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**DETERMINANTS AND CONSEQUENCES OF MULTI-  
GENERATIONAL LIVING ARRANGEMENTS: THE  
CASE OF PARENT-ADULT CHILD CORESIDENCE**

**Ulrike Schneider and Douglas A. Wolf**

**Maxwell Center for Demography and Economics of Aging**

**Center for Policy Research  
Maxwell School of Citizenship and Public Affairs  
Syracuse University  
Syracuse, New York 13244-1090**

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## Abstract

Coresidence between adult children and their elderly parents has become less common over the past several decades. At the same time, the share of the population that is elderly has increased, and will continue to do so, which raises concern about the future living arrangements of the elderly. Several studies have investigated the determinants of choices of household arrangements, and how these choices affect the well-being of the parties that are involved in the decision process. This paper examines the consequences of moves by an elderly parent into, or out of, an adult child's household, with respect to the allocation of time between household and labor market activities, and on the rewards to time spent in paid labor. The empirical analysis is based on a subset of families observed over time in the Panel Study of Income Dynamics (PSID), in which the arrival or departure of an older parent took place. The families in this subset are used as their own "controls"—that is, we compare labor market and housework adjustments made over years of household change to adjustments made in years not accompanied by household change.

Our regression analysis reveals significant effects of a change in coresidence status on all the dependent variables examined: changes in the weeks spent in the labor market per year, in weekly working hours, in hourly earnings and in the weekly hours spent on housekeeping. We find that households' responses to an elderly parent's move in, and to a parent's move out, are asymmetrical. Also, heads and wives are affected differently by the shared living arrangements. Wives react almost exclusively to the "move-out" changes. Most strikingly, the ending of a period of coresidence substantially boosts wives' work out of the home. We also find that taking in an elderly parent increases the head's housework hours, but find no significant effect on wives housekeeping activities.

## **Determinants and Consequences of Multigenerational Living Arrangements: The Case of Parent-Adult Child Coresidence**

Living arrangements are a salient aspect of economic and noneconomic well-being. Unlike children, who are simply born into a household setting, adults can, at least in the long run, make decisions concerning their household status. Moreover, from a microeconomic perspective, an adult's living arrangement is by assumption the one that yields the highest utility, selected from a set of feasible alternatives. However, the dynamics of household formation and dissolution has changed markedly over the past decades and in virtually all western industrialized societies. The fundamental role of family bonds in shaping living arrangements over the life cycle has been challenged by an increase in family dissolution and a growing number of households that extend beyond the nuclear family. At the same time the share of individuals living alone has increased dramatically at all ages.

In view of these trends there is a new interest in the factors that shape household formation and dissolution decisions. Part of the explanation for the long-run trend towards smaller household among the elderly is reduced kin availability, due mainly to falling fertility (Kobrin 1976; Wolf 1995). Yet a reversal of the trend in kin availability as the parents of postwar baby booms pass through old age suggests a possible reversal of the trend in household size in coming decades (Macunovich et al. 1994; Wolf 1995). Wachter (1995), in contrast, projects a situation of "kin privation" resulting from current family dissolution patterns and the smaller proportion of households with children, which could reduce the supply of potential coresidence arrangements for the elderly. Apart from these demographic considerations, it has been pointed out that economic stress or poor health undermines the ability of elders to live independently.

Thus economic, housing, or home care supports for those who cannot rely on family networks is being discussed.

Growing attention is being paid to how the living arrangements of elders affect the well being and household choices of the nonelderly population, with a special focus on informal elder care. Recent data shows that 80 percent of long term caregivers are family members and, more specifically, 38 percent of community based care is provided by sons and daughters (Stone et al. 1987). Changes in family structure might reduce the effective supply of family-based insurance against long term care risks, while at the same time the demand for such care can be expected to rise. Thus further burdens for the working population, or increasing caregiver stress in the informal sector, appear to be major challenges.

This paper addresses shared living arrangements between adult children and their older parents in an attempt to shed light on how adults cope with family responsibilities and changes in household composition. It discusses the determinants and consequences of living arrangement choices, stressing the perspective of the adult child. Our empirical analysis shows that moves of an elderly parent into or out of a child\*s household affect that child\*s, and—even more so—the child\*s spouse's, allocation of time between household and labor market activities.

The following section reviews information on the prevalence of various types of multigenerational living arrangements. This is followed by a discussion of theories of living arrangement choices, and of the potential economic consequences of coresidence. A number of hypotheses on parent-adult child coresidence can be derived from bargaining approaches and the microeconomic household production and consumption framework. This is followed by sections dealing with past empirical research, and a presentation of our own empirical findings. We conclude with a summary and discussion of directions for future research.

## Patterns of Multigenerational Living in the United States

The trend in the household situations of older Americans is clear: the past decades have shown a rise in independent living arrangements and a decline in shared living among the elderly population. The vast majority, about two thirds of elderly singles and couples, continue to live in their own households instead of doubling up with others. Those who coreside apparently prefer living with close rather than with distant relatives and with kin rather than nonrelatives. Thus, sharing the household with an adult child is the second most important living arrangement for elderly Americans and ranks first among all generationally complex household situations (Börsch-Supan 1989). According to the 1988 National Survey of Families and Households, 18 percent of elderly with living children (and 15 percent of all elderly) coresided with adult children, compared to 36 percent in 1957 (Hoyert 1991).<sup>1</sup>

Among the nonelderly adult population, however, the incidence of sharing a household with parents has increased recently (Kotlikoff 1992; Börsch-Supan 1989). In an 1988/89 personal interview survey of 2358 adult children with living parents, Ward, Logan and Spitze (1992) found 11 percent of adult children residing with their parents. The proportion of coresident children ranged between 15 and 20 percent for the 20-30 age group, 10 percent for children over age 30, and 4 percent of the children age 40 or older, the group more likely to have elderly parents (Ward et al. 1992; Ward and Spitze 1992).

The stock of multigenerational family households comprises at least three very distinct coresidence situations: the 1975 National Survey of the Aged (NSA) revealed that about half of the coresiding children, as well as the majority of elderly coresiding parents, have been living jointly with their closest kin all of their lives (Crimmins and Ingegneri 1990). Another portion of these shared living arrangements consists of “returns to the nest.” In this case adult children move

back into their parents\* households, which are therefore still headed by the elderly parent. Only a small fraction of the parent-adult child households comes close to a commonly held stereotype, in which the parent dissolves his or her household and subsequently joins that of an adult child. Elsewhere it has been suggested that about 5 percent of elderly with living children share a household headed by an adult child (Aquilino,1990).<sup>2</sup>

Goldscheider, Biddlecom and McNally (1993) analyzed the prevalence of elderly and nonelderly household headship among United States multigenerational households over four decades. They concluded that in the period 1940 to 1960 adult children were more likely to head joint households, but the percentage of elderly parents among the heads of multigenerational households went up again in the 1960s and 1970s. In 1983 more than two thirds of all parent-adult child households were headed by the elderly parent (Börsch-Supan 1989). Our empirical analysis, reported below, focuses on coresidence situations in which the adult child holds the headship role.

The most commonly cited explanations for the falling prevalence of parent-child coresidence from the 1950s through the 1980s are the demographic and economic shifts occurring during the postwar period. Today\*s elderly lived through their young adulthood in a period of severe economic depression, which, in combination with the strains of the war resulted in a baby bust. Due to the low fertility rates that preceded the postwar baby boom, current elderly cohorts have fewer kin than the preceding generations and thus reduced options for coresidence options (Kotlikoff 1992; Kotlikoff and Morris 1988). In the years following World War II real income and housing wealth grew rapidly (McFadden 1992). This as well as proliferating social policy programs enhanced economic security in older ages and made independent living more and more affordable (Michael, Fuchs and Scott 1980). But since children\*s income has risen as well,

Kotlikoff (1992:9) cautions: “ ... the .. findings that as their incomes rise the elderly choose to live alone may really be findings that as the income of children rise, they choose not to live with their elderly parents.” Indeed, some evidence has been presented that a considerable proportion of parents who live alone would prefer to share the household with an adult child (Kotlikoff and Morris 1988).

Economic growth may also have contributed to an increasing geographical separation of parents and their children. Today\*s young and middle-aged generations have reached higher education levels, and their professional careers are more likely to depend on geographical mobility. Their older parents, however, are less likely to move and might find themselves left behind (Börsch-Supan 1989; Kotlikoff and Morris 1988). Yet available evidence, while scanty, suggests little if any diminution of the proximity of elderly parents to at least one child (Crimmins and Ingegneri 1990), and research on parent-child proximity suggests that at least after about age 75, the moves made by the elderly tend to bring them closer to their children (Clark and Wolf 1992).

## **Conceptual Framework**

### **Determinants of Coresidence**

The process of multigenerational household formation involves at least two parties, one which is relinquishing headship and one which is willing to share its household. Therefore multi-actor approaches and, ideally, models of joint decision making should be employed to explain coresidence choices. Kotlikoff and Morris (1988) and, more recently, Pezzin and Schone (1994) have proposed and tested bargaining approaches to explain the choice of coresidence by elderly parents and their adult children. Both approaches assume a two-player context, in which the

broader family context is not explicitly considered. These, like other microeconomic decision making models, assume that living arrangement choices are made rationally. Finally, both models assume that resources are pooled in the shared household unit.

Each “player” in the bargaining model compares his or her utility in the noncoresident state to that attainable in the coresidence state. The specifications of the utility functions in the models under consideration are slightly different, but both encompass a dependence on private goods, a public good and a taste parameter. Taste parameters are meant to capture each player’s general preference for privacy or joint living. The utility levels that can be attained by the elderly parent and the adult child in their respective noncoresidence states are ‘threat points’ against which the utility in a coresidence-setting is measured, with the latter calculated subject to a collective household budget constraint. Coresidence will be chosen only if both players are at least as well off as they would be living apart, that is, if a Pareto improvement over continued separate household arrangements is achieved.

The individual utility functions prior to coresidence can be specified to reflect altruism or family interaction. Pezzin and Schone (1994) suggest that interhousehold interaction occurs prior to intrahousehold exchange in the coresidence setting. The parent and the adult child contribute to parental well-being which is included as a public good in both independent-state utility functions. As the parent’s utility depends on the child’s decision on the production of the public good and vice versa, this model starts coresidence bargaining in a “voluntary contribution equilibrium” with indirect utility functions.

Kotlikoff and Morris (1988) stress the significance of the taste parameters in the utility functions. They analyze situations in which the coresidence preferences of the elderly parent and those of the adult child are in conflict. The inclusion of taste parameters in their structural model

of living arrangement choices produces nonlinear effects of the parental income on the odds of coresidence: “...when parents prefer living together, but their children do not, they are able eventually to bribe their children if their incomes are sufficiently high relative to their children” (p. 12).

### **Outcomes of Coresidence**

Extensions of the standard microeconomic theory of the household are useful for analyzing the “impacts” of shared living arrangements. In the microeconomic household production framework, households combine market goods and household resources, including the time of household members, to produce goods and services. Each household is characterized by a specific production technology which is shaped by the kinds and qualities of available human and physical capital. Clearly, household size and composition will shape household production (Becker 1981; Chavas and Citzler 1988). More specifically, some general advantages of multi-person over single-person household production can be taken as given. First, the burden of household duties will be effectively reduced in multi-person household if the tasks are shared among household members. Scale effects in the production of services reduce the total amount of home labor input that is required to reach a constant level of service provision.<sup>3</sup> Also, due to specialization a higher standard of services can be attained in multi-person compared to single-households. Reflecting life-course experiences and gender-specific socialization, new household members, endowed with specific human capital, will have a predisposition for certain types of duties.<sup>4</sup> Microeconomic household production theory therefore predicts that changes in household composition will change the division of labor in the household, in turn changing both the output of home produced goods and services and the household\*s market earning potential. It is precisely these changes in household output, and their implications for the consumption

possibilities of household members, that drive the decision process for the living arrangements themselves.

Burch and Matthews (1987) point out that the choice of a specific household status reflects a choice of the specific bundles of market and household goods provided within that household setting. They conceive household arrangements to be “composite goods” which offer idiosyncratic combinations of shelter, storage, domestic services, personal care, companionship, recreation, privacy, autonomy, authority and consumption economies. The number and characteristics of the persons in a household intervenes in the individual\*s utility calculus as it determines the set of goods which can be consumed.

Adding a new member to an existing household should, in general, widen the range of goods demanded and consumed by the household unit. When an elderly person joins the household, some “elderly goods,” which have hitherto not been purchased at the market, may begin to enter the demand functions. But shared living arrangements have at least two more important nonlinear effects. The consumption of a multi-person unit can be expected to differ from the sum of what would be consumed individually if each household member lived apart. Joint consumption of public goods yields economies of scale, while congestion may occur in the case of mixed or “club” goods, which support shared consumption only up to a critical level of consumers. Moreover, decisions over the allocation of the combined family budget must be made.<sup>5</sup> Acknowledging potential scale economies in consumption and the effects of sharing income, consumption outcomes of coresidence will be nonlinear. Changes will vary across households of different composition depending on the absolute and relative strength of income and substitution effects.

Having sketched elements of bargaining models of coresidence decisions, and the microeconomic analysis of household production and consumption, we offer some interpretation and illustration for the specific case of elderly parents coresiding with an adult child. We consider the stereotypical case of an elderly unmarried parent whose living arrangements options are to live alone or to share the household of an adult child. Among the factors that influence the likelihood and consequences of older parent-adult child coresidence, some are likely to be of common interest to both parties, while others figure idiosyncratically in either the parent\*s or the adults child\*s coresidence considerations. Cost sharing can be assumed to be of common interest. Cost economies that result from scale and specialization impacts of a change in household size and composition are more salient for low-income elderly and low-income children, which should therefore be more likely to double-up.

From the parent\*s perspective, the quality and availability of domestic goods such as household services, personal care, and companionship may cause the coresidence option to become preferred to independent living with advancing age. In terms of the bargaining analysis, the parent\*s threat point utility is expect to decrease over time, for several reasons. First, some household goods, for example companionship, are effectively not available in a single-person household. Since alternatives such as telephone communication serve as poor substitutes for personal interaction, the company of other people has to be sought out of the home (Burch and Matthews 1987). The less successful or capable is the elderly parent of socializing out of home, the higher are the cost of separate living and, correspondingly, the potential gains to living in a shared household. Other things being equal, elderly parents with relatively wide informal networks, those who are living in urban settings with rich cultural and leisure amenities and those

who are relatively mobile should be less likely to depend on family companionship in shared living.

Second, household tasks may simply become too burdensome for an aged individual, such that services must either be bought, provided by informal helpers, or obtained through a joint living arrangement. Also, with increasing age, an elderly parent is more and more at risk of falling ill and of losing the capacity to function independently in the tasks of daily life. Dependency on help with activities of daily living may be seen as an extreme in the process of a gradual change in the relative attractiveness of joint living arrangements. Thus frail and disabled parents in need of care are more likely to join the household of an adult child. Also, elderly widowers should be more prone to coreside.

Third, a life-cycle approach to family consumption predicts that investments in the stock of household equipment typically occur in two “empty nest stages.” In the first, the home is being prepared for child rearing. A second likely time for investment in housing and household equipment is after the last child has left home and while the household\*s head is still in the working force. In later life, major investments and retrofitting become less likely (because disposable income is lower, new household technologies are not as readily accepted, or because the expected life span of the capital improvement might exceed the subjective life expectancy of the elderly consumer). What results is a “vintage” structure of household equipment across young and elderly households. At some point, joining the household of an adult child also means technical upgrading and a switch into more comfortable surroundings. This “amenity” factor, again, should be more important in explaining the coresidence patterns of elderly parents with low income, and especially so in comparison to the adult child\*s economic status.

Often researchers have treated the adult child\*s decision to coreside as a response to the elderly parent\*s care needs. However, since we assume that for both parties the choice of household status is deliberate, we must consider the possible advantages of providing care in the child\*s household, compared to alternatives such as formal or informal care provided in the parent\*s home, or in an institution. In addition to consideration of altruism or affection, two additional arguments can be identified: a rationalization of care obligations, and affordability. In some cases coresidence may be the least-cost or most productive solution to caregiving. This could be due to lower mobility cost, to scale economies in consumption of household services or specialization economies. As for affordability, care provided in the home may involve the lowest monetary costs (yet may impose high time costs); thus it is hypothesized that households with relatively low economic resources, and those with low opportunity costs of time, will be more likely to choose coresidence.

In contrast to those who view multigenerational living primarily in terms of parental care and a fulfillment of filial obligations, some authors have emphasized the productive contributions of the elderly generation. Elderly Americans in the 1990s are in better health, possess considerable economic resources and have received more schooling than previous cohorts of elders. The human capital and economic resources which they bring into the household therefore can increase household production. It has been proposed that elderly parents supply domestic labor, helping with household tasks and engaging in child care (Ward and Spitze 1992; Ward et al. 1992).

In the remainder of this section we consider specific hypotheses regarding changes in adult children\*s allocations of time in response to the initiation of coresidence with their elderly parent. We take into account two opposing possibilities: that the parent represents a care “burden,” and

the possibility that the parent is a net contributor to household output. We adopt the perspective of the household production framework.

It is reasonable to assume that, at the time of the household change, elderly parents supply less market labor than the average adult in the child's household. Often the parent will have already retired. Yet as long as the parent contributes to domestic production, and as long as he or she produces more output than is necessary to provide his or her share of consumption goods, there is a net positive contribution to household production. The reverse, however, may instead be true. Since elderly females are more likely to embody human capital specialized to household activity, the highest net contributions are to be expected from "young old," healthy mothers.

Other things being equal, the presence of an elderly parent who can supply domestic labor in excess over what would be needed to provide his share of household services, reduces household time inputs by other family members, and vice versa. We first consider the case of a single working adult child; the conclusions derived depend on the assumptions made about leisure and the ratio of market to household goods. Barring changes in the preferred consumption mix of market to household goods and holding leisure constant, with net productive contributions of the elderly parent, the child will provide less domestic labor and more completely specialize in market production. If the presence of an elderly parent tightens the domestic time budget, market time will have to be reallocated to domestic production. Dropping the assumption of a constant amount of leisure time, the effect on labor supply can be neutral or negative. Either labor supply is held constant and leisure time is redirected to domestic production, or both market and leisure time is reduced in order to sustain the per capita provision of household goods. Dropping the assumption of an unchanged ratio of market to home produced goods, the effect of coresidence on market labor is completely indeterminate. Substitution of time intensive household goods by

money intensive market goods is possible, which means that market production might even increase.

If the child's household contains other members, a more complex readjustment of the household's division of labor and associated family roles can arise. According to Becker's (1981) specialization hypothesis, the household member with the greatest comparative advantage in performing household tasks will be responsible for the majority, if not for all, household duties. Assuming such specialization, the arrival of an elderly parent in the household can be hypothesized to produce two opposing effects, depending on the productive capacities of the parent. Taking in an "unproductive" elderly parent increases the demand for household services and will reinforce the given patterns of specialization. The family member who was already primarily responsible for housework is most likely to provide care for the elderly parent. There is likely to be complementarity in the productivity of time inputs to household production and time inputs to parent care. Moreover, the potential market earnings of someone already specializing in home production is expected to be lower than the earnings of those family members specializing in market activity. If additional household time inputs are necessary to provide parent care, low earners will be the first to reduce their labor supply (Becker 1981; Finley 1989; Mutschler 1994).

In contrast, coresidence with a "productive" elderly parent who supplies domestic labor will diminish existing patterns of specialization in time allocation. If the elderly parent assumes the role of primary homemaker, the household member previously specializing in household duties can redirect time to the market sector. Other household members who have contributed to domestic production prior to the change in household composition also can be discharged from some of their household duties. The leveling of differences in market earnings among family members will be less pronounced than the differences in time investments. Traditional

“breadwinners” will have accumulated market-oriented human capital over a comparatively longer period of time. The marginal revenue of an extra hour spent in market production therefore are higher for them compared to the new entrant’s. A gap in earned market income is only likely to become smaller when the reallocation of household time strongly favors the former homemaker.

### **Joint Determination of Coresidence and Time Allocation**

In the preceding two sections we first discussed the decision to coreside, and then the reallocation of time by household members given coresidence. Yet it is clear that the two arenas of behavior are closely linked. Indeed, we assume that the decision to coreside took as given an optimal deployment of household resources, and consequent output of household production, in the shared-household state, which may in turn have differed substantially from the ex ante separate-household state. Viewed in this way, changes in time use and household production are both a cause of, and caused by, a change in household composition; the two behavioral changes are simultaneously determined. As we shall see below, this view has not always been adequately reflected in past research.

## **Empirical Studies of Elderly Parent-Adult Child Coresidence**

### **Studies of Coresidence**

Many studies have investigated factors influencing coresidence decisions involving the elderly. Most have disregarded whether it is the parent or the child heading shared households, and therefore are unable to distinguish between the “source” and the “destination” household. Nonetheless, more attention has been paid to parent characteristics than to child characteristics in research on the correlates of coresidence; this limitation is often traceable to shortcomings in the data used for analysis (Wolf 1994). Characteristics of coresiding children have been studied

nearly exclusively in the context of caregiving. Only a few papers have presented multi-actor models, or models based explicitly on bargaining approaches. Wolf and Soldo's (1988) model emphasizes demographic factors, especially family structure, as predictors of living arrangement choices of elderly women. Each living child of a sample older mother enters the analysis as a distinct potential coresident. The findings suggest that comparing across family configurations, the availability of unmarried children in general, and more so of unmarried sons, significantly enhance the likelihood of elderly mothers' coresiding with a child. More recently, Ofstedal and Wolf (1995) introduced a simultaneous logit model of coresidence choices applied to a sample of Taiwanese families. Again, each child appears in the model as a distinct potential coresident, but pairs and triples of children are also considered in view of the substantial prevalence of simultaneous coresidence with multiple children in Taiwan. Further empirically tested multi-actor models include Kotlikoff and Morris's (1988) structural model of living arrangement, and the bargaining model by Pezzin and Steinberg Schone, both of which were discussed above. Selected empirical findings from these and other studies are summarized in the remainder of this section.

Among the elderly parent' attributes one would expect age to be a good predictor for the decision to maintain or relinquish separate living. But as Crimmins and Ingegneri (1990, p. 15) point out, "... it is not age, in itself, but rather the often concomitant losses which necessitates coresidence." Accordingly, the effect of the parent's age on coresidence is found to be either weakly significant (Wolf and Soldo 1988; Mutchler and Burr 1991; Hoyert 1991) or insignificant (Crimmins and Ingegneri 1990) when health and economic status are included in the models. Some studies isolate a "threshold" age at which the odds of coresidence start to increase. Wolf and Soldo estimate this age to be 79 for elderly unmarried women. Börsch-Supan (1989) calculated age 75 as the average turning point across all income classes but found that low income

elderly coresided four and a half years earlier (at about age 70.5) and high income elderly three and a half years later.

Several studies find that poor health, or alternately diminished functional status (usually measured as difficulty with, or an inability to perform, basic activities of daily living or ADLs) adds significantly to the likelihood of living with a child. Wolf and Soldo (1988), for example, estimate that the odds of coresidence for elderly mothers increase by nearly 18 percent with declines in an ADL-based disability score. Crimmins and Ingegneri (1991) also found that severe functional disabilities raised the likelihood of an elderly parent\*s living with a child. Mutchler and Burr (1991) found health to be insignificant in the choice of noninstitutional living arrangements, but significant when institutionalization is considered. Ward et al. (1992) found no direct effect of parent\*s health status on coresidence, but the older parent\*s ability to drive a car helped to sustain independent living.

The likelihood of coresidence also varies by gender and marital status of the elderly parent. Although mothers seem to dominate coresidence situations, net of health and economic status male elderly are about 4-5 percent more likely than females to coreside with their children (Kotlikoff and Morris 1988; Crimmins and Ingegneri 1990). Being married reduces the odds of coresidence, while widowhood can increase the probability of sharing a household with an adult child up to 11 percent (Crimmins and Ingegneri 1990).

As mentioned earlier, it has been argued that favorable economic conditions in the postwar decades have allowed successive cohorts of elderly to satisfy their demand for the “superior good,” autonomy (Beresford and Rivlin 1960). However, in several cross-sectional analyses economic attributes have found to be less powerful overall predictors of coresidence than demographic factors. The estimates range from a 10 percent to 24 percent decrease in the

likelihood of coresidence with additional income, depending on sample characteristics and also depending on how income is operationalized.

Mutchler and Burr (1991) present a threefold specification of economic effects, comprising two income variables and a net worth variable. Both income predictors, the income in the year prior to a change in living arrangements and the rate of income change, were significant and negatively related to the odds of being a nonhead versus living alone. The impact of net worth is negligible and dominated by the home ownership of the single elderly. The latter result is consonant with Wolf and Soldo (1988), who found homeowners among elderly mothers nearly 10 percent less likely to coreside with adult children.

Several studies have concluded that income matters for low-income elderly while it is only marginally important for the middle and high income groups. Börsch-Supan (1989) found low-income elders five times more responsive to income changes than middle- and upper-income households of elderly. Wolf and Soldo (1988) found significant negative income effects only above an annual income of \$3500 (in 1975 dollars), among elderly unmarried women.

The associations between attributes of adult children and their likelihood of coresidence with parents has received less study, but some evidence highlights the importance of children's ages, marital status and gender. Kotlikoff and Morris (1988) point out that parents with older children were more likely to coreside. Not surprisingly, the relationship between the age of the adult child and the incidence of coresidence appears to be U-shaped. The number of living children mainly has an indirect effect, determining the pool of offspring with preferred characteristics (Crimmins and Ingegneri 1990). Children with fewer competing demands on their time are assumed to be more attractive partners for shared living arrangements. There is solid evidence that the child's marital status is an important codeterminant of coresidence. Having an

unmarried child of either sex increases the probability of coresidence by as much as 25 percent (Crimmins and Ingegneri 1990, p. 19). Hoyert (1991) suggests a “pecking order” of coresidence choices with never-married children being preferred over those previously married, and the latter over currently married children. Wolf and Soldo (1988) estimated the log odds of coresidence over a number of hypothetical family compositions, including combinations of married and unmarried sons and daughters. Again the availability of unmarried children and, even more so, having an unmarried son, turned out to be significant. Moreover, having younger sisters reduces the likelihood for a specific child to coreside with an elderly parent.

There has, in addition, been some research investigating effects of children’s economic circumstances on their propensity to coreside with their parents. Apparently only Kotlikoff and Morris (1990) have had data that permitted simultaneous controls for the parents’ and the children’s incomes. In an analysis controlling for both, the child’s but not the parents’ incomes produced a statistically significant association, in the expected negative direction. Soldo, Wolf, and Freedman (1995) investigated parent-child coresidence using data that permitted detailed representation of the child’s, but not of the parents’, attributes. Soldo et al. (1995) controlled for the (predicted) labor market wage of women and the labor earnings of men in their analyses. Among unmarried women, there was a significant negative effect of the wage rate on the probability of coresidence with an older unmarried mother; for unmarried men, earnings produced a similar effect. Among married couples the findings were more complex: wives’ wage rates were negatively related to the probability of living with their own mother, but positively related to the probability of living with their husband’s mother. Husbands’ earnings, in contrast, had no relationship with their probability of living with their wife’s mother, but a strong negative effect on their probability of living with their own mother.

## **Empirical Evidence on Coresidence Outcomes**

Studies of the consequences of coresidence are not as abundant as those directed at living arrangements choices. Nevertheless, the issues of time allocation and family role adjustments have been analyzed to some extent in caregiving research, as in some more encompassing studies of gender division of housework. Also, empirical research on household consumption patterns is abundant, and some studies take family structure into account.

Mutschler (1994) analyzed work accommodations among 600 caregiving employees across different occupations. Her sample, which was drawn from the “Survey of Caregivers” component of the National Long-Term Care Survey, comprised a majority of cases in which the caregiver coresided with the dependent (more than 66 percent) and in which the dependent was an elderly parent (more than 50 percent). Half of the caregivers who were employed at the time of the interview reported constraints on their work activity, such as adjustments in schedules, a reduction of hours worked, or unpaid leaves. Income losses due to these constraints were estimated to reach a minimum of \$1,300 per year. The accommodation strategies adopted to respond to the dual commitments to work and family varied across occupations. A reduction of working hours was most typical for sales and service professionals, and least likely for caregivers holding production jobs. The duration of an unpaid leave averaged 28 days, but clerical workers, 90 percent of whom were females, averaged leaves which were twice as long. Overall, workers preferred to maintain their jobs and the strategies to cope with conflicting caregiving duties varied with workplace characteristics, gender and income.

Similar findings are reported by Franklin et al. (1994), who studied a sample of 119 employed and caregiving females. Again, the majority of these were daughters or daughters-in-law, and more than two thirds of the caregivers were employed full-time prior to assuming

caregiving responsibilities. The results show that short term adjustments were most common, compared to leaving the workplace altogether. Moreover, reactions occurred with little delay once the caregiver role had been assumed and the influence of family background or support was found to be negligible.

The preceding studies favor neither the “coresident parent as contributor” nor the “coresident parent as burden” hypothesis, as they focus narrowly on elderly care recipients and their children. In contrast, Tilly and Albelda (1994) used the 1973, 1979 and 1987 Current Population Surveys to study earning differences across seven family types. Their models included family structure variables as predictors, one of which was the number of household members aged 65 or older. Annual earnings were decomposed into participation, hours, and wage components, and simulations identified variations in annual hours of work as the explanation for most of the earning differences across family types. Tilly and Albelda estimate an “elderly effect” on annual working hours of about negative 700 hours worked per elder included in the household.

Regarding potential consumption impacts of coresidence, a study by Chavas and Citzler (1988) is relevant. The analysis, based on a sample of white southern households from the 1972-73 Consumer Expenditure Survey, focussed on the notion of determining “optimal family composition,” which implies that the marginal cost and revenue implications of an additional family member are equal. This is consistent the bargaining model approach to the adult child\*s decision to coreside. Chavas and Citzler consider five categories of family members, classified by age. Cost effects are measured as changes in 14 categories of consumption expenditures, and revenue effects as income changes. Their estimates reveal that the cost elasticities of an additional elderly family member are close to zero because increases in some expenses are outweighed by decreases in others. Adding a person over age 65 to a household reduces overall expenditures for

8 out of the 14 expenditure groups, with the strongest negative elasticities for food away from home, alcohol and tobacco, housing and utilities. Positive elasticities are notable for domestic services, health, food at home and personal care. As the calculated income response to an elderly family member is positive but small Chavas and Citzler conclude that household welfare should be scarcely affected by the presence of an aged person. Nevertheless, they caution that the analysis neglects informational and moving costs, as well as constraints on choices in the process of household formation. Also, time allocation is not taken into account. These issues are suggested for further analysis that should be based on panel data.

Another strand of relevant research considers the relationship between coresidence and the alleviation of poverty. Changes over time in the propensity of elders to live independently implies possible changes in the distribution of income, or more generally, of well-being, conditional on household type. Holden (1988), for example, notes that during the period 1950-1980 poverty rates among older women living alone fell more slowly than among other groups of elderly people. This could be a consequence of changes over time in decisions concerning coresidence. Her calculations indicate that poverty rates among the elderly (those aged 60 and older) would have fallen by about 39 percent, rather than by 36 percent, had concurrent changes in living arrangements patterns not taken place. However, much larger changes were calculated for the oldest groups, especially women aged 80 and older. Rendall and Speare (1995) also addressed the association between coresidence patterns and poverty rates, but used a comparative static analysis. Their results are much more dramatic than Holden's: they find that in the absence of extended-family coresidence poverty rates among the elderly would be 42 percent higher than those actually observed. However, the counterfactual analyzed by Rendall and Speare—one in which no coresidence takes place—is very different from that employed by Holden.

Neither Holden (1988) nor Rendall and Speare (1995) assume any behavioral responses to coresidence among either coresident elders, or among the nonelderly persons that coreside with them. This assumption probably has little effect on their findings, which are expressed only in terms of poverty rates among the elderly. In another recent article, however, Waehrer and Crystal (1995) present calculations of the financial benefits to both elders, and to their nonelderly coresidents, of shared living arrangements (and, by assumption, shared incomes). Waehrer and Crystal, like Holden and Rendall and Speare, treat the incomes of all coresident household members as exogenous, ignoring possible changes in employment, hours of work, or even wages, that might accompany the decision to coreside. Because of this failure to account for the potential endogeneity of income, Waehrer and Crystal's conclusions concerning the distribution of gains to, and losses from, coresidence must be viewed cautiously.

## **Impacts of Changes in Coresidence Status: A Panel Analysis**

Our empirical analysis focuses on changes in time allocation and consumption patterns associated with changes in household composition—specifically, changes in the form of arrivals to, or departures from, an adult's household by his or her parent(s). Because such changes occur infrequently, and moreover are viewed as the outcome of a joint decision process, we must be concerned with possible selectivity in the subsample of households in which such changes take place. We deal with this issue by exploiting the panel nature of our data source, the Panel Study of Income Dynamics (PSID), identifying a group of households in which an older parent is observed to either arrive or depart. Our measure of possible impacts of this change involves differencing the values of time allocation or consumption variables in years prior to, and subsequent to, the household composition change. We then create a parallel set of observations

on the same subsample of households, identifying years in which **no** household composition change took place, and creating parallel first-differences measures of outcome variables. Thus, each household analyzed serves as its own “control” in our multivariate analysis.

### **Data and Sampling Procedure**

Our analysis is based on a subsample drawn from the PSID. This nationally representative survey started in 1968 and is conducted on a yearly basis. The number of responding households has increased from 4,802 in 1968 to more than 7,000 in 1989, including “split off households” which are headed by members of original sample families. Pooling observations over the 1968 to 1989 survey years, a total of 155 parent-adult child household units have been selected for the current study.<sup>6</sup>

Our subsample is selected in a way that permits an analysis of change in the children\*s and their spouses\* time allocation due to the change in coresidence status. The first step in the sample selection was to identify families who reported that an elderly parent moved into or left the household in at least one year between 1971 and 1987.<sup>7</sup> “Moves out” of the household include the parent\*s move to an institution, or death, as well as moves to other households (either shared or independent). The age of the parent was required to be at least age 60 in the year of the move.<sup>8</sup> A second selection criterion required that no changes in household headship or marital status had occurred in the years that immediately bracket the year of the parent\*s move. Thirdly, only one type of move by an elderly parent—either into or out of the household—was permitted in a single year. Families that simultaneously experienced moves into and out of their household by elderly parents were excluded, as this could imply offsetting changes in the time allocation variables. Also, to avoid overlapping and spillover effects, cases in which parental moves in one

year had been preceded by or succeeded by moves of elderly parents in the three previous years or the following year were dropped from the sample.

A schematic representation of our subsample construction, for a hypothetical observation, is as follows:

interview year:	1982	1983	1984	1985	1986	1987
time relative to change:	$t-3$	$t-2$	$t-1$	$t$	$t+1$	$t+2$

In this example, “ $t$ ”, the year during which a parent is observed to join or depart from the household, is 1985 (or, more precisely, the period between the 1984 and 1985 interviews).

Variables constructed to capture the possible behavioral changes associated with the household composition change (for example, annual hours of work) are constructed by subtracting the 1984 value (which pertains to the year prior to the change) from the 1986 value (which pertains to the year after the change). The reference year for comparison to year  $t$  is year  $t-2$  (here, 1983), and the parallel measure of the behavioral variable is constructed by subtracting the  $t-3$  (1982) value from the  $t-1$  (1984) value. The relevance of year  $t+2$  (here, 1987) to the analysis is that annual values for year  $t+1$  are reported in the interview taken in year  $t+2$ .

The implications of restricting the number of moves to only one in five consecutive years should be made explicit. Elderly parents who leave must have lived at least three years in the household with the adult child, while parents who move in to live with their adult children will share their child\*s household for at least 18 months. That is, there is an asymmetry built into our design, with moves out ending more lengthy periods of coresidence—periods to which behavioral adaptations might be more complete—than moves in. Unstable patterns of coresidence that last less than 18 months and might reflect a crisis situation (such as a period of recovery following

hospitalization), were systematically omitted from the analysis. Both factors limit somewhat the conclusions that can be drawn from our estimated impacts of coresidence.

## Methods

To determine the net impact of a change in coresidence status on changes in household production, we estimated regressions that include two observations per family: one for the control period and one for the period covering the change in household composition. Formally, the regression model posited for the analysis can be written as

$$Y_t = \beta_0 + \beta_1 I_t + \beta_2 O_t + \beta_3 X_t + \beta_4 X_t I_t + \beta_5 X_t O_t + e_t$$

in the year of a household composition change, and as

$$Y_{t\&2} = \beta_0 + \beta_3 X_{t\&2} + e_{t\&2}$$

in the “control” year, where  $Y$  is a variable hypothesized to respond to changes in household composition,  $X$  is a vector of contemporaneous covariates,  $I_t$  is a dummy variable indicating that an elderly parent moved in to the household, and  $O_t$  is a dummy variable indicating that an elderly parent moved out of the household. Note that the intercept ( $\beta_0$ ) and covariate effects ( $\beta_3$ ) are equal in the two equations, causing the effects of household change to be confined to the dummy-variable coefficients ( $\beta_1$  and  $\beta_2$ ) and their interactive effects ( $\beta_4$  and  $\beta_5$ ).

Changes in various measures of market labor supply of the families\* heads and their spouses, as well as changes in the weekly amount of time that both devoted to housework, were regressed on the indicators of the elderly parent\*s move into, or out of, the family household. Shifts in the employment status of the head and spouse were considered to be part of the decision to coreside. Therefore employment variables such as “weeks worked per year” or “weekly working hours” were defined for all individuals (and coded as zero for those not working for pay).

## Sample Characteristics

Table 1 displays the dependent variables that were chosen to represent potential changes in a family's time allocation. Average changes for these variables over the control and over the transition period are shown separately for the 94 sample families in which an elderly parent moved in, and for the 61 families in which an elderly parent moved out. The actual number of cases included in each row of the table varies due to changes in the pattern of missing data from year to year (due, in turn, to variations in the wording and contents of PSID interviews from year to year) as well as the fact that not all families include a spouse. Table 1 also shows, in the last column, the difference-in-differences variables obtained by subtracting the "control" period difference from the "change" period difference. The means shown in columns (1) and (2) are small and exhibit no systematic pattern. The difference-in-difference figures, however, show a slight pattern: all are nonnegative. This is somewhat curious since it fails to suggest that behavioral changes made in response to the addition of an elderly parent are offsetting in nature to those made in response to the departure of an elderly parent. These changes, however, do not control for vintage (age) effects or other possible changes in covariate values that may be found in the data.

Summary statistics for covariates describing the households into which, or out of which, moves by older parents take place are shown in Table 2. In several respects, the households that gain older parents look quite different from the households that lose them. For example, households gaining a parent are younger, richer, and less likely to be headed by a single or childless person than are the families that lose an older parent. In the year of the move, and net of the elderly parent, the average sample family comprised about three persons. Coresidence arrangements typically occur when the adult child is in its mid and late forties. The child's age averages 49 in the complete sample. Household heads were younger in the group that took in an

elderly parent: Half of the adult children in the move-in group were aged 46 or younger, compared to a median age of 54 among the move-out cases. The median age of the elderly parents that moved into their children\*s home or left was 74 and 80 respectively.

Slightly less than half of the sample families (76 households) included a least one minor child. Considering the age of the household heads, it is unsurprising that only a minority of the young dependents were preschoolers. In three out of four cases with children present, the youngest child was older than age 4, while in half of the cases it was older than age 10. This leaves little time to be committed to child care by the major adults in the family households.

The predominant family type among households that were joined by an elderly parent was a married couple family. The remaining cases in this group were nearly equally distributed across households of single children and of lone parent families, the latter being especially frequent in the move-in subsample. More than one out of four families beginning a period of coresidence were single-parent families. In contrast, the majority of households in the move-out group comprised an elderly parent and an unmarried son or daughter only (with couples ranking second and lone parent families following well behind).

The socioeconomic status of the sample families was measured using the head\*s and wife\*s combined taxable income in the year of the move. Two thirds of all sample households reported a taxable income of less than \$20,000 (in 1990 dollars). The distribution of taxable income was skewed towards the lower income tail in both subsamples. But there were also notable differences to be found between the move-in and move-out group. The median taxable income in the move-out group, \$9,435, is 30 percent less than the taxable income in the move-in group, which is \$13,805. Also, the share of households with an income of more than \$40,000 is 21 percent among the families in the move-in group, but only seven percent among for the

families that experienced the end of a multigenerational living arrangement. These differences can be partly attributed to the different age of the two groups. Of the adult children in the move-out group 30 percent were 60 or older and had thus reached retirement age by the time their parent moved out. Also, the higher percentage of married couples among the “move-in” cases helps to explain the difference in incomes between the two groups: couples\* median taxable income (\$29,000) is about three times that of single sons and daughters (\$10,000) or lone-parent families (\$9,000).

To summarize, the sample statistics reveal considerable differences between families that experience a move of an elderly parent into the household and those that report an elderly parent left the family. For this reason alone, an asymmetrical response to the two kinds of moves can be anticipated in the multivariate analysis.

### **Results of Multivariate Analysis**

In the regressions, the independent variables of primary interest are the two dummy variables indicating moves into and out of the household. The motivation for separating move-in and move-out cases was to allow for an asymmetric response to the two kinds of changes. In addition, family characteristics (controls for family size and composition) and interaction terms were examined. Another set of potentially important variables that undoubtedly influence the response to coresidence are the characteristics of the elderly parent. However, these factors are not addressed in the current analysis. For one thing, little is known about the characteristics of the parents beyond age, sex and the year of their joining or leaving the family unit. What was known was reported by the adult children, or their children\*s spouses. More importantly, no information was available about characteristics of potential elderly coresidents who for some reason did not join their child\*s household in the period under consideration.

The results of three levels of hierarchical regression analysis are reported, for each of five dependent variables, and separately for household heads (which include both males and females) and their spouses (which are exclusively female). In the first, the dependent variable is regressed on the two dummies for moves into and out of the household only. In a second step controls for family composition and the change in family size over time are added. A control for household size seems to be advisable as changes in the time allocation of head and spouse could depend on the family's potential to realize economies of scale in household production. The third set of regressions includes variables produced by interacting the move-in/move-out dummies with selected indicators of family composition, in order to reveal indirect effects of an elderly parent's move on the time allocation of the adult child and daughter-in-law. Results for these models are shown in Tables 3 through 7. In the following paragraphs we first discuss the impact of the elderly parent's move on the time spent by the household head (and spouse, if any) on work outside the home, and on hourly earnings. This is followed by a discussion of the results on changes in time spent on housework.

Only one of the simple models yielded statistically significant estimates of the effect of parental arrivals or departures on heads' weekly working hours, or on weeks worked per year: the results indicate a positive effect of a parent's arrival on the number of weeks worked by household heads per year, albeit at the 10 percent rather than 5 percent significance level. Heads worked four additional weeks annually compared to the control period, due to taking an elderly parent into the household. The coefficient for the move-out dummy also was positive, but nonsignificant. No effect could be found on earnings per hour for the household head (Table 5). Adding controls for family size and composition improved the overall explanatory power of the models, but eliminated the statistical significance of the move-related variables.

The most striking coefficients are to be found for spouses\* work outside the home. An elderly parent\*s move out of the family household produces a large change in wife\*s weeks of work, hours worked per week, and in hourly earnings. In contrast to the stronger sensitivity of heads to the moves of elderly parents into the household, wives turned out to be significantly affected by their in-laws move out of the family. The ending of a shared living arrangement led wives to work nearly six additional month per year, and almost 15 more hours per week. Similarly, the end of an episode of coresidence was also strongly related to changes in wives\* hourly earnings, which went up by about three dollars. It is likely that much of the impacts for weeks worked is in the form of moves into employment, suggesting that the newly-employed wives took jobs at higher average wage rates than those held by the previously-employed spouses. The independent variable that measured the effect of an elderly\*s move into the family also displayed a positive coefficient in the regressions for work related variables. But only the wife\*s hourly earnings are significantly related to an in-law\*s joining of the family.

Unsurprisingly, the age of head was a significant predictor of changes in the work related variables, indicating a pattern of life-cycle reductions in the volume of and wage received for paid work. There was also a highly significant relationship between race and the employment variables. White household heads reduced their weeks of work, and weekly working hours, relative to nonwhites. However, race turned out to be of no importance for wives\*s employment or wages.

We also examined whether a change in coresidence status influenced the number of weeks missed at work by heads and their spouses due to the illness of other family members (Table 6). Again, heads were found to react more strongly to a parent\*s move into the family, whereas wives were more responsive to parental moves out of the family. In all models heads were found to

miss an additional week of work due to their aged parents\* joining their household. The elderly parent himself may have fallen ill, causing the head to stay away from work. The presence of grandchildren in combination with the parent\*s move into the family added slightly but significantly to this effect. At the same time, taking in the parent indirectly decreased the number of weeks missed at work through an increase in family size. Both indirect effects, one through the change in household size and one through interaction with grandchildren that share the household, might indicate that the aged parent took care of other family members, which allowed the head to leave home for paid work. Spouses' absenteeism is only marginally effected by an older parent\*s move into or out of the household.

Changes in the time spent on housework were strongly and significantly related to the moves of an aged parent for both, the heads and their spouses (Table 7). Household heads' housekeeping efforts increased between five and seven hours per week in response to taking in a parent. There was also an indirect effect of parents\* joining or leaving the family on the head\*s housework through the presence of dependent children as well as through the impact of the move on household size. The change in household size helped to mitigate these effects, an apparent consequence of scale economies in household production. It is interesting to note that again, the group of families beginning a period of coresidence and the group of families that have lived with an elderly parent over a long period of time do not respond symmetrically to moves, since both types of moves tended to increase the head\*s housework responsibilities. Also, the changes in heads weekly hours of housework once more varied across white and nonwhite households. For wives, an indirect but strong and significant effect was found on housework when in-laws left the household. Together with the change in family size a move out of the household increased spouses\* time spent on housework by 11 hours per week.

Curiously, wives increased both labor market labor time and household production time in response to the elderly parent\*s move out of the household. This may be explained by within-group heterogeneity. Some of the spouses may have taken advantage of the elderly\*s presence by leaving home for paid work, while relying on the in-law\*s housekeeping. Once the in-law moved out, these women would tend to reallocate their time towards housework. Another group of spouses might have stayed home to take care of the aged parent, tending to re-enter the labor market only after the in-law has left the family.

## **Summary and Conclusions**

Coresidence between adult children and their elderly parents has become less common over the past several decades. At the same time, the share of the population that is elderly has increased and will continue to do so, which raises concern about the future living arrangements of the elderly. Several studies have investigated the determinants of choices of household arrangements and how these choices affect the well-being of the parties that are involved in the decision process.

Theoretically, explaining parent-adult-child coresidence involves the attractiveness of joint living relative to separate living for each generation. From the perspective of household economics, the “destination unit” will weigh the marginal cost against the marginal revenue of changes in its household size and composition. The optimal family composition is realized, when the marginal costs and the marginal gains for each household member are equalized. This condition, however, is an ideal steady state situation, which might not be attained in the short run (Chavas and Citzler 1988, p.1406). An equilibrium might be reached only after some transition period or only in a life time accounting perspective. The parent might have contributed to the

family's well being prior to coresidence and live on the "credit of past services" (Burch and Matthews 1987, p. 501) after joining the child's household. This implies that assessing coresidence in terms of balanced exchange and through examination of observable impacts of coresidence in cross section can be potentially misleading. Such an assessment would fail to capture the time-path of exchange between the elderly parent and the adult child. Finally, even if the equilibrium was reached on the household level, in a multiperson unit gains and losses of specific household members still could be out of balance. The present paper therefore addressed the issue of coresidence impacts, using panel data and distinguishing consequences of coresidence for family heads and their spouses.

The results of our regression analysis reveals significant effects of a change in coresidence status on all the dependent variables: changes in the weeks spent in the labor market per year, in weekly working hours, in hourly earnings and in the weekly hours spent on housekeeping. We found that household's responses to an elderly parent's move into and to a parent's moves out of the family were asymmetrical. Also, heads and wives were affected differently by the shared living arrangements. Wives reacted almost exclusively to the "move-out" changes. Most strikingly, the ending of a period of coresidence substantially boosted wives' work out of the home. We also found that taking in an elderly parent increases the head's housework hours, but found no significant effect on wives housekeeping activities.

As has been noted before, both our sampling design and inherent data limitations imply some important caveats for the analysis of coresidence impacts. Some of these restrictions could be mitigated. Instead of using the families in which parental arrivals or departures occurred as their own controls, a group of households which did not coreside with elderly parents might serve as a reference, providing that the resulting problems of selectivity could be adequately addressed.

The coresidence group could then be observed over three years rather than five, and this less demanding sample selection criterion would increase the number of cases available for analysis. A control group of families which do not report moves would be essential in any case to be able to draw contrasts to the coresiding group.

Prior to 1982 the PSID does not allow us to unambiguously identify in-laws who are living with, or moving into or out of, the households of married couples. Therefore, our sample is restricted to cases in which parents of the household\*s head join or leave the family. It would be interesting to extend the analysis to changes that follow moves of in-laws and to test for differences in the household\*s responds to coresidence with both kinds of movers.

## Endnotes

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1. A variety of measures can be used to depict the prevalence of parent-adult child household arrangements. Percentages of shared living arrangements may relate either to the total number of American households, or even to the nonelderly population. Some, but not all, studies consider institutionalized elderly. Also, the proportion of older Americans living with adult offspring will be found to be higher when only elderly parents with at least one living child are studied. Accordingly, percentages of coresiding children among all nonelderly adults, and among those with living parents, should be determined.
2. Aquilino (1990) used the NSFH to study parent-adult child households. His sample of parents comprises parents who are not institutionalized and who have at least one living child over age 19. The parents are not necessarily aged 60 or older. He finds that prior to retirement age, 97 percent of coresident pairs lived in the parent\*s household. Among the parents who were over age 65 (n=179) and coresided, only one-quarter lived in the household of the child.
3. Scale economies in production are assumed to decrease with household size as will the relative importance of changes in the division of labor and potential earning effects.
4. But, as Becker (1981) points out, even if initially none of the family members has a comparative advantage in fulfilling specific household tasks, the division of labor is advantageous and will eventually result in idiosyncratic expertise.
5. Traditional models suggest income pooling in multi-person units, but more recently the proposition of collective, Pareto-efficient sharing-rules has gained ground. Collective decision models imply that consumption patterns depend not only on the level of income which is available but also on its composition, as for example on the amounts of labor earnings that are contributed to the household income by different household members (Bourguignon et al. 1993).
6. The PSID offers family level and individual level information on persons that are moving into or out of the household, which are not perfectly interchangeable. For a given year, the number of families reporting a move of a parent does not match the number of individuals who are identified as the head\*s parents and who have moved in or out recently. This is due to slight inconsistencies with respect to the year or month of the move. Moreover, several moves by one or different persons may have occurred in a single year. The number of elderly parents that joined or left their children\*s families therefore exceeds the count of adult children\*s households that are affected by such moves. The present analysis focuses on households and makes use of the family-level information.

7. As observations of the same family unit in different sets of years are treated as independent, the number of transitions exceeds the number of family units under consideration.
8. Due to the fact that two elderly couples were joining their children\*s family, the age of the sample\*s youngest mover is 57 and thus happens to drop below the cut-off.

**Table 1. Average Values of Dependent Variables: Change Period and Control Period**

<b>Variable</b>	<b>N</b>	<b>(1) Average: Change Period</b>	<b>(2) Average: Control Period</b>	<b>Difference: (1) - (2)</b>
<b>A. Households Gaining An Elderly Parent (n=94)</b>				
Weeks Worked, head	88	0.15	-2.08	2.23
Weeks Worked, wife	37	-1.05	-4.49	3.43
Weekly Hours, head	88	-1.03	-0.78	-0.25
Weekly Hours, wife	37	-0.57	-2.59	2.03
Weeks Missed, head	64	0.66	0.06	0.59
Weeks Missed, wife	37	0.00	-0.08	0.08
Hourly Earnings, head	94	-0.15	-0.78	0.11
Hourly Earnings, wife	94	0.19	-0.24	0.43
Housework Hours, head	40	3.23	-1.43	4.14
Housework Hours, wife	40	-1.40	-4.31	2.50
<b>B. Households Losing An Elderly Parent (n=61)</b>				
Weeks Worked, head	56	-2.89	-7.09	4.20
Weeks Worked, wife	28	6.00	-1.96	7.96
Weekly Hours, head	56	-1.61	-6.34	4.73
Weekly Hours, wife	28	4.64	-0.82	5.46
Weeks Missed, head	29	0.28	-0.55	0.83
Weeks Missed, wife	28	0.00	-0.11	0.11
Hourly Earnings, head	61	0.41	-1.40	0.16
Hourly Earnings, wife	61	0.90	-0.76	1.66
Housework Hours, head	19	0.26	-2.84	3.11
Housework Hours, wife	19	1.63	-2.47	4.11

**Table 2. Characteristics of Multigenerational Households at the Time Coresidence Begins or Ends**

<b>Family Characteristics</b>	<b>Elderly Parent Moves into Household (n=94)</b>	<b>Elderly Parent Moves Out of Household (n=61)</b>	<b>All (n=155)</b>
Average family size	3.2	3.6	3.3
Average number of adults	1.7	3.0	2.2
Median age of head	46	54	49
Median age of wife	41	46	42
Median age of parent	74	80	76
<b>Family Type (percent)</b>			
Single son/daughter	30.0	51.0	38.0
Couples (all)	43.0	31.0	38.0
Childless couples	10.0	18.0	13.0
Couples with children	33.0	10.0	25.0
Single-parent family	28.0	18.0	24.0
Male headed	59.0	49.0	55.0
White	49.0	53.0	50.0
<b>Head's (and Wife's) Taxable Income:</b>			
Median	\$13,805	\$9,435	\$11,644
Distribution by income category (percent)			
Less than \$10,000	37.0	52.0	43.0
\$10,000 to \$20,000	19.0	25.0	21.0
\$20,000 to \$30,000	16.0	12.0	14.0
\$30,000 to \$40,000	6.0	5.0	6.0
Greater than \$40,000	21.0	7.0	16.0

**Table 3. Changes in Heads' and Wives' Weekly Work Hours**  
(p-values in parentheses)

Variable	Change in Weekly Work Hours:					
	Heads (n=288)			Spouses (n=47)		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	-2.9444	14.0238	15.0888	-4.9583	-2.50498	-6.4213
Parent moves in	1.9104 (0.4071)	-1.1957 (0.6253)	-2.0653 (0.5025)	2.8583 (0.6449)	1.512244 (0.8342)	18.6234 (0.3259)
Parent moves out	1.3373 (0.6179)	3.0912 (0.2396)	5.0267 (0.1630)	14.9583 (0.0110)	14.08487 (0.0224)	12.3987 (0.0925)
Change in size		1.8487 (0.0237)	2.5398 (0.0107)		2.07305 (0.4344)	-0.6753 (0.8484)
White		-6.0983 (0.0021)	-5.8622 (0.0033)		-4.46569 (0.4222)	-3.7104 (0.5083)
Age of head		-0.2611 (0.0072)	-0.2747 (0.0053)			
Age of wife					0.0255 (0.8672)	0.0880 (0.5793)
Couples		-1.3779 (0.0237)	-1.8726 (0.3618)			
Moves in and change in size			-3.0145 (0.1167)			-10.4564 (0.5639)
Moves out and change in size			0.9821 (0.7361)			8.4645 (0.1436)
Moves in and grandchildren			1.7028 (0.1188)			-5.0679 (0.5037)
Moves out and grandchildren			-1.4465 (0.4853)			6.2170 (0.1541)
R <sup>2</sup>	0.0026	0.0878	0.1085	0.1409	0.1650	0.2631

**Table 4. Changes in Heads' and Spouses' Annual Weeks Worked**  
(p-values in parentheses)

Variable	Changes in Weeks Worked:					
	Heads (n=288)			Spouses (n=47)		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	-4.0278	12.5263	13.7846	-9.2083	-11.7455	-12.4684
Parent moves in	4.1755 (0.0771)	3.7051 (0.1464)	4.4717 (0.1666)	5.3083 (0.4533)	-1.0316 (0.8972)	6.2353 (0.7777)
Parent moves out	1.1349 (0.6789)	1.9633 (0.4723)	1.0726 (0.7761)	22.1314 (0.0013)	22.0957 (0.0017)	23.7012 (0.0077)
Change in size		-0.2279 (0.7877)	0.5285 (0.6102)		5.4280 (0.0687)	4.6196 (0.2683)
White		-4.5154 (0.0281)	-4.6065 (0.0269)		-1.6188 (0.7817)	-1.2025 (0.8545)
Age of head		-0.2729 (0.0070)	-0.2916 (0.0048)			
Age of wife					0.1326 (0.4324)	0.1374 (0.4611)
Couples		-3.1481 (0.1363)	-3.0775 (0.1533)			
Moves in*change in size			-2.30806 (0.2515)			-4.3905 (0.8359)
Moves out*change in size			-2.5004 (0.4134)			2.0166 (0.7631)
Moves in*grandchildren			0.0624 (0.9564)			-2.7069 (0.7600)
Moves out*grandchildren			-1.3216 (0.5430)			-0.8163 (0.8714)
R <sup>2</sup>	0.0110	0.0647	0.0715	0.02146	0.2810	0.2868

**Table 5. Changes in Heads' and Wives' Hourly Earnings**  
(p-values in parentheses)

Variable	Changes in Hourly Earnings					
	Heads (n=310)			Spouses (n=123)		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	-1.0253	2.8912	3.2254	-1.0969	-0.3627	-0.4887
Parent moves in	0.8713 (0.3425)	0.8073 (0.4193)	0.9319 (0.4511)	1.5514 (0.0898)	1.3718 (0.1886)	1.3728 (0.4042)
Parent moves out	1.4393 (0.1754)	1.5616 (0.1477)	1.4703 (0.3333)	2.9878 (0.0123)	3.0032 (0.0142)	2.4298 (0.1285)
Change in size		-0.0802 (0.8084)	-0.0612 (0.8823)		0.1625 (0.7084)	0.3286 (0.5435)
White		-0.6150 (0.4499)	-0.7456 (0.3653)		-1.0073 (0.2362)	-0.9066 (0.2900)
Age of head		-0.0660 (0.0987)	-0.0726 (0.0760)			
Age of wife					-0.0026 (0.9247)	0.0006 (0.9626)
Couples		-1.1231 (0.1812)	-0.9618 (0.2606)			
Moves in*change in size			0.1064 (0.8880)			-1.0729 (0.3823)
Moves out*change in size			-0.9357 (0.4535)			0.3189 (0.7855)
Moves in*grandchildren			-0.1765 (0.6907)			0.3438 (0.4264)
Moves out*grandchildren			-0.9978 (0.2229)			0.8526 (0.3335)
R <sup>2</sup>	0.0069	0.0239	0.0306	0.0585	0.0733	0.0969

**Table 6. Changes in Weeks of Work Missed by Heads and Wives Due to Other's Illness (p-values in parentheses)**

Variable	Changes in Missed Working Weeks Due to Other's Illness:					
	Heads (n=186)			Spouses (n=47)		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	-0.1290	-0.9784	-0.3296	-0.2500	-0.6404	-0.6464
Parent moves in	0.7853 (0.0441)	1.3096 (0.0023)	1.0428 (0.0356)	0.2500 (0.0910)	0.2617 (0.1271)	0.2042 (0.6610)
Parent moves out	0.4049 (0.4257)	0.2619 (0.6023)	0.2199 (0.7270)	0.2500 (0.0655)	0.2599 (0.0664)	0.2271 (0.2149)
Change in size		-0.3418 (0.0104)	0.0320 (0.8350)		0.0123 (0.8413)	0.0312 (0.7361)
White		-0.5543 (0.1208)	-0.4658 (0.1659)		0.0460 (0.7219)	0.0350 (0.8026)
Age of head		0.0194 (0.2537)	0.0124 (0.4449)		0.0113 (0.1214)	0.0125 (0.1376)
Age of wife					-0.0039 (0.4519)	0.0048 (0.4416)
Couples		-0.1100 (0.7625)	-0.3760 (0.2802)			
Moves in*change in size			-1.2241 (0.0001)			0.0530 (0.9055)
Moves out*change in size			-0.0195 (0.9680)			-0.0438 (0.7736)
Moves in*grandchildren			0.5980 (0.0095)			-0.0067 (0.9712)
Moves out*grandchildren			0.1938 (0.6656)			0.0157 (0.8827)
R <sup>2</sup>	0.0221	0.0857	0.2159	0.1015	0.1688	0.1722

**Table 7. Changes in Heads' and Wives' Weekly Hours Housework  
(p-values in parentheses)**

Variable	Change in Weekly Hours Housework:					
	Heads (n=120)			Spouses (n=48)		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	-1.8689	2.6364	4.9250	-4.1923	-2.6579	-3.1557
Parent moves in	5.0939 (0.0391)	7.0247 (0.0073)	5.5829 (0.0561)	2.3352 (0.5936)	2.3081 (0.6584)	-3.6831 (0.7060)
Parent moves out	2.1320 (0.5002)	2.9733 (0.3414)	5.6650 (0.1245)	8.0673 (0.1349)	8.0431 (0.1535)	-4.0974 (0.5743)
Change in size		-1.7096 (0.0184)	-1.1178 (0.1909)		0.1217 (0.1535)	-0.1369 (0.9465)
White		3.6943 (0.0965)	4.2900 (0.0405)		-0.3597 (0.9317)	-1.8414 (0.6567)
Age of head		-0.1654 (0.1318)	-0.1892 (0.0705)			
Age of wife					-0.0361 (0.7934)	-0.0026 (0.9848)
Couples		1.1555 (0.6234)	-1.3682 (0.5486)			
Moves in*change in size			-3.0500 (0.0379)			5.3532 (0.4321)
Moves out*change in size			7.3548 (0.0046)			3.1545 (0.4550)
Moves in*grandchildren			2.3162 (0.0752)			0.9470 (0.7426)
Moves out*grandchildren			3.9661 (0.1359)			10.9268 (0.0165)
R <sup>2</sup>	0.0359	0.1131	0.2531	0.0492	0.0519	0.1986

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Center for Policy Research  
Tim Smeeding, Director  
Richard V. Burkhauser, Associate Director for Aging Studies

Center for Demography and Economics of Aging  
Douglas A. Wolf, Director

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For more information contact: Martha Bonney ([mbonney@maxwell.syr.edu](mailto:mbonney@maxwell.syr.edu)).

Center for Policy Research  
426 Eggers Hall  
Syracuse University  
Syracuse, New York 13244

(315) 443 3114

FAX: (315) 443 1081

## AGING STUDIES PROGRAM PAPERS

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<b>Paper No.</b>	<b>Title</b>	<b>Author</b>	<b>Date</b>
1	The Division of Family Labor: Care for Elderly Parents	Wolf, Freedman, and Soldo	August 1995
2	Time? Money? Both? The Allocation of Resources to Older Parents	Couch, Daly, and Wolf	December 1995
3	Coresidence with an Older Mother: The Adult Child's Perspective	Soldo, Wolf, and Freedman	December 1995
4	Determinants and Consequences of Multigenerational Living Arrangements: The Case of Parent-Adult Child Coresidence	Schneider and Wolf	January 1997

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