HOUSEHOLD AND NONHOUSEHOLD LIVING ARRANGEMENTS IN LATER LIFE: A LONGITUDINAL ANALYSIS OF A SOCIAL PROCESS

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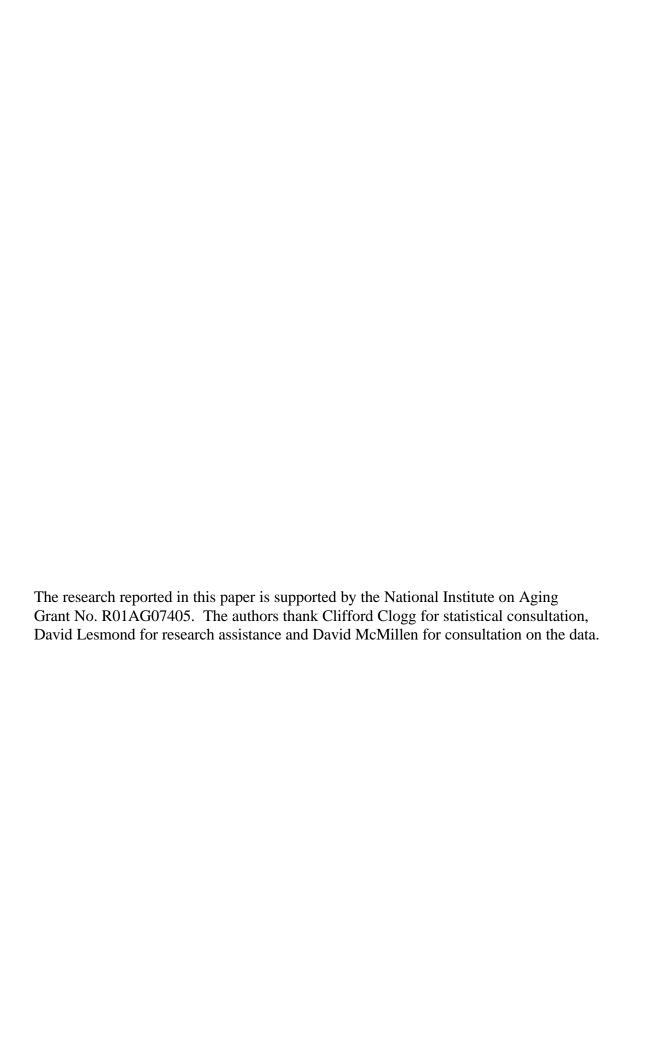University of Buffalo

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Household and Nonhousehold Living Arrangements in Later Life:
A Longitudinal Analysis of a Social Process

Considerable discussion in recent years has focused on the living arrangements of the elderly population in the United States. Among the trends most noted by demographers, as well as by policymakers, are the rising rates of living alone in later life. Over half of all unmarried individuals live alone in their later years, suggesting that current cohorts are retaining a high level of independence as they age. Although a much smaller share of this population is unable to maintain community residence much less live alone; as much as 25 percent of the elderly population will be institutionalized some time during their lives (Manton, Woodbury and Liu, 1984; Palmore, 1976). The distribution of individuals across these different types of living arrangements--from living alone to institutionalization, to living with others within the community-are reflective of the demographic, socioeconomic, and health characteristics of those in the older age groups, as well as their preferences for various living arrangements.

Those who have studied the patterning of living arrangements in later life agree that socioeconomic resources are important concerns when individuals are deciding with whom they will live. In short, individuals are poorly equipped to act on their living arrangement preferences in the absence of sufficient resources. Increases in economic resources among the elderly population over the last several decades, facilitated by near-universal coverage by Social Security and the shift of public resources toward the older segments of the population (Bane, Wilson and Baer, 1983; Preston, 1984; Weicher, 1989), likely enhance the ability to act on these preferences. Further, some analysts argue that institutional options are often closed to those who can neither afford the expense of long-term care nor wish to "spenddown" their resources in order to benefit from public funding for care. Thus, both institutional and noninstitutional living arrangements are conditioned to some degree by economic resources in later life.

Because choice of living arrangement may be associated with different costs (Michael, Fuchs, and Scott, 1980) and different access to public and private resources (Schwartz, Danziger, and Smolensky, 1984), a fuller understanding of the relationship between economic resources and living arrangements is an ongoing public policy concern (Soldo, 1981). Yet up to now, knowledge of these empirical relationships has been limited because most studies rely on cross-sectional data measuring living arrangements and individual characteristics and resources concurrently. For example, if living arrangement choices are thought to be in part a response to economic resources, then the analysis of living arrangement choice is weakened by cross-sectional measurement. A more accurate assessment of the effect of economic resources on living arrangements in later life would measure resources at some time prior to a <u>change</u> in living arrangements. The present paper offers such an assessment.

Living Arrangements in Later Life

In a society that has historically been dominated by the nuclear family household ideal, family life course events such as marriage, childbearing and childbearing, and marital disruption are powerful determinants of living arrangements. Indeed, for many individuals, these events

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dictate the kinds of households within which they will live for much of their lives. For example, most people who get married live with their spouse until the marriage is disrupted by death, separation, or divorce. Other members of the idealized nuclear family household are included primarily through birth, leaving as grown children.**(1)** Yet even individuals who follow traditional life course patterns find themselves at "disjunctures" in the life course for periods of time--as young adults who have left home but are not yet married, or as older individuals who have become widowed, for example. For individuals at these disjunctures, as well as for those who choose less traditional trajectories, the problem of choosing where and with whom to live may be quite complex. For example, as a woman becomes older her family obligations may be altered through loss of a spouse or the nest-leaving behavior of children. These changes are immediately evident in her living arrangements: even if she does not physically move to another housing unit, the composition of her household will change around her. In addition, she may face new constraints in health or economic resources that make certain kinds of living arrangements more costly or more affordable. These characteristics and resources in combination help to determine her chances of maintaining a one-person household, relinquishing household headship, or entering an institutional facility such as a nursing home.

The dialogue concerning living arrangements in later life is based on a well-documented preference for independent living (Shana , 1980; Troll, 1971). All else equal, individuals in later life prefer to live with nuclear family members (i.e., spouse and minor children) or alone. Including nonnuclear members in the household, relinquishing headship, or living in a nursing home are less desired alternatives. Given these preferences, the choice of living arrangement is conditioned by the resources (economic and otherwise) available to each individual as (s)he ages. A plethora of research suggests that economic resources, health, and kinship are particularly salient considerations when living arrangement choices are being made (Kobrin, 1981; Wolf, 1984; Wolf and Soldo, 1988). These resources reflect events and experiences earlier in the life course: features of family, work and personal history that culminate in older age (Elder, 1985).

Economic Resources. Affordability is a critical determinant of one's living arrangements (Davis and van den Oever, 1981; Michael, Fuchs and Scott, 1980; Pampel 1983). Separate living is seen as a "superior good" in developed societies (Burch and Matthews, 1987), one which is in high demand for its associated privacy and independence. The household literature has typically phrased this relationship in terms of chances for living alone--only those who can afford it will actually "purchase privacy" by living in a single-person household (Beresford and Rivlin, 1966). Yet the composition of more complex households is also related to economic resources: unmarried individuals in later life who live with others are more likely to be head if they have more economic resources (<identifying reference>.

Affordability is also considered when contemplating a move to an institutional setting such as a nursing home. while analysts highlight the increasing costs of institutional care, cautioning that this resource is beyond the means of many elderly in need of intensive health care assistance, they also note that this care may have the effect of leaving families and older individuals destitute as they "spenddown" to the point of Medicaid eligibility (Moon and Smeeding, 1989; Soldo and Agree, 1988). Thus, the relationship between economic resources and institutionalization may

actually be nonlinear; those with very low or very high resources being more likely to live in an institution.**(2)**

An additional dimension of the affordability issue is the context within which affordability is assessed. For example, it may be feasible for an individual in good health to live alone on a moderate annual income. Someone in poorer health who has special dietary needs, equipment needs, or needs for assistance may be unable to live alone on an equivalent income. Similarly, a person who is approaching old age may assess the affordability issue quite differently than someone already in advanced old age, assuming age-graded estimates of future life expectancy. Furthermore, affordability is more accurately assessed by a combination of short-term resources, such as income, and long-term resources, such as assets or wealth. An older person who is considering a change in living arrangements likely evaluates both current income and value of assets when making decisions. For example, faced with a low or even declining income, an individual may be more likely to live alone if this decision is backed by a high level of wealth.**(3)**

Health. Health is another type of resource that may be considered when living arrangement decisions are made (Avery, Speare and Lawton, 1989; McCoy and Edwards, 1981; Soldo and Manton, 1985; Troll, 1971). Although typically regarded as a last resort, institutionalization frequently results from a need for intensive medical assistance, as in-home care under these circumstances may be even more costly than institutional care (Soldo, 1980), if indeed home care is even possible. At the other extreme, an older person in good health can design his/her household based on a modified set of constraints and opportunities, since (s)he requires no physical assistance. Individuals with an intermediate level of health likely make these decisions considering an evaluation of their needs for assistance in combination with other resources such as income, informal support from family members, and the like. Thus by determining how much assistance an older person needs, health status shapes the amount of independence and autonomy (s)he can retain, and this is reflected in living arrangements.

Kinship. Most people who do not live alone or in an institution live with family members.**(4)** Analysts have long held that one's chances for living alone are reduced by the presence of one or more offspring (Beland, 1984; Wolf and Soldo, 1988). Thus, grown offspring have been identified as important resources to individuals in their later years. Yet, intergenerational exchanges are not unidirectional in later life: older individuals may serve as resources to their adult children by providing free or reduced-cost housing. Shared living arrangements between older parents and grown offspring thus may involve a complex interplay of exchanges, often serving the needs of both generations.

The risk of institutionalization is also thought to be minimized among those with children. Shanas (1980), among others, observes a strong negative association between number of grown offspring and chances of institutionalization among the aged. Yet some recent studies indicate that kinship considerations may not be as dominating when other characteristics are controlled. As noted by Soldo and Agree (1980:30), older people "are not institutionalized because they are old or abandoned by their families. Rather, they live in such facilities because they are sick." Worobey and Angel (1990) support this conclusion with their finding that number of children is

not a significant predictor of institutionalization when other factors such as health, income, and demographic characteristics are controlled.

The present study is designed to consider the choice of living arrangements among individuals in later life, including both household and nonhousehold alternatives. In the past, living arrangement outcomes most frequently have been analyzed cross-sectionally, and few studies have considered both the household and the nonhousehold populations (see Dolinsky and Rosenwaike, 1988, for a similar observation). Further, although a longitudinal research design can better address the dynamic issue of choice of living arrangements, few studies have accomplished this due to data limitations (see Richards, White and Tsui, 1987; Schwartz, Danziger, and Smolensky, 1984; White and Tsui, 1986; Worobey and Angel, 1990, for some recent longitudinal studies of living arrangements). In this study we look at household change over a two and one-half year period of time, using the 1984 panel of the Survey of Income and Program Participation (SIPP). Individuals are observed as they change household types, become institutionalized, or die during this time period. While consideration is given to all the above predictors of living arrangements, the present paper emphasizes socioeconomic indicators. The Survey of Income and Program Participation is uniquely suited for this emphasis, due in part to its provision of multiple and repeated indicators of socioeconomic status.

Data and Methods

The data used in this analysis are taken from the 1984 panel of the Survey of Income and Program Participation. This survey was designed to be nationally representative of the civilian noninstitutionalized population. Respondents to this longitudinal survey are interviewed at four-month intervals over a period of approximately two and one-half years (Kasprzyk, Doyle, Goldstein, and McMillen, 1987). Monthly information on respondents' demographic characteristics, income, and living arrangements are complemented by "topical module, information on health, economic resources other than income (e.g., assets), and family history, collected at intervals throughout the survey.

The present analysis is restricted to the population aged 55 and over at first interview, who were unmarried for the duration of the sample (i.e., those who are never married, widowed, divorced, or separated). We analyze only those who were unmarried at time of survey because virtually all married individuals live in couple-headed households (Kobrin, 1981; Santi, 1988). Our sample is also limited to those who were either observed for the entire two and one half year period or were institutionalized or died during this period. While individuals who became institutionalized during the reporting period were not subsequently followed, they can be identified as leaving the sample by way of institutionalization and their characteristics prior to institutionalization are known. Attrition resulting from death of the respondent is also recorded in the survey.

Finally, the analysis is limited to those who neither died nor were institutionalized prior to the fourth wave of interviews. This strategy was followed so that we could make use of the topical module information on health and assets, which were obtained in the third and fourth wave

of interviews, respectively. In order to compensate for other forms of attrition and oversampling on certain characteristics, this analysis makes use of longitudinal weights that are designed to be applied to the original members of the sample who participate in the survey for its full duration, plus those who either die or are institutionalized during the study period.

Measuring Living Arrangements. In this study we are concerned with the changes in living arrangements experienced by men and women in later life. Our goal in the present analysis is to evaluate the importance of economic resources and other constraints for determining living arrangement outcomes at the end of the survey. Living arrangements are conceptualized as including the household categories of living alone, heading a multi-person household, and living in a multi-person household of which one is not the head; as well as the nonhousehold outcomes of institutionalization and death.**(5)**

The first goal of this analysis is to consider the patterns of change in living arrangements in later life. A transition matrix is included in Table 1, showing in percentage terms that probabilities of change are different for those originally observed in different household types. For example, among those who were observed living alone at the first interview nearly 88 percent were still living alone two and one half years later at final observation. Living alone appears to be the most stable household type: the other two categories reflect much lower levels of stability. An additional four percent of those who began the survey living alone became heads of multi-person households by the end of the survey, but just one and one-half percent were no longer head of household at last observation. Two and one-half percent had become institutionalized and just over four percent had died.

TABLE 1: **Transitions in Living Arrangements, Wave 1 to Wave 8: <u>Nonmarried</u> individuals Age 55 and Over, Survey of Income and Program Participation, 1984 Panel(1)**

<u>Wave 8 Status</u>

Household Type, Wave 1	Alone	Head	Not Head	Institution-alized	Deceased	Total
Alone	87.7%	3.9	1.6	2.5	4.3	100.0 (1527)
Head	25.1%	68.7	1.2	1.7	3.3	100.0 (.504)
Not head	9.1%	1.3	78.2	4.2	7.2	100.0 (.420)
TOTAL	61.4% (1505)	16.8 (411)	14.6 (359)	2.6 (63)	4.6 (113)	100.0 (2451)

(1)Includes only those who remained in the household population and were interviewed for all waves of the survey, or who either died or became institutionalized after Wave 4 of the survey. All calculations are based on weighted data.

The lowest levels of stability are observed for those who were initially observed as head of a multi-person household. Only about two-thirds were observed in this household type at last interview. One-quarter had formed one-person households, and just over one percent had given up headship. Less than two percent had become institutionalized and just over three percent had died. An intermediate level of stability is observed for those who were not head of household at first interview: about nine percent were living alone at last observation and a small share became head of a complex household. Members of this group were more likely to die or become institutionalized.

Because our interest is in <u>change</u> in living arrangements, the dependent variable for the remaining analysis is a six-category classification based on the pattern of change noted in Table 1: [1] change to living alone; [2] change to heading a multi-person household; [3] change to nonheadship; [4] institutionalization; and [5] death. The sixth category is the reference group and is composed of those who reside in the same household type throughout the survey period.

Table 2 includes summary statistics describing the distributions of the variables included in the analysis. At the final interview, 82.2 percent of the sampled population lived in the same household type in which they were originally observed (see top of column 7). Among the "movers," most changed to one-person households. Just over six and one-half percent became heads of one-person households, while much smaller shares became heads of multi-person households or gave up headship. About two and one-half percent became institutionalized and just over four and one-half percent had died. Thus, by far the typical pattern of behavior is to remain in the same type of household over this time period.

TABLE 2:   Descriptive Statistics for Survey of Income and Program Participation, 1984 Panel, Nonmarried Individuals Aged 55 and over at Wave 1, Continuous Sample(1)

				Transition Outcomes Experienced Change:			
Variable	Total Sample	Alone	Head	Not Head	Institutionatized	Deceased	No Change
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Transition Outcomes	100.0%	6.7%	2.6	1.2	2.6	4.6	82.2
Economic Resources:							
Prior Year's Income(2) (median)	$7652	$7677	$8546	56964	56598	$6160	$7774
Average Rate of Income Change (median)	0.9%	0.5%	0.3%	0.9%	0.7%	0.9%	1.0%
Net worth (median)	$28193	$27375	$40000	$21700	522838	$14600	$28550
Health							
Zero disabilities	82.5%	7.0%	2.7	1.2	1.3	2.7	85.0
1-2 disabilities	11.3%	4.5%	2.3	1.5	6.1	12.3	73.2
3-4 disabilities	4.4%	8.0%	2.3	0.8	12.1	14.0	62.8
5-6 disabilities	1.8%	4.8%	2.0	0.0	14.9	20.2	58.1
Demographic Characteristics:							
Age (median)	70.0	65.0	66.0	81.0	79.0	78.0	70.0
Sex: Male	23.2%	6.8%	1.8	1.6	3.2	6.4	80.2
Female	76.8%	6.7%	2.9	1.1	2.4	4.1	82.8
Race: Nonblack	88.3%	6.3%	2.6	1.3	2.8	4.5	82.6
Black	11.7%	10.0%	2.7	0.7	1.4	5.7	79.4
Marital Widowed	65.7%	5.5%	3.1	1.4	3.2	5.1	81.6
Status: Divorced/Sep	20.0%	10.4%	2.0	1.3	0.4	3.8	*82.1*
Never Married	14.3%	6.9%	1.3	*0.2*	3.0	3.3	85.1

(1) See footnote 1, Table   1.

(2) Total personal income for the twelve-month period prior to household transition, death, or institutionalization. For those who did not die or move, reference period is the last twelve months of interview.

Measuring Socioconomic Resources. In the current paper we emphasize the effects of socioeconomic resources on living arrangement outcomes. Prior literature demonstrates that income is an important constraint on living arrangements, but few studies consider alternative indicators of economic well-being. Indeed, because residents of long-term care facilities often report very low or no income, values that are likely not reflective of their resources prior to institutionalization, income is often excluded from analyses of institutionalization (Avery, Speare and Lawton, 1989; Dolinsky and Rosenwaike, 1988). We account for this potential problem by measuring income prior to change in living arrangements or institutionalization. Further, we argue that when contemplating a change in living arrangements, individuals respond to both short-term income receipts, and value of long-term resources such as savings and other assets, as well as recent changes in income. For example, an older woman who has experienced a recent loss in income may reevaluate her choice to live alone and decide to move in with a relative. Alternatively, an older man who experiences an improvement in his economic status may move out of his son's household and into a household of his own. The assessment of these income changes may depend not only on base value of income received prior to a change in living arrangement, but also value of long-term resources.

Following this logic, we include three economic indicators in this analysis. First, we include a measure of current income. As noted above, to assess this effect requires knowledge of the value of income prior to a change in living arrangement outcome. Accordingly, we calculate incomes received for the year prior to the transition in living arrangements, for those who experience a transition. (For those who experience no change in living arrangements during the survey we use the income for the year prior to last interview; for those who die we calculate income for the year prior to death.)**(6)** As shown in Table 2, the median annual income for this sample was $7,652. Those who did not change household type over the period of the survey and those who formed one-person households had median incomes slightly higher than this level, but the highest incomes were reported by those who formed multi-person households as head. The lowest incomes were reported by those who died, were institutionalized, or became non-heads of household. This provides some support for the notion that headship is related to income.

A second economic indicator reflects change in income receipt over the same time period described above. The calculated rate of income change tells whether the respondent had experienced a declining, increasing, or stable income trajectory. The median income change indicates fairly stable incomes over the course of a year for most individuals in later life: the typical respondent reported a less than one percent increase in income. Rates of change were lowest among those who formed one-person households and those who became heads of multi-person households, although all groups typically had low rates of income change.

Finally, as noted above, non-income indicators of economic well-being such as assets or wealth are subject to fewer fluctuations and may be more salient in decision-making among those in later life (see Burkhauser, Butler, and Wilkinson, 1985; Crystal and Shea, 1990). For this reason, we include in the analysis a measure of net worth, that is, value of assets less debt.**(7)** As shown in Table 2, the median net worth for this group was $28,193. Net worth for the non-changers and those who formed one-person households were similar to this overall median, while

much higher levels of wealth were reported among those who became heads of a multi-person household. Those who died reported the lowest net worth.

Measuring Noneconomic Resources. Possibly the most important noneconomic resource in later life is health. Information on health is provided in the SIPP in the Wave 3 topical module. Several alternative measures are available, ranging from self-assessment of health to detailed requirements for assistance. For this analysis a modified Activities of Daily Living/Instrumental Activities of Daily Living measure was constructed (Katz, Ford, Moskowitz, Jackson and Jaffe, 1962), based on self-response to six items regarding needs for assistance with housework, personal care, and the like. We chose this strategy over a more general disability measure because specific needs for assistance may be most salient to decisions regarding ability to maintain independent living arrangements. Most respondents report good health: nearly 83 percent report no disabilities requiring assistance. An additional 11 percent report just one or two needs for assistance; less than two percent report extensive (i.e., 5 or 6) disabilities requiring assistance. As would be expected, a large share of those who reported very high levels of disability either died or became institutionalized during the course of the survey (for example, twenty percent of those reporting five or six disabilities died.) Those who stayed in the same household type appear to have been among the most healthy, although even among those with five or six disabilities, over half remained in the same noninstitutional setting by survey's end.

Another resource highlighted in the literature is kin availability. An ideal measure would include information on the geographic location and characteristics of offspring and other relatives, including their willingness to share living quarters with their aging kin. The only measure of kinship available in the SIPP, children ever born, not only falls short of this ideal but is also obtained from SIPP respondents at Wave 8, near the end of the survey after most of the sample attrition due to institutionalization and mortality has already taken place. As a result, we are unable to include a direct measure of kinship in our analysis. Variability in kinship is captured to some extent by the inclusion of several demographic variables in the analysis, including race and age, but especially prior marital status.

Other Indicators of Living Arrangements. Additional respondent characteristics incorporated into the analysis include age, sex, race, and marital status. As they get older, individuals may change their living arrangements in response to changing circumstances of health and economic resources. For example, the need for institutional as opposed to family-based services may accelerate with age (Branch and Jette, 1982; Cohen, Tell, and Wallack, 1988). Age may also capture the effects of additional constraints not included elsewhere in the model (Avery, Speare, and Lawton, 1989). Indeed, considering the bivariate relationship, Table 2 shows that although the typical respondent is about 70 years of age, those who die, become institutionalized, or relinquish headship during the survey are substantially older than average, ranging from medians of 78 to 81 years of age. Those who form single-person or other households of which they are head tend to be younger than average.

Sex is another demographic characteristic noted by observers to be important in shaping living arrangements. An earlier study (<identifying reference>) suggests that gender differences in

household living arrangements may be largely a function of gender-based differences in resources; however, the differences in mortality and institutionalization between the sexes are well known (Dolinsky and Rosenwaike, 1988; Verbrugge, 1983). As a result, we expect that sex will be important at least for these two outcomes. Over three-quarters of this sample is female; a not unexpected outcome since this population is both older and not married. Although the differences between males and females observed in the distributions in Table 2 are slight, note that males are more likely to die or be institutionalized.

Some research suggests that blacks and whites are characterized by different living arrangements in later life (Mitchell and Register, 1984; Wolf, 1984; Wolf and Soldol 1988). Furthermore, important racial differences in mortality and institutionalization are well documented (Manton, Patrick, and Johnson, 1987). Due to small sample sizes in the SIPP for some ethnic groups, we deem it inadvisable to include indicators for other nonwhites and Hispanics. However, preliminary analyses indicate that models including blacks and whites only yield identical conclusions to one based on blacks and nonblacks. As a result, nonblacks and Hispanics are grouped together to form a single comparison group. Just under 12 percent of the total sample is black, the remaining 88 percent being Anglo, Hispanic, or other nonblacks. The distributions in Table 2 shows that some racial differences occur in household transition patterns in later life: blacks are more likely to die or to form single-person households, while whites are more likely to be institutionalized or relinquish headship.

Finally, marital status is included to capture marital history and to a limited extent provide a proxy for childbearing history. Most of the sample is widowed but 20 percent is divorced or separated. About 14 percent is never-married. We argue that the widowed may be more likely to have continued strong relationships with their extended family than the divorced or separated; and both ever-married groups may be more likely to have offspring than the never-married individuals. Table 2 indicates that important differences among those with different marital histories are observed. For example, the widowed are more likely to die or be institutionalized than either of the other two groups. Yet, associated differences by age or other characteristics may be at the root of this patterning. The multivariate analysis will permit a better assessment of this relationship.

The Multivariate Analysis

To assess the effects of the indicators described above on patterns of change in living arrangements in later life, an analysis of unmarried individuals aged 55 and over at first interview is performed. Because the dependent variable is categorical and unordered, multinomial logistic regression analysis is the preferred method of analysis (Hanushek and Jackson, 1977). The dependent variable is as listed at the top of Table 2, with the five transition categories (columns 2 through 6) being contrasted with the "no change' reference category (column 7).

Results from a maximum likelihood logistic regression analysis are included in Table 3. Because the reference category of the dependent variable is composed of those who stay in the same household type, regardless of whether that original arrangement was single-person or multi-

person, as head or nonhead, we can interpret each of the effects in the first three columns of the table as describing the log-odds of moving to the identified household type for those who began the survey in a different type households Because none of the respondents began the survey in the last two statuses (institutionalized or deceased), these effects can be interpreted more generally. For example, considering the demographic characteristics first, females are significantly less likely than males to die or become institutionalized during the survey period (relative to staying in original wave 1 household type). However, they are also less likely to give up headship (if they are originally heading a household, either living alone or with others). No significant differences between men and women are observed for change to living alone or to heading a household.

TABLE 3: **Logistic Regression of Change in Living Arrangement Status Among Nonmarried Individuals 55 and Over, SIPP, 1984(1)**
(Standard errors in parentheses).

	Transition Outcome(2)				
				Institution-	
Demographic Characteristics:	Alone (1)	Head *(2)*	Not Head (3)	atized (4)	Deceased (5)
Sex (1= Female)	0.10 (0.20)	0.15 (0.36)	-0.71** (0.42)	-0.70* (0.23)	-0.73* (0.23)
Race (1 = Black)	0.46** (0.23)	0.07 (0.41)	-0.64 (0.74)	-0.73 (0.57)	0.12 (0.31)
Age	-0.05* (0.01)	-0.07* (0.02)	0.08* (0.03)	0.11* (0.02)	0.09* (0.02)
Marital Status: Widowed	-0.05 (0.25)	0.94** (0.51)	1.66 (1.13)	-0.28 (0.37)	0.23 (0.34)
Divorced/Separated	0.28 (0.27)	0.20 (0.58)	2.02** (1.19)	-1.31** (0.77)	0.57 (0.40)
Economic Resources:					
Prior Year's Income(3) (000s)	-0.01 (0.01)	-0.03** (0.02)	-0.05 (0.04)	-0.03 (0.02)	-0.04* (0.02)
Average Rate of Income Change (ARIC)(4)	-0.00 (0.00)	-0.01** (0.00)	0.00 (0.02)	-0.01 (0.00)	0.01 (0.01)
Max (0, ARIC-0)	0.01* (0.00)	-0.02 (0.02)	0.01 (0.02)	0.01 (0.01)	-0.00 (0.01)
Net worth (in)	0.05** (0.03)	0.10* (0.05)	-0.02 (0.05)	0.05 (0.04)	0.01 (0.03)
Health	-0.77 (0.65)	-1.31 (1.17)	-6.42 (6.20)	2.22* (0.78)	1.07** (0.57)
Interactions:					
Health*Age	0.01 (0.01)	0.02 (0.01)	0.07 (0.07)	-0.02* (0.01)	-0.01 (0.01)
Intercept	0.50	-0.01	-10.19	-11.69	-8.83
Model X 2			333.84*		
Model df			55		

*p < .05   **p < .10
(1)See footnote #1, Table 1.
(2)Reference category for all outcomes is no movement--remaining in original (Wave 1) status.
(3)See footnote #2, Table 2.
(4)See text for discussion of income change and accompanying spline measure.

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Blacks and nonblacks are similar on all but one of the transition outcomes, as indicated by nonsignificant coefficients. However, a marginally significant difference between blacks and nonblacks emerges for change to living alone. This is a surprising result because older blacks are characterized by much lower rates Of living alone than whites in cross-sectional analysis, more often being observed heading households including other relatives. Because they often share living quarters with others, they may also be more likely to experience changes in those arrangements as younger relatives come and go, leading to the result observed here. This provides an example of how longitudinal results can yield conclusions that differ substantially from those offered by cross-sectional analyses.

The patterns for age also provide a picture of how living arrangements choices are made that is slightly different than that usually inferred from cross-sectional analyses. While cross-sectional results show that older individuals are more likely to reside in one-person households than are younger individuals, these longitudinal patterns indicate that older individuals are less likely than those who are younger to move into households characterized by greater independence (that is, living alone or heading some other household). In contrast, they are more likely to give up headship, become institutionalized, or die. Thus, age is consistently associated with reduced independence in living arrangements. Importantly, these effects occur above and beyond the effects of health or economic resources, suggesting that age is important even net of the changes in resources and constraints that often occur as individuals become older.

The results for marital status indicate that those who are widowed are more likely than those who are never married to become heads of multiperson households over the duration of the survey. Those who are divorced or separated are more likely than the never married to become nonheads and less likely to become institutionalized. No significant differences among the marital status classifications emerge for living alone or for dying. These results indicate that at least one dimension of family history--that reflected by marital status--has an impact on the living arrangements of nonmarried individuals in later life, although these coefficients are only marginally significant. Further, the patterning of these coefficients are consistent with the assumption that the ever-married are more likely to have offspring, providing some assurance that this strategy accounts in a limited fashion for some aspects of the availability of kin.

Considering all the economic resource variables and health in combination, we can learn a great deal about how decisions may be made in later life regarding a change in living arrangements. The only changes with which health is significantly associated are death and institutionalization--those in poor health are substantially more likely than others to become institutionalized or die during the two and one-half years covered by the survey. These coefficients suggest that for each additional disability reported, the probability of institutionalization increases by 16 percent, and the probability of dying increases by about four percent (see Petersen, 1985). Thus, the effect of health on these two outcomes is substantial. None of the economic indicators are associated with likelihood of institutionalization, indicating that the key risk factors for this type of transition in living arrangements are first and foremost health, followed by age, sex, and to some extent marital history (and the differences in kinship implied).

In contrast to health, economic resources and change in those resources are primarily associated with movement to different types of household living arrangements.**(9)** Those with higher incomes were

less likely to become head of a multi-person household. (Interestingly, they were also less likely to die during the period of observation.) Because the association between income change and transitions in living arrangements was expected to be nonlinear, we include in the model a spline function defined at the point of zero change. The average rate of income change variable (ARIC) therefore reflects income change in the negative range. The [max(0, ARIC-0)] variable equals ARIC for positive change values, and is coded 0 for non-positive change, therefore reflecting the effect of income increase. The negative ARIC coefficient in column 2 indicates that those who experienced greater income loss were more likely to become heads of complex households. This suggests that including others in one's household may be one technique to alleviate economic strain (see Tienda and Angel, 1982 for similar conclusions). It is important to note, however, that greater net worth is also positively associated with this transition. It may be that those who become heads of multi-person households have greater wealth than those who stay in place (most of this wealth being in the form of home equity); yet they are experiencing income shortfalls due to retirement, lose of pension, or some other event. Rather than liquidating assets, these individuals may choose to include others in the household.

As would be expected, the move to living alone is also associated with economic resources. The greater the increase in income over the previous year, the more likely an individual is to make the transition to living alone. Furthermore, those with greater net worth are more likely to form single-person households. These results provide strong support for the rational choice model, the 'consumer choice, model, and other hypotheses that have been tested at the cross-sectional level of analysis, suggesting that increases in rates or likelihoods of living alone are related to improvements in income. our replication of this result using longitudinal data on economic changes garners further support for these hypotheses.

Column three shows that becoming a non-head of household is not predicted by any of the resource variables, economic or otherwise. Only sex, age, and being divorced or separated are predictive of this shift. It may be that this rare event occurs only when certain kinds of needs associated with these characteristics are perceived by those approaching old age and members of their kinship network. Alternatively, it may be a response to resources that are outside the consideration of this model. Future analyses may clarify this patterning.

As suggested above, it was expected that there may be important interactions among the resource variables and other variables in the model. In particular, we expected that the constraints of affordability or health may be assessed differentially by older individuals with different characteristics. To test this thesis, sets of models were fit including interaction terms between the economic and health indicators and each of the other characteristics listed in Table 3. With one exception, none of these interaction terms were significant. The one significant term is listed at the bottom of Table 3, and captures the effect of the interaction between health and age. We note that although the inclusion of this term does not change the other coefficients in any substantial way, it is included here because it provides important insight to the social process leading to institutionalization.

This coefficient is negative, and indicates that those in poor health are less likely to be institutionalized if they are among the older members of this population. This suggests that, as far as living arrangement decisions are concerned, poor health is evaluated differently by those who are

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relatively young than by those who are older. This somewhat counterintuitive result offers compelling evidence that living arrangement decisions, or at least the decision to enter an institutional care facility, may not be based strictly on cost, resources, or other constraints, but also on age-graded expectations. We know from previous research that institutionalization is generally seen as a last resort and avoided if other options are available. What is less clear is how various options are evaluated by older individuals and their extended kin network. It may be that alternatives to institutionalization, such as living with relatives, are more palatable to an older individual in poor health than to his/her younger counterpart in equally poor health, because greater dependence on family members is accepted as a corollary of older age. Alternatively, the different cohorts included in this sample may differ in attitudes toward extended family care.

Yet another alternative points to the characteristics of those relatives who likely form the options to institutionalization for most elderly. The offspring of a "young-old" individual are likely younger and in possession of fewer resources themselves. For example, the sixty-year-old may have an oldest daughter who is just in her mid-thirties, while the 80-year-old would likely have older offspring who may be in more secure economic circumstances. Any or all of these explanations could play a role in this intriguing result--future research contrasting the experience of these cohorts as they age may consider the question in greater detail.

Conclusion

The study of living arrangements in later life has typically been based either on cross-sectional, micro-level studies of the correlates of living patterns, or longitudinal, macro-level studies of changing rates of living alone, institutionalization, or the like. Another strategy for assessing these choices that has not been fully exploited to date is to study changes as they occur in individuals' lives. In this paper, data from the Survey of Income and Program Participation are employed to assess the patterns of change in living arrangements among nonmarried individuals aged 55 and over during a two and one half year period in the mid-1980s. The model employed here emphasizes the role of socioeconomic resources in making these decisions within the context of a set of other central factors influencing the pool of living arrangement alternatives.

Our results indicate that economic resources are important parts of the process of choosing living arrangements, but that they are not the only concern. Chances Of institutionalization are determined largely by health, defined by needs for assistance with everyday activities. According to the results presented here, the association between economic resources and institutionalization is minimal, once health is accounted for. We thus concur with others' evaluations that risk of institutionalization is driven largely by circumstances of health, with affordability playing a less central role.

Economic resources are more important in explaining choice of household living arrangements. The relationship between economic resources and household living arrangements is complex, because the older individual is often not the only actor in this decision-making process. While some incidents of "doubling-up" among those in later life may be a response to their own resource short-falls, other incidents may be due to short-falls of other persons in their interpersonal network. Our results suggest that a high level of assets increases the likelihoods of forming a one-person household, as does

experiencing an increase in income. A loss of income is more likely to result in doubling-up, although the older person typically will retain household headship. A high level of assets, most of which is value of owned home, seems to facilitate household headship.

Another conclusion drawn from this analysis is that even economic resources and health in combination cannot fully explain the dynamic of living arrangement choices observed in the mid-1980s. Demographic characteristics such as age, sex, race, and marital status also condition these temporal outcomes. While these may be serving partially as proxies for omissions from the model, such as availability of kin, the possibility that they are also associated with different preferences and expectations cannot be discounted. The patterning of age, and the interaction between age and health in predicting institutionalization, are particularly deserving of additional attention.

The decisions made as individuals modify their living arrangements over the life course are part of a very complex process. Those in later life are particularly susceptible to changes in resources and life circumstances that may promote instability in living arrangements. Continuing investigations that view this process longitudinally hold great promise for unraveling some of this complexity.

NOTES

(1) The degree to which these events are in turn conditioned by demographic, sociological and economic characteristics is a consideration outside the scope of this analysis. obviously as cohabitation and other nontraditional living arrangements become more important, the tie between family status and household status becomes weaker.

(2) The type of institution and quality of care may differ dramatically for groups characterized by high and low economic resources. Those who can afford to pay for their care out of pocket or through private insurance may have greater control over the kind and quality of facility chosen.

(3) Obviously, wealth and income are not entirely separate. Many individuals with high levels of wealth obtain supplements to their incomes through interest, dividends and the like derived from that wealth. For other sources of wealth, such as home equity, assets may represent a potential rather than current source of income- Although not as liquid as some other assets, homeownership may be important if reverse mortgages and home equity loans are considered. (However, Weicher, 1989, suggests that the former has met with limited acceptance among the elderly population to date.)

(4) Calculations from the 1980 Census indicate that three percent of the U.S. population aged 55 and over lived with nonrelatives.

(5) Death is included as an outcome because of the age of the members of this sample and the importance of this form of attrition for conditioning chances of other kinds Of change over the course of the survey. Although institutionalization is not necessarily an absorbing outcome like death, it is treated as absorbing since the SIPP does not reinterview those who later leave institutions and return to the household population.

(6) For a small number of individuals who change living arrangements, die, or become institutionalized early in the survey, a full year's worth of income information is not available. For these individuals (2.7% of the sample) we provide annualized estimates of income based on the income values that are reported.

(7) Net worth includes value of home, value of businesses and personal property, plus value of all interest-bearing property, except rental property and mortgages held for another individual, less secured and unsecured debt.

(8) The decision to omit original household type from the multivariate model was based on the observation that, while original status conditions outcome status (e.g., those who are initially observed living alone are unable to change to living alone), original statuses themselves are strongly associated with many of the characteristics included in our model. We argue that a more accurate assessment of the effect individual exogenous characteristics on patterns of change is achieved through omitting the intervening influence of original living arrangement choice.

(9) In preliminary analyses, we tested for a curvilinear relationship between income and living arrangement transitions; none was found. However, it was determined that a better fit was achieved through logging the values for net worth, due to skewness on this variable.

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