone		Living with others		Correlation coefficient <sup>1</sup>
	Number reporting	Percent	Number reporting	Percent	
Poor based on own income needs .....	1,856	71	1,312	81	-0.108 (.001)
Owens home of residence .....	1,932	29	1,373	15	.156 (.001)
Assets (excluding the home) greater than zero .....	1,794	35	1,256	19	.174 (.001)

<sup>1</sup> Level of significance in parentheses calculated by student t with N-2 degrees of freedom.

In one sense, there is nothing startling in the discovery that functional capacity and financial security were associated with the household choices of old persons. That is, after all, the conclusion that has emerged from countless studies of later life. What seems important is that these variables are so consistently related to household composition in a sample that excludes almost everyone who is aging comfortably. Among the poor and the sick, it is still the poorest and the sickest who most often turn up in shared households.

Do combined households actually deliver the economic and material benefits so often claimed for them? The 1973 survey data indicate that they do. In developing the concept of the "hidden poor," Orshansky identifies a group of older persons with extremely low personal income. These persons do not appear in the official poverty counts, however, because they live in households that are not poor as a whole.<sup>14</sup> This phenomenon is reflected in the data shown in table 5. Although 81 percent of the aged in shared households were poor when their own income was matched against their individual poverty thresholds, just 40 percent were living in households whose combined income fell below the poverty standard appropriate to the larger unit. Compared with older recipients living alone, those in combined households were poorer individually but much less likely to live in poor households.

The obvious advantage to be gained from sharing the income of other household members is that it is much cheaper to live that way. Persons living alone were considerably more likely to be spending half or more of their income for food and shelter than were old persons who shared homes with others. And those in shared homes seemed to be living better. Their houses appeared to have been superior structurally, at least in regard to hot and cold running water and the provision of unshared access to a kitchen and bathroom facilities. They enjoyed greater access to various appliances and consumer amenities too. Their homes were more likely to include a television set, washing machine, refrigerator, and telephone. Unexpectedly, quality of diet was not associated with living arrangement. Daily diets were evaluated according to Department of Agriculture criteria.<sup>15</sup> Application of the minimum recommended daily diet standard to the food consumption reports of the survey respondents yields virtually identical results for both groups.

<sup>14</sup> Mollie Orshansky, "Counting the Poor: Before and After Federal Income-Support Programs," in Congress of the United States, Joint Economic Committee, *Old Age Income Assurance Part II: The Aged Population and Retirement Income Programs*, 1967, pages 177-231.

<sup>15</sup> Gerald Feaster, *Impact of the Expanded Food and Nutrition Education Program on Low Income Families* (Agricultural Economic Report No. 220), Economic Research Service, U.S. Department of Agriculture, February 1972.

**Table 5.—Living arrangements, by household finances and level of living, 1973**

Household finances and level of living	Living alone	Living with others	Correlation coefficient <sup>1</sup>
<b>Household poverty status:</b>			
Number reporting.....	1,866	949	.....
Percent living in households that were poor as a whole.....	71	40	0.296 (.001)
<b>Food/shelter expenses:</b>			
Number reporting.....	1,597	978	.....
Percent spending at least half of own income for food and shelter.....	87	50	.409 (.001)
<b>Structural features of home:</b>			
Number reporting.....	1,932	1,373	.....
Percent living in homes with—			
Hot and cold running water.....	82	86	-.046 (.01)
Kitchen.....	94	98	-.103 (.001)
Flush toilet.....	82	87	-.074 (.001)
Tub or shower.....	77	86	-.117 (.001)
<b>Household amenities:</b>			
Number reporting.....	1,932	1,373	.....
Percent living in households with access to—			
Refrigerator.....	94	98	-.105 (.001)
Television set.....	78	92	-.184 (.001)
Telephone.....	69	81	-.133 (.001)
Washing machine.....	33	60	-.274 (.001)
<b>Diet adequacy:</b>			
Number reporting.....	1,922	1,368	.....
Percent with daily diet meeting recommended minimum standard.....	55	57	-.019 (>.05)

<sup>1</sup> Level of significance in parentheses calculated by student t with N-2 degrees of freedom.

## Change in Income and Living Arrangments, 1973-74

No one became wealthy after being transferred to the SSI program, but most people experienced a net improvement in their financial condition. Even after adjusting for an 11-percent inflation rate during the study period, two-thirds of the aged singles received a higher monthly income in 1974 than in the preceding year.<sup>16</sup> Real income rose \$19 per month for the average recipient living alone in 1973. Those living with others at the time of the first interview experienced a mean individual increase of \$22 per month. Quite a few persons received income advances appreciably larger than the average. Actual monthly purchasing power increased by \$50 or more for 1 in 6 survey respondents.

<sup>16</sup> To offset inflation, 1974 income was converted to constant 1973 dollars (that is, multiplied by 0.9) before comparing it with 1973 income. Increase in absolute or nominal income was, of course, much larger than real increase. For persons living alone, mean monthly income rose from \$157 to \$191 and for those living with others it increased from \$135 to \$176.

Because 1973 income was so low, dollar increases of this amount produced major proportional gains in monthly income for a large number of recipients. Table 6 shows that real income increases of 40 percent or more were not uncommon in either segment of the sample. It should be noted that there were losers as well as gainers. In evaluating the impact of SSI on its larger transferred caseload, Schieber found that some SSI transfers lost money in an absolute sense and many of them failed to increase their income at a rate sufficient to match inflation.<sup>17</sup> Within the present sample, roughly 5 percent suffered real income declines of 20 percent or more during the year.

There was virtually no net change in living arrangements during the study period (table 7). In 1973, 58 percent of the full sample was living alone. A year later the same proportion (58 percent) lived by themselves. That is not to say that nothing happened during the year. Nearly 7 percent of those who had lived alone initially were in shared households at the second interview. About half of them (3.2 percent) had left their former home to move in with others; the remainder (3.3 percent) were still in their 1973 homes but other people had moved in with them. The experience of recipients who had begun in shared homes was almost a mirror image of that reported above. They became one-person households at nearly the same rate (8.4 percent) at which the others shifted to joint living arrangements. And, as before, about half of that change could be attributed to a move on the part of the recipients themselves: 3.9 percent left a shared home to find their own place but 4.5 percent just stayed behind while everyone else moved out.

<sup>17</sup> Sylvester Schieber, "First Year Impact of SSI on the Economic Status of 1973 Adult Assistance Population" (SLIAD Report No. 2), *Social Security Bulletin*, February 1978, pages 18-43.

**Table 6.**—Living arrangements in 1973: Percentage change in real monthly income between 1973 and 1974

Percentage change in real monthly income <sup>1</sup>	Living alone in 1973	Living with others in 1973
Number reporting.....	1,810	1,280
Total percent.....	100	100
Lost:		
20 percent or more.....	5	6
5-19 percent.....	11	11
Lost or gained less than 5 percent.....	22	17
Gained:		
5-19 percent.....	25	22
20-39 percent.....	20	19
40 percent or more.....	17	25
Mean percentage change.....	<b>18.2</b>	<b>24.6</b>
Standard deviation.....	<b>33.4</b>	<b>42.3</b>

<sup>1</sup> Percentage change =  $(1974 \text{ income} - 1973 \text{ income}) \div 1973 \text{ income}$  for each respondent reporting income in both years.

**Table 7.**—Summary of living arrangements, 1973-74

Living arrangement	Number	Percent
Living alone in 1973		
Total.....	1,932	100.0
Still alone in 1974.....	1,806	93.5
With others in 1974.....	126	6.5
Same house: others moved in with recipient ...	64	3.3
Different house: recipient moved in with others.....	62	3.2
Living with others in 1973		
Total.....	1,373	100.0
Still with others in 1974.....	1,258	91.6
Alone in 1974.....	115	8.4
Same house: others moved out.....	62	4.5
Different house: recipient moved out.....	53	3.9

## Logit Analysis and Results

The analysis of change in living arrangements is based on a number of hypotheses suggested by the cross-sectional analysis of the 1973 data. For those living alone initially, a shift to shared housing should occur most frequently for certain demographic categories (very old, poorly educated, female, nonwhite, rural residents, parents), for extreme isolates, and for those persons least able to care for themselves. Poor diets and substandard housing might impel them to seek better living conditions by sharing accommodations with others. The economic hypothesis is straightforward. Living alone is a comparatively expensive proposition. It seems reasonable to predict that maintaining a separate home would be easiest for respondents with the greatest financial resources (owned home and other assets) and the largest real income increase during the year. Those who began the survey period in the most precarious financial condition and experienced the least real income gain should encounter the greatest difficulty going it alone.

For respondents living with others in 1973, the change hypotheses are largely the reverse of those outlined above. Change to single-person households in 1974 should be more common among younger recipients, men, better educated persons, whites, urban residents, and the childless elderly. Those with active social lives and the ability to care for themselves should leave shared households at a greater rate than the others, and significant gains in real income should play an important role in permitting respondents to set up and maintain homes of their own.

These propositions were tested separately for the two basic types of living arrangements defined in 1973. Thirteen independent variables were used to explain change in living arrangements over the year. The coding specifications and the statistical properties of each independent variable are shown in appendix table

I on page 12. The statistical technique used to identify significant predictors of change was multinomial logistic analysis or logit. Logit is recommended for multivariate analysis when the dependent variable is dichotomous and extremely skewed in its distribution. Since the proportion of "changers" did not exceed 8 percent in any of the models reported here, the use of simple regression seemed inappropriate. This particular logit procedure is a maximum log-likelihood technique that is robust when the distribution of independent variables is not multivariate normal.

Tables 8 and 9 present several types of statistics based on the logit results. The final log coefficient is included only to indicate the direction of the relation between each independent variable and the outcome measure. The magnitude of its log coefficient is not a reliable measure for determining a variable's relative importance. To determine the significance of a given variable it is necessary to calculate the value of chi square, which, in this case, is a function of the squared ratio of its log coefficient to its standard error. Variables are considered to be important predictors of change only if their chi square values are significant at the 0.05 level with one degree of freedom. The -2 log-likelihood statistic summarizes the improvement in variance reduction and overall fit attributable to the independent variables.

The results of the initial logit procedure show that self-care capacity was the prime determinant of simple change in living arrangements (table 8). Functional frailty was the best predictor of whether a recipient went from living alone in 1973 to living with others in 1974, and functional competence was the only significant correlate of whether a person went from living with others to living alone. The income change hypotheses were not borne out in either of these initial models. Income gain or loss did not predict a change from joint to solitary living arrangements during the year, while income increase was positively associated with a switch from living alone to living with others in 1974. Although it was assumed that financial hardship would force older singles to seek out shared households, the logit results show the reverse; the larger the recipient's real income increase, the greater the likelihood that a person living alone in 1973 would turn up in a shared household in 1974. It is worth noting that no other variable achieved significance in either of the two basic models of change.

In focusing on gross measures of change, one obscures important differences that relate to the way change is achieved. As shown in table 9, the factors disposing others to move in with the respondent are quite different than those that lead the respondent to move in with someone else. Respondents were most likely to have someone move into their homes if they were comparatively young, unable to accomplish the

**Table 8.**—Logit results, probability of change in living arrangements for all respondents, 1973–74

Independent variables	Recipients living alone in 1973: Probability of living with others in 1974			Recipients living with others in 1973: Probability of living alone in 1974		
	Final log coefficient	Chi square	p	Final log coefficient	Chi square	p
Age.....	0.006	0.18	.....	-0.020	1.52	.....
Race (white).....	-.012	.00	.....	.403	2.54	.....
Sex (male).....	.388	2.85	.....	.468	3.11	.....
Education.....	-.025	.69	.....	.045	2.04	.....
Residence (rural).....	.197	.60	.....	-.316	1.26	.....
Number of children.....	.037	1.10	.....	.064	3.27	.....
Housing quality.....	-.377	2.89	.....	-.457	3.38	.....
Diet quality.....	-.005	.00	.....	.291	1.63	.....
Assets (other than home).....	.001	.03	.....	.001	.72	.....
Home ownership.....	.030	.02	.....	.205	.56	.....
Self-care capacity.....	-.273	17.99	0.001	.241	13.49	0.001
Social participation.....	-.231	2.05	.....	.249	2.04	.....
Income change (percent).....	-.614	6.00	.05	.381	2.29	.....
-2 log likelihood:						
Initial.....	855.09			703.08		
Final.....	807.76			653.62		

tasks of daily living, and the recipient of an increase in real income over the year. Income change did not play a role in the respondent's decision to move into the home of another. Extreme old age, social isolation, and, once again, the inability to care for oneself were the only significant predictors of moving in with others.

There were two distinct routes to household disaggregation as well. The probability of others moving out of the recipient's home was greater for whites, homeowners, persons with substandard houses and those able to care for themselves without help. Moving out of a combined household to set up a home of one's own was the sole instance in which income change produced the hypothesized result. The amount of real income increase was positively associated with the likelihood of leaving a shared household in 1973 to live alone in 1974. Being younger, male, a parent, and functionally self-sufficient were also significant predictors of household disaggregation in which the older person made the move.

### Effects of Income Change

The data show that income manipulation leads to change in living arrangements over the course of a year, but only for certain kinds of changes and not always in the anticipated fashion. Failure to confirm a simple, unilinear income hypothesis is not surprising. Recent studies have concluded that poor persons do not suddenly begin to act, think, and live like their wealthier peers simply because their income is adjusted upwards. In some cases, a reverse effect is observed. Elesh and Lefcowitz found that the New Jersey-Pennsylvania Negative Income Tax Experiment, "... had no effects

**Table 9.**—Logit results, probability of change in living arrangements, by type of change, 1973–74

Independent variables	Recipients alone in 1973						Recipients living with others in 1973					
	Others moved in with recipient, 1974			Recipient moved in with others, 1974			Others moved out of home, 1974			Recipient moved out of home, 1974		
	Final log coefficient	Chi square	p	Final log coefficient	Chi square	p	Final log coefficient	Chi square	p	Final log coefficient	Chi square	p
Age .....	-0.054	5.62	0.05	0.064	9.20	0.01	0.024	1.22	.....	-0.071	7.19	0.01
Race (white).....	-.155	.26	.....	.202	.32	.....	.793	4.69	.05	.121	.12	.....
Sex (male).....	.224	.49	.....	.490	2.29	.....	-.151	.13	.....	.946	7.55	.01
Education.....	-.054	1.74	.....	.006	.02	.....	.030	.47	.....	.050	1.32	.....
Residence (rural).....	-.154	.19	.....	.576	2.60	.....	-.237	.40	.....	-.410	.95	.....
Number of children.....	.055	1.42	.....	.012	.05	.....	-.015	.08	.....	.122	6.09	.05
Housing quality.....	-.372	1.49	.....	-.334	1.12	.....	-.703	4.18	.05	-.247	.48	.....
Diet quality.....	-.424	2.30	.....	.424	2.06	.....	.324	1.03	.....	.244	.59	.....
Assets (other than home).....	.001	3.49	.....	-.001	2.29	.....	-.001	.23	.....	.001	1.96	.....
Home ownership.....	.403	1.93	.....	-.422	1.56	.....	.013	16.79	.001	-.073	1.13	.....
Self-care capacity.....	-.300	11.48	.001	-.210	5.44	.05	.318	11.20	.001	-.174	3.89	.05
Social participation.....	.100	.18	.....	-.523	5.78	.05	.489	3.73	.....	.058	.06	.....
Income change (percent).....	.955	9.97	.01	.041	.01	.....	-.136	.13	.....	.835	6.29	.05
-2 log likelihood:												
Initial.....	523.78			496.43			425.34			420.27		
Final.....	485.53			449.12			378.26			362.18		

on either our measures of health or on our measures of utilization of health care.”<sup>18</sup> The Seattle-Denver Income Maintenance Experiment appears to have increased rather than decreased the rates of unemployment and geographical mobility among experimental subjects, and though the level of psychological distress remained about the same for most persons, “. . . several groups did respond to an experimental treatment and it was always with significantly increased distress.”<sup>19</sup> Working with data from the same project, it was discovered that certain kinds of marriages were stabilized by income increases, but that overall “. . . income maintenance treatments substantially raised rates of marital dissolution.”<sup>20</sup> It would appear that more can be learned about poor persons’ behavioral responses to income adjustment as it occurs in the real world.

In the present analysis, functional capacity or health is the most important determinant of change in living arrangements. If recipients cannot take care of themselves, they have little choice but to move in with someone else or convince someone to move in with them. The luxury of living alone is reserved for those who can meet the physical demands of independence. Self-care capacity appears as a significant correlate of change in living arrangements in all six logit models and

assumes the hypothesized direction of relationship in each application of the technique.

Income change and age were the only other variables to achieve significance in more than one logit model. The rest turned up as important predictors of change only once (race, sex, parental status, housing quality, home ownership, social participation) or not at all (education, urban-rural residence, diet quality, assets). It seems reasonable to conclude that most of these point-in-time correlates of living arrangements in old age play a very minor role in the short run. These factors may have influenced the household choices made in the past but it is quite clear that functional health, age, and income change were more important predictors of household change during the study period.

In examining the four independent routes to change in living arrangements, it is relatively easy to interpret recipient initiated change—moving in with others or moving out of the home—as a function of individual strengths and weaknesses. Giving up a home of one’s own to move in with others is closely associated with the survival needs of the recipient. Extreme old age, social isolation, and physical helplessness combine to force the individual into the home of another. The fact that income change plays no appreciable role in this process is interesting but not startling. Equally plausible is the finding that comparative youth, physical self-sufficiency, and increased income allow persons in shared households to move out and maintain homes of their own. These factors do not compel people to leave shared households but they certainly make it easier to indulge a preference for solitary living.

One has less confidence in the interpretation of change initiated by others. Half of the changes in living arrangements occurred among recipients who did little

<sup>18</sup> David Elesh and M. Jack Lefcowitz, “The Effects of the New Jersey-Pennsylvania Negative Income Tax Experiment on Health and Health Care Utilization,” *Journal of Health and Social Behavior*, December 1977, page 401.

<sup>19</sup> Michael Hannon, Nancy Brandon Tuma, and Lyle P. Groenevald, “Income and Independence Effects on Marital Dissolution: Results From the Seattle and Denver Income Maintenance Experiments,” *American Journal of Sociology*, November 1978, page 612.

<sup>20</sup> Peggy Thoits and Michael Hannon, “Income and Psychological Distress: The Impact of an Income Maintenance Experiment,” *Journal of Health and Social Behavior*, June 1979, page 134.

themselves—other people moved into or out of their homes but the survey recipients just stayed put. Although the self-care variable was consistent, the other correlates of change were seldom those anticipated. Why, for instance, do other people move into the homes of younger recipients whose income increased over the year? It is difficult to imagine that income advances of the magnitude that SSI delivered would attract very many people for purely venal reasons but the possibility cannot be discounted entirely. Is it true that others move out of the recipient's owned home because the home lacks modern conveniences, and why does this general form of household disaggregation occur most frequently for whites? Answers to these kinds of questions are possible only if detailed information is available on the status, needs, and preferences of the "others" as well as the aged individual. Although each of the four paths to household change requires some degree of participation or consent from both parties, "others-initiated" change is the most difficult to explain or interpret using data on the older person only.

As a guide to policy, the study offers useful conclusions regarding the effects that can be anticipated from raising the income of the elderly poor in the future. The transfer of aged public assistance recipients to SSI provided the opportunity to examine income change that was imposed arbitrarily and abruptly across the Nation, that was permanent rather than experimental, that was varied in amount, and that was about as large an overall increase as can be expected in the near future given the economic and political realities of the time. In short, these data are ideally suited for predicting the behavioral outcomes that would result from future liberalization of the basic SSI benefit standard.

Overall, it seems unlikely that moderate, across-the-board increases in SSI benefits will ever have a major effect on the living arrangements of aged recipients. Large numbers of them are simply too old and frail to consider independent living situations no matter how large their income. Neither does it seem reasonable to suppose that great numbers of the aged at these income levels will choose to spend a benefit increase for privacy or independence rather than for clothing, better food, entertainment, or other amenities routinely forgone for purely financial reasons. Income increase in these amounts should have its principal effect on the living arrangements of old persons who are healthier than most SSI recipients and who have fewer unmet needs to start with.

Finally, it may not make sense to assume that very many old persons, rich or poor, will suddenly change their living arrangements simply because their income goes up while everything else stays the same. It seems more reasonable to suppose that income increase dictates few changes but does define the range of solutions

that are possible when other circumstances force a decision. From this perspective, increased income is not a powerful independent stimulus for change but is instead a resource that enables one to achieve a satisfactory solution when the children finally leave home, the spouse dies, the building goes condominium, the grandchildren prove too boisterous, or it just becomes obvious that one person does not need an entire house to himself or herself any longer. For aged SSI recipients, whose median age is 75 years, it seems likely that most of these issues were faced and resolved long ago.

## References

- Bengtson, Vern L.; Kasschau, Patricia; and Ragan, Pauline. "The Impact of Social Structure on Aging Individuals." In *Handbook of the Psychology of Aging*, edited by James Birren and K. Warner Schaie. New York: Van Nostrand Reinhold, 1977.
- Beresford, John C. and Rivlin, Alice. "The Multi-Generation Family." In *Living in the Multi-Generation Family*. Institute of Gerontology. Ann Arbor: University of Michigan-Wayne State University, 1969.
- Berkson, Joseph. "Maximum Likelihood and Minimum Chi Square Estimates of the Logistic Function." *Journal of the American Statistical Association*, 1955, pages 130-162.
- Beyer, Glenn E. and Woods, Margaret E. *Living and Activity Patterns of the Aged*. Center for Housing and Environmental Studies. Ithaca: Cornell University Press, 1963.
- Bixby, Lenore E. and others. *Demographic and Economic Characteristics of the Aged: 1968 Social Security Survey* (Research Report No. 45). Office of Research and Statistics. Social Security Administration, 1975.
- Borgatta, Edgar F. and Foss, Robert G. "Correlates of Age: The NORC General Social Survey." *Research on Aging*, June 1979.
- Clark, Margaret and Anderson, Barbara. *Culture and Aging: An Anthropological Study of Older Americans*. Springfield, Ill.: Charles C. Thomas, 1967.
- Cox, David. "Some Procedures Associated With the Logistic Response Curve." In *Research Papers in Statistics: Festschrift for Jerzy Neyman*, edited by Florence David. New York: John Wiley and Sons, Inc., 1966.
- Donahue, Wilma T., editor. "Where and How Older People Wish to Live." *Housing the Aged*. Ann Arbor: University of Michigan, 1954.
- Halperin, Max; Blackwelder, William; and Verter, Joel. "Estimation of the Multivariate Logistic Risk Function: A Comparison of the Discriminate Function and Maximum Likelihood Approaches." *Journal of Chronic Disorders*, October 1971, pages 125-133.
- Jones, Richard. "Probability Estimation Using a Multinomial Logistic Function." *Journal of Statistical Computation and Simulation*, 1967, pages 167-179.
- Lopata, Helena Znaniecki. "Living Arrangements of American Urban Widows." *Sociological Focus*, 1972, pages 41-61.

Morgan, Christine. "The Attitudes and Adjustments of Recipients of Old Age Assistance in Upstate and Metropolitan New York." *Archives of Psychology*, 1937, pages 1-131.

Morgan, James N. and others. *Income and Welfare in the United States*. New York: McGraw-Hill, 1962.

Murray, Janet. "Living Conditions." In *The Aged Population of the United States: The 1963 Social Security Survey of the Aged* (Research Report No. 19). Social Security Administration, 1967.

Riley, Matilda White and Foner, Anne. *Aging and Society: An Inventory of Research Findings*. vol. I. New York: Russell Sage Foundation, 1969.

Rosenmayr, Leopold and Kockeis, Eva. "Propositions for a Sociological Theory of Ageing (sic) and the Family." *International Social Science Journal* (UNESCO), No. 14, pages 410-426.

Shanas, Ethel. "Living Arrangements and Housing of Old People." In *Behavior and Adaptation in Late Life*, edited by Ewald Busse and Eric Pfeiffer. Boston: Little, Brown and Co., 1969.

Shanas, Ethel. *The Health of Older People: A Social Survey*. Cambridge: Harvard University Press, 1962.

Smith, Wallace F. "The Housing Preferences of Older People." *Journal of Gerontology*, July 1961, pages 261-266.

Smith, William M. "Family Plans for Later Years." *Marriage and Family Living*, February 1954, pages 36-40.

Tartler, Rudolph. "The Older Person in Family, Community and Society." In *Processes of Aging*. vol.II. Atherton, 1963.

Troll, Lillian E. "The Family of Later Life: A Decade Review." *Journal of Marriage and the Family*. May 1971, pages 263-290.

Tunstall, Jeremy. *Old and Alone*. London: Routledge and Kegan Paul, 1966.

U.S. Congress. Joint Economic Committee. "The Family, Poverty and Welfare Programs: An Introductory Essay on Problems of Analysis and Poverty, by Robert I. Lerman. In *The Family, Poverty and Welfare Programs: Factors Influencing Family Instability*. (Studies in Public Welfare Paper No. 12) Washington, D.C.: U.S. Govt. Print. Off., 1973.

Walker, Strother and Duncan, David. "Estimation of the Probability of an Event as a Function of Several Independent Variables." *Biometrika*, June 1967, pages 167-179.

**Appendix table I.**—Coding specifications and statistical properties of independent variables<sup>1</sup>

Independent variables	Code	Range	Mean	Standard deviation
Demographic characteristics				
Age.....	In single years	66-99	75.7	7.0
Sex.....	1 = male 0 = female	0-1	.2	.4
Race.....	1 = white 0 = all others	0-1	.7	.5
Education.....	In single years completed	0-18	6.1	3.6
Residence.....	1 = rural 0 = urban	0-1	.2	.4
Number of children.....	In single units	0-18	2.8	2.7
Level of living				
Housing quality.....	1 = kitchen hot/cold running water flush toilet tub/shower television telephone 0 = if home lacked one of above	0-1	.6	.5
Diet quality.....	1 = met USDA standard 0 = did not meet standard	0-1	.6	.5
Health and social activity				
Self-care capacity.....	One point each for ability to do unaided— grocery shop prepare meals light housework laundry care for self when ill	0-5	3.4	1.8
Social participation.....	Computed using principal factor analysis with varimax rotation applied to— entertaining in home belong to organization having at least one confidant monthly contact with friends and neighbors and relatives	-1.3 to 0.6	0	.6

**Appendix table I.—Coding specifications and statistical properties of independent variables<sup>1</sup>—Continued**

Independent variable	Code	Range	Mean	Standard deviation
	Economic status			
Assets .....	In single dollars (excludes home) Values above 2,000 recoded 2,000	0-2000	110	304
Home ownership.....	1 = solely or jointly owned 0 = all others	0-1	.2	.4
	Income change			
Income change.....	As percentage change in real income occurring between survey months in 1973 and 1974. -1.0 = losses greater than 100 percent 2.0 = gains greater than 200 percent	-1.0 to 2.0	.2	.4

<sup>1</sup> Thirteen independent variables were tested in six different logistic models. Each model employed a dichotomous outcome or dependent variable that was

coded 1 if the specified change in living arrangement occurred during the year and coded 0 if the change did not occur.

## Survey of Low-Income Aged and Disabled

Reports published to date include:\*

**No. 1** -- The Survey of Low-Income Aged and Disabled: An Introduction (by Thomas Tissue, February 1977, 9 pages)

**No. 2** -- First Year Impact of SSI on Economic Status of 1973 Adult Assistance Populations (by Sylvester J. Schieber, February 1978, 29 pages)

**No. 3** -- A Last Look at Adult Welfare Recipients Prior to SSI (by Thomas Tissue, 41 pages)

**No. 4** -- Health Status Among Low-Income Elderly Persons: Rural-Urban Differences (by John L. McCoy and David L. Brown, June 1978, 13 pages)

**No. 5** -- Survey Design, Estimation Procedures, and Sampling Variability (by Erma Barron, 136 pages)

**No. 6** -- Response to Reciprocity Under Public Assistance and SSI (by Thomas Tissue, November 1978, 13 pages)

**No. 7** -- Low-Income Disabled Singles Without Public Assistance (by Rose Sturm, 23 pages)

**No. 8** -- Antecedents of Mortality Among the Old-Age Assistance Population (by John L. McCoy, July 1979, 15 pages)

**No. 9** -- Low-Income Widows and Other Aged Singles (by Thomas Tissue, December 1979, 8 pages)

\*Single copies of the above reports can be obtained by writing to the Publications Staff, Office of Research and Statistics, Office of Policy, Social Security Administration, Room 1120, Universal North Building, 1875 Connecticut Ave., N.W., Washington, D.C. 20009, or by telephoning (202) 673-5209. Reports 1, 2, 4, 6, 8, and 9 were reprinted from the **Social Security Bulletin**.