

ABSTRACT

Title of thesis: ARE LEAVERS AND RETURNERS DIFFERENT?
DETERMINANTS OF CORESIDENCE AFTER
ADULT CHILDREN LEAVE HOME

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The paper examines the determinants of coresidence between parents and adult children. Using 34 waves of the Panel Study of Income Dynamics from 1968 to 2005 and event history models, I find that there is an unambiguous distinction between nest leavers and nest returners. Marital status and employment status of adult children are the most important time-dependent determinants of nest-returning, and older cohorts have a higher propensity to return home. Parents in good health support their children returning home when significant life events endanger the adult children's ability to live alone. Therefore I argue that coresidence is a rational support but not a competition between children's need and parent's need. Further cohort comparisons also show adult children's life events matter for older cohorts, but parents' marital disruption matters for younger cohorts.

ARE LEAVERS AND RETURNERS DIFFERENT?
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by

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Chapter 1

Introduction

It is generally believed that there has been a long-term decline in intergenerational coresidence in the United States. The percentage of elder parents (above 65) who lived with a child was 28% in 1962 and 18% in 1975 and 1984 (1992). Nevertheless, coresidence between elder parents and their adult children continued to be a common living arrangement throughout the twentieth century (Aquilino 1990). The proportion of young American adults who returned home for four months or more after having been away for at least that length of time actually increased from 22% to about 40% between the 1920s and the 1980s (Goldscheider and Goldscheider 1994). Together, these trends suggest that perhaps dependency is growing among young adults but declining among the elderly.

Empirical studies report mixed findings on the determinants of coresidence. In general, the marital status or marital transition of young adults, the health care needs of aging parents, and the economic needs of both aging parents and their adult children affect the likelihood of coresidence (Choi 2003). In a longitudinal study, Silverstein (1995) found that the declining health of older parents increased the temporal geographic proximity between parents and adult children; further, the declining health of those recently widowed had stronger effects on transitions to coresidence than among those who were married. Similarly, not only the absence

of a spouse of an elder parent, but also children's unmarried or divorced status, elevates the probability of coresidence (Lee and Dwyer 1996).

However, the costs and benefits of coresidence in terms of economic needs are not entirely clear. According to Ruggles (2007), there are two competing arguments that attempt to explain declining coresidence more generally. The first is the affluence hypothesis, which holds that rising incomes of the elderly reduced their dependence on children. The second is the autonomy hypothesis which holds that decline in intergenerational coresidence is linked to the rise of wage labor and mass education of the younger generation. Most relevant research focuses on a one-generation cross-sectional viewpoint, such as the characteristics of coresident and non-coresident families, why some adult children leave the nest early but some do not, and how individuals' characteristics affect either living with elder parents or adult children. However, the lack of simultaneous consideration of both parents and children fails to provide a comprehensive explanation.

Coresidence happens in three types: children who never leave home after adulthood, adult children who return to their parents' home, and parents who move to their adult child's home. This research focuses only on the later two types, because they represent dramatic transitions of living arrangements. To better understand why coresidence happens after adult children leave home, I employ a two-generation approach that helps not only to examine the competition between parents' economic needs and children's need, but also consider age-varying health and life events of both generations at the same time. Therefore, I use the Panel study of Income Dynamics (PSID) dataset to answer my research questions: after a move away from home,

what are the different characteristics of coresiding children-parent pairs from those who never coreside again? What are the impacts of various factors, and economic independence in particular, on the risk of shifting into coresidence for the cohorts born between 1953 and 1978? Do empirical data support the affluence hypothesis or the autonomy hypothesis?

Coresidence is not a static phenomenon. Various personal characteristics and life events may trigger its occurrence. Not only does coresidence involve a dynamic process of decision making, individual attributes also change for both children and parents. Few previous studies have used a relatively long-term longitudinal dataset to explore the determinants of coresidence of elder parents and their adult children, and none of them focus on all these three most important factors in the literature- economic independence, health, and significant life events- of both parents and adult children at the same time. Speare and Avery (1993) examined how the age, parents' health, and economic effect on coresidence for parents and adult children separately, and they found financial needs and need of care are important coresidential determinants for both unmarried children and unmarried parents. However, it is not clear that how the dynamic marital/employment disruption as well as the mutual interaction between parents and adult children influence their coresidence decision. The transition from extended family to nuclear family has long been a core concern for family demographers, and here I will explore the possible causes of coresidence decisions.

Chapter 2

Determinants of Coresidence

2.1 Patterns and Causes

There is limited research about returning to coresidence (Goldscheider et al. 1999; Ward and Spitze 2007; White 1994), and "nearly all [studies of returning home] focus either on single cohort or take an atemporal approach to multicohort data." (Goldscheider et al. 1999: 697) The age at leaving home declined dramatically between 1920s and the 1970s and has been partially reversed since 1990 based on Census and other survey (Goldscheider and Goldscheider 1994). Research indicates that those who leave for the reasons other than marriage are more likely to return home (Goldscheider 1997). The trend of returning home, unlike leaving home, appears to be steadily increasing and less sensitive to marital timing due to nonfamily living arrangements. Adult children who reach their eighteen at 1980 are a third more likely to return home than those reaching adulthood between 1966 and 1972 (Goldscheider 1997).

Consequently, most studies show a strong linkage between patterns of leaving home and returning home. Though the increase in returning home is related to the declining age of leaving home and the increases in leaving home before marriage, the factors explaining leaving home had few effects on returning home (Goldscheider et al. 1999). Most studies about the determinants of coresidence only focus

on static living arrangements of coresidence and non-coresidence; few thoroughly examine whether such factors affect leaving home or returning home in particular. Avery et al (1992) found parental income deters the youngest adults' nest leaving via marriage but has limited effect on unmarried children's coresidence. Will these explanatory factors similarly affect returning home? A further review of these determinants follows.

2.2 Economic Independence

Troll (1971) pointed out the continuation of the strong bond in extended families, where economic interdependence and mutual aid should be considered when measuring the kinship structure. Economic independence plays a critical role on young adults' nest-leaving and reshapes family structure. If independence is not attainable, adult children will stay at, or move back to, the nest if available. Therefore, living arrangements help buffer the effects of labor market disadvantages, and "this mechanism serves as a compensatory strategy for supplementing the temporarily or chronically low earnings of minority." (Angel and Tienda 1982:1630)

Some scholars discuss costs and benefits arguments to enrich the economic independence hypothesis. From a micro-structural perspective, White (1994) applied exchange theory to the individuals' costs and benefits assessments, and such economic considerations dominate in most empirical studies. DaVanzo and Chan (1994) mention that financial support, domestic service, and the minimization of the costs of living are typical benefits of coresidence in eastern societies. For western

societies, however, higher income enables people to buy out their privacy and independence, as well as to purchase services, and thus losing one's own freedom might be the major cost of coresidence. Thus, parental financial support serves as a key determinant of home-leaving and home returning home (Mitchell, Wister and Gee 2004). Ermisch and Salvo (1997) report similar findings that the volume and price of labor market, local housing market, and young adults' income as well as parental income significantly affect the manner and timing of young adults' departures.

Since both younger adults and elder parents have similar economic concerns about their living arrangements, which has more influence on adult children's returning to nest? Following the traditional debate between elder parents' perspectives and adult children's perspectives (see Speare and Avery (1993)), Ruggles (2007) argued against the affluence hypothesis, that the living arrangements of the aged resulted only from increases in their disposable resources, social security income in particular, which enabled increasing numbers of elders to afford independent living. With Census historical data, he demonstrates that rather than residing in intergenerational families, the poor were the group most likely to live alone, and elders with chronic illnesses and disabilities were significantly less likely to reside with children than were healthier elderly people (Ruggles 2003).

If elders' economic independence could not explain the parent-child coresidence, the opposite end to affluence hypothesis might be a better explanation: the needs of adult children explain intergenerational coresidence better than the needs of elder adults. Aquilino (1990) found parental dependency is not the major predictor of coresidence, and there is no relationship between parental income and coresi-

dence. Therefore he further suggested that coresidential living arrangements met the economic need of children more than of parents' declining health and resulting need for care. Similarly, Ward et al. (1992) found that health, marital status, and employment status of parents have little bearing on coresidence in either middle or later life, and children's needs and circumstances are the more important predictors of coresidence.

These viewpoints of the dominant effects of adult children on coresidence led Ruggles to extend upon the economic development hypothesis, which I term autonomy hypothesis to clarify its emphasis on children's need and independence. Ruggles (2007) argued that the significant historical decline of coresidence can be traced to the changing circumstances of the younger generation. Although many studies estimated that the rising income of the aged account for between 15 to 50 percent of coresidence arrangements, a few analyses found the increasing income of the aged does not raise the probability of living alone (Ruggles 2007). Indeed Ruggles provided some indirect estimates from Census historical data and found the effect of income on coresidence for the adult children is far more significant than that of the elder generation, but he admitted that the lack of longitudinal data on the incomes of noncoresident children of the aged make the direct test of the autonomy hypothesis challenging. Even if the income of both parents and children are available, it is not persuasive to use cross-sectional IPUMS data to estimate dynamic living arrangements and the coresidence decision.

Therefore, the longitudinal PSID dataset that I use in this analysis provides an excellent way to explore age-varying personal traits and provides stronger evi-

dence to test the affluent hypothesis and the autonomy hypothesis, i.e. whether the needs of children will be more important than needs of their parents in determining coresidence. Furthermore, the different cohorts might experience different social environments and norms relating to long-term coresidence decline, thus a cohort identifier would be useful for distinguishing cohort effects from age effects.

2.3 Cohort Effect

The basic assumption of both affluence and autonomy hypothesis is that different cohorts, whether for adult children or elder parents, encounter different industrial structures and employment opportunities, thus yielding different rational choices based on an individual's socioeconomic status. From the long-term point of view, there is a clear tendency of individuals seeking independent living arrangements. Nevertheless, different cohorts may have specific coresidence attitudes that conform to the changing social norms. White (1994) introduced a life course perspective where family life cycle models portray individuals' experiences with age-related transitions, and changes in the social norms and meaning of adulthood substantially shape individuals' decisions. Alwin (1996) argued that the General Social Survey (GSS) data show a surprisingly systematic increase in attitudinal support for intergenerational coresidence from 1973 to 1991, though the behavioral change of living arrangements is toward living alone. After decomposing these trends into inter-cohort and intra-cohort components, Alwin found the most significant predictor of coresidence beliefs is an individual's birth year. Although the ambiguity of

GSS question design and the potential for social conformity might make coresidence belief differ from real behavior, Alwin (1996) suggested that the youngest cohorts were the most favorably inclined toward coresidence, and the reason might be that they are expecting their parents' support.

If the affluence hypothesis or the autonomy hypothesis holds, the observed probability of nonresidence might increase over the succeeding cohorts if recent cohorts become more economically independent. However, others found contradictory evidence when studying cohort effects on coresidence. Weinick (1995) elaborates Easterlin's cohort size hypothesis to explain the relative disadvantage of those younger adults born in large cohorts. In addition, the prevalence of delayed marriage, divorce, and higher education changes the composition of the population at risk. Weinick (1995) concluded that recent cohorts of young women are more likely to leave home to attend school and less likely to leave home to marry, therefore a larger proportion of the population is at higher risk of returning to nest.

In short, if researchers only apply marital and educational indicators on coresidence, the intra-cohort effects will dominate the results and obscure inter-cohort effects. The age effects as well as the cohort effects should be simultaneously examined in a longitudinal event history study because the risk of coresidence might increase substantially in one cohort but stabilize in another.

Theoretically, the affluence hypothesis (parents' needs matter) and the autonomy hypothesis (children's needs matter) might not be limited to economic independence but could be extended to the parents' or children's health condition, marital status, and employment status. For simplicity, however, I separate health conditions

and life events as a set of control variables and further explore their plausibility as determinants of coresidence.

2.4 Health and Need for Care

Elder parents often suffer declines in physical health and increases in disability, and the necessity therefore emerges to alter their living arrangement and care-giving environment. Silverstein (1995) describes late-life migration patterns of older people when their health and social characteristics influence changes in how far they live from their children. In particular, among those parent-child pairs who had lived closer, declining health and widowhood collectively increased both the non-coresident proximity and the likelihood of transition to coresidence. There seems to be agreement that older parents who are both disabled and widowed are the most likely to live with an adult child, and non-resident parents tend to live close to children (Crimmins and Ingegneri 1990). However, some contradictory scenarios are found in non-western societies where the health effect varies by marital status: in Malaysia married seniors are more likely to coreside with adult children when one or both of the parents are in poor health, but among unmarried seniors health and coresidence have no significant relationship (DaVanzo and Chan 1994).

Furthermore, some scholars argue that there is a selection effect of health in elder parents who live alone. Davis and Moritz (1997) found no disadvantage in health or mortality for middle-aged or older women living alone. The possible mechanism is that individuals who are able to live alone are generally healthier than

those in nursing home or those living with adult children. Therefore, elder parents in poor health pull adult children to live close by or to live together, and elder parents in good health remain independent from living with adult children. A family might adjust their living arrangement to serve the changing needs of its older members.

2.5 Life Events

There are mixed, sometimes contradictory, arguments about the determinants of coresidence in terms of economic and health factors. However, life events, especially transitions in marital and unemployed status, are unambiguously and strongly related to coresidence. Marital status may be the most dominant factor that affects coresidence according to various empirical studies. From the children's standpoint, Ward et al (1992) found that among parents age 65 and older, living with own children was significantly associated with having divorced, separated or never married children. Aquilino (1990) also emphasized that children's marital status is the strongest predictor of coresidence among various socioeconomic and family composition indicators, and mainly parents with unmarried adult children have significant risk of coresiding with an adult child.

From the parents' standpoint, findings are mixed. Silverstein (1995) reports that widowed and unmarried parents increase the proximity with children and probability of coresidence while their functional health problems and need of non-institutional care are increasing. To the contrary, Aquilino (1990) found that parents' marital dissolution and remarriage are negatively related to the likelihood of

coresidence, i.e. parents who had lost their spouses whether through widowhood or marital disruption were less likely to have a coresident child than the currently married parents (Aquilino 1990). The positive relationship seems apparent between coresidence and children's marital disruption as well as children's nonmarriage, but parents' marital dissolution might have negative direct effect and positive indirect effect on coresiding with adult children.

At the aggregate level, the recent prevalence of marital disruption and marriage delay further increase the population at risk and produce the phenomenon of increasing coresidence. In fact, scholars suggest that the increase in young adults' coresidence was completely due to changes in the marital status distribution in different age categories (Messineo and Wojtkiewicz 2004). The tendency of living with parents would have decreased between 1960 and 1990 if marital status of young adults had not changed. Divorced, separated, and never married people are more likely to coreside than the married due to lack of resources, and the increasing proportion of coresidence was due to rising occurrence of divorce, separation, and nonmarriage. The real propensity of coresidence among those unmarried adults is actually declining (Messineo and Wojtkiewicz 2004).

Being not employed has a similar effect as marital disruption. Temporarily lack of income might lead to adult children's residential arrangement to compensate their short-term losses. Though mentioned less in literature, children's employment is also as an important predictor as their marital status (Lee and Dwyer 1996) and in general has stronger effect than parents' employment on coresidence (Ward, Logan and Spitze 1992).

2.6 Summary

Elder (1996) conceptualized coresidence in terms of life course and social exchange theories. He considered coresidence as a pathway for a family life course transition determined by parents' declining health and need for care, parents' and children' economic needs, and family-role as well as life event transitions. The cumulative trajectories of economic needs and resources and the cultural expectations or norms of a family stimulate the decision to coreside. In sum, I follow Elder's conceptualization that economic independence, cohort effects, health and need for care, and life events all affect the coresidence of elder parents with their children. I will first investigate the similarity as well as different characteristics of parents and adult children between permanent nest-leaving families (adult children who moved away from parents and never move back) and nest-returning families (those who moved back after moving out). Second, the role of long-term life-cycle transitions, and marital status in particular, will be evaluated. Finally, event history models will be built to test both the affluence hypothesis and the autonomy hypothesis with the longitudinal PSID dataset.

Chapter 3

Method

3.1 Data

The data of coresidence history and personal characteristics came from the Panel Study of Income Dynamics (PSID).¹ Begun in 1968, the PSID has a representative sample of almost 18,000 individuals and 4,800 family units interviewed every year until 1997, and every other year from 1999 to 2005, even after they left their 1968 households. Since its emphasis is on dynamic aspects of economic and demographic behaviors, the yearly transitions of family composition, coresidence status, and individual economic, health, and marital status of both parents and children can be examined simultaneously. This dataset allows us to catch the immediate and long-term response of coresidence as well as its plausible determinants during individuals' life cycles.

3.2 Sample & Design

The PSID consisted of two independent samples in year 1968, one is a cross-sectional national sample consisted of members in 2,930 families, and the other is a national sample of members in 1,872 low-income families. Among these 4,802 sample families, the 17,845 individuals, including parents and children at each family, are

¹Please refer to PSID website: <http://psidonline.isr.umich.edu/Guide/Overview.html>

called Original Sample Members (OSM). The benefits of using OSMs and their offsprings are these samples have the most complete annual survey record from 1968 to 2005, and the oversampling of low-income families allows us to investigate a large subsample of African Americans.

According to the available data from 1968 to 2005, three groups could be categorized by their nest-leaving and nest-returning behaviors. The first group is the stayer who never leaves his/her father's or mother's home, the second is the permanent nest-leaver who leaves parents' home after 1968 and never returns before 2005, and the third is the nest-returner who leaves parent's home after 1968 and then returns. Substantively, the stayers have very different characteristics from the other groups, because many of them are never-married or in poor health, thus I exclude the stayer from my focus groups. Ward and Spitze (1996) suggest that adult children who return home differ in several respects from those who have remained in the parental household. There is also a methodological reason for excluding stayers from the analyses: their individual records might not be complete because these adult children are usually not the head of family, of which PSID has more detailed data. The lack of data makes it difficult to test the affluence and autonomy hypotheses.

Those who move out or move in before 1968 are not included in the samples for similar reasons: because of the lack of information on their characteristics during that time, and the lack of leaving year and records between leaving and returning. Consequently, the permanent nest-leaver (simplified as leaver in this thesis) and nest-returner (simplified as returner) are the two focus groups best describing the

characteristics of non-coresident and coresident people, and this design allows me to focus more on why they are returning home and less on why they leave their nest.

In short, the analysis sample includes the returners who have an event (returning home) and the leavers who are right-censored (no coresidence events are observed) during the survey. The annual or bi-annual measures of returners and leavers are included in the models from their first time away from home after age eighteen until when the adult child returned or is censored.² This research design ensures the availability of data from both parents' and children's families and controls the availability of either adult children or elder parents. Measures are taken only when both generations stay alive. I also exclude the repeated events of nest-returners, because the very first event may well portray individuals' characteristics and coresidential history over time.

Of the 54,015 original sample members and their offspring, there are 47,575 individuals who are adult-child stayers, parents themselves who never leave their own home, those who leave home before age eighteen, and those who are born before 1953 or after 1979. Children who leave from parents' home before age eighteen often do so in response to some significant life events, and their moving histories as well as the characteristics of their new families might not fit my research focus. Those who born before 1953 are older respondents and might lack their coresidential history by 1968, and those born after 1979 are almost too young to leave or return home. For the other 6,440 individuals who ever left, there are 6,005 (93.2%) nest

²If a child goes away to college, the PSID keeps him or her in the same family unit as his or her parents', and is therefore not considered a leaver.

leavers, who average 13.4 years away from the home (until censored), and 435 (6.8%) nest returners, who were, on average, away from the home for 8.5 years until they returned home. ³

Ward and Spitze (2007) used two waves of data from the National Survey of Families and Households to investigate the relationship between coresidence and parents' reports of the quality of parent-child and marital relation. Since their various focal variables and age criterion are necessary for both parents and adult children, the available samples consisted only 437 non-coresident and 328 coresident pairs. Studies of returning home face challenge from sparse samples and survey data collection, therefore reader should be cautious when explaining and comparing results between models based on different sample sizes.

³There are 298 returning children and 123 returning parents in the returner group. This research will not perform separate analyses on these groups due to: 1) theoretically, parents move into children's home does not necessary mean parents need support, and vice versa. Both the characteristics of children and parents might contribute to either children's returning home or parents returning home, therefore they could be considered the returner group in contrast to leaver group; and 2) empirically, the best way to distinguish between returning children and returning parents is by their relationship to the householder or who is the owner/lease holder of their house or apartment. Sometimes none of them are the householder/ owner / lease holder, and in my case there are 14 leavers in this situation. In short, the returner group should be referred more on their coresidence event, rather than who is returning, though through this thesis the returner always refers to the adult children of the returner group.

3.3 Variables

Duration. Although the data before nest-leaving and after nest-returning are available, I only observe the years after moving out and remaining away. The PSID is designed based on the family unit, and by exploring the duration away from home I am able to observe both the characteristics of the parent's family and the children's. Adult children and their wives are heads and spouses in children's families, and elder fathers and elder mothers are heads and spouses in parents' families. The duration away from home is the dependent variable when estimating the hazard rate of coresidence events. The duration of living away is defined by the period between first moving-out and first moving-back for returners, or between first moving-out and last available survey year for leavers.

Coresidence. There are many ways to define the coresidence status in the PSID. Instead of using the moving in/out variable at the individual level, or using the relation of movers to head at the family level, the family identifier might be the most intuitive way to identify if an individual lives with his or her parent(s). This avoids complexity of relationship to head and who is the head. As described in the sample & design section, leavers are those who lived with their parents but live in different family later (moved out) and never return, at least in the available data; on the other side, returners are those who return again and have the same family identifier as their parents/children. Consequently, coresidence is an event for all returners, while leavers are censored cases where the occurrence of coresidence is not observed. When returners return home, 114 (26%) of them live with both

parents, 51 (12%) live with only their father, and 270 (62%) live with only their mother.

Economic Independence. The ratio of income to need standards (RIN) is the major indicator of economic independence in this analysis. In general, income is the most common indicator of economic independence. Family income in the PSID includes taxable income and total transfer of head, wife, and other family members, and Social Security income is included in later waves. However, income alone might not well represent individual's economic independence, because whether total family income meets a family's needs depends on the size and composition of each family. On average people in larger families have higher total family income, but they also consume more food as well as other necessities. Even when the family size is the same, the age distribution of family members influences the basic need of the total family.

Consequently, the idea of need standards and poverty thresholds are implemented in the PSID and are widely-used today. In the PSID the need standard is Orshansky's USDA annual family need standards (low-cost version), and the ratio of income to need standard reflects adjustments for income to meet the scale of family size and the composition of family members. Speare and Avery (1993) also used the similar measures to avoid the misleading because elder parents might either live alone, with only their spouse, or as a part of large family. When calculating annual RIN, annual income and the annual needs standard are not adjusted with CPI-U because they use the same base year.

Cohort. Since leavers and returners are relatively young in the PSID samples,

the period to divide each cohort might not be long enough or be historically meaningful. I divide the 6440 samples into three categories based on their birth year. There are 2566 (40%) individuals born between 1953 and 1960, 2010 (31 %) born between 1961 and 1968, and 1864 (29 %) born between 1969 and 1978.

Health. Unlike coresidence and income indicators which are available almost every year, the health related questions are relatively scarce in the PSID. Though the Activities of Daily Living (ADLs) and the Instrumental Activities of Daily Living (IADLs) might be better to measure the status of elder's inability and dysfunction as well as their need of care, they are only available in nine waves and limited to head/spouse of family above age 55. I therefore use self-administered health status, available from 1984 to 2005 for eighteen waves, to measure individuals' and parents' general health status. The general health status is a five-point scale ranging from excellent(5), very good(4), good(3), fair(2) to poor(1).

Life Events. Marital status and employment status are two major life-course indicators in this study. The marital status is coded by three dummy variables: 1) married or permanently cohabiting, 2) single or never married, and 3) widowed, divorced, or separated. If the marriage dynamic contributes to coresidence, I might observe different tendencies between the three categories. Similarly, the employment status is simplified to two categories: those who are working now, only temporarily laid off, sick leave, or maternity leave are coded one, and those who are retired, unemployed, permanently disabled, keeping house, or students are coded zero. Annual employment status refers to head of family rather than individuals due to the lack of individuals' long-term data. The employment status of the head might better

exhibit how a significant life event may influence individual’s coresidence decision, especially when wife is employed but the husband/ head is not. In short, the marital status and employment status reflect the general influence of marriage and employment on individual’s coresidence decision making.

3.4 Analytic Strategy

Basic descriptive tables and life-cycle graphs will show the distinctive characteristics between leavers and returners. For the event history analysis, I use non-proportional hazards models, an extension of Cox regression models, to estimate the effects of time-dependent covariates on coresidence, and the model is:

$$\log H_i(t) = \alpha(t) + \mathbf{B}_j \mathbf{X}_{ij} + \mathbf{\Gamma}_k \mathbf{Y}_{ik}(t)$$

For each individual i , $H_i(t)$ is the hazard function of coresidence at time, and $\alpha(t)$ is the log of baseline hazard function for an individual whose covariates all equal to zero. There are j time-independent variables \mathbf{X}_{ij} , such as cohort, gender, race, and highest education, and k time-dependent variables $\mathbf{Y}_{ik}(t)$, such as ratio of income to need (RIN), health, marital status, and employment status; \mathbf{B}_j and $\mathbf{\Gamma}_k$ are the estimated parameters respectively.

Since my main focus is on individual time-dependent characteristics, the two advantages of Cox regression model are 1) the assumption of probability distribution is not required, and 2) the relative ease of incorporating time-dependent covariates (Allison 1995). The proportional hazards model assumes that the hazard for any

individual is a fixed proportion of the hazard for any other individual, and the ratio of their baseline hazard function would be a constant. However, the ratio of coresidence hazards should not be constant over time, and the inclusion of time-independent covariates will change at different rates for different individuals (Allison 1995). Therefore it is unrealistic to assume individuals' hazards are proportional. Using SAS Proc Phreg procedure, the partial likelihood computation would be implemented to estimate the non-proportional hazards model with time-dependent covariates.

Chapter 4

Results

4.1 Descriptive Statistics

[Table 1 about here.]

Table 1 shows basic descriptive statistics of nest leavers and nest returners. For time-independent variables between leavers and returners, the cohort composition is similar. Returners are more likely to be males (54%) than leavers (48%), are less likely to be white (36% v.s. 57%), have fewer years of education for both children (12.3 yrs v.s. 13 yrs) and parents (10.6 yrs v.s. 11.4 yrs).

For the rather complicated time-dependent variables, age decomposition provides preliminary exploration of individuals' life courses. Note that most individuals, whether in leaver or returner category, are observed during different parts of their life. Some have data from age 20 to age 50, and others have data from age 30 to age 60. The number of sample members in older category is fewer than in younger category since leavers and returners are relatively young. Consequently, the trend from age 10 to age 50 is a cross-sectional description of each variable, not a longitudinal portrait of individual's life course.

In general, median family ratio of income to need (RIN) shows an increasing pattern with age, and adult children have higher RIN than their parents⁴ after age

⁴The inclusion of both father and mother makes analyzing and graphing extremely difficult,

30. Returners have lower RINs than leavers in all age groups for both individuals and parents. Additional analysis shows that leavers tend to have better economic opportunities (higher income) and smaller family sizes (lower need standard), therefore the higher economic independence of both adult children and elder parents might be relevant to leavers' non-coresident living arrangement.

With regards to self-administered health, returners have worse health than leavers in all age groups, and the gap is larger for parents than adult children. Besides, it seems that children in the returner group suffer from more health problems than those in leaver group when getting old, but the declining health seems similar for parents in both groups. This suggests the worsening level of parents' and children's health might be a concern among returner families.

For the life events, there are large differences in marital status between leavers and returners. Leavers are more often married than returners for both adult children and parents in all age categories, and I observed an accelerating marriage decline in older age groups for parents in returner families. Comparably, returners are more often single, widowed, divorced, separated than leavers, especially for elder parents, and this suggests that marital status might be relevant to the coresidence decision when both parents and children are getting older. Similarly, leavers have a higher employment rate than returners for adult children and parents in all age categories,

therefore I define the parent as either father or mother by :1) if a returner returns to live with both parents or with only his father, the parent is father, 2) if a returner returns to live only with mother, the parent is mother, 3) if a leaver has his father when the leaver is leaving, the parent is father, and 4) if a leaver has only his mother when the leaver is leaving, the parent is mother.

and the gap between leavers and returners is higher in adult children's families than in parents' families. Note that those who are working now, only temporarily laid off, on sick leave, or on maternity leave are coded as employed, and those who are retired, unemployed, permanently disabled, keeping house, or students are coded as not employed.

By transferring these individual attributes from survey year to interviewing age, a more detailed life course portrait could be drawn, and the dynamic process of income, health, marriage, and employment transition can be better linked to the decision making of coresidence. Now I will show several portraits about how various time-dependent variables change with age between leavers and returners for both adult children and their parents.

4.2 Descriptive Life-cycle Graphs

Here I extend the context in Table 1 and demonstrate the life-cycle difference between leavers and returners, though they are still cross-sectional portraits by age. The sample in the following graph sets consists of 6005 leavers and 435 returners, and the X axes are the age of adult children. If data of individual's level is not available, such as Figure 1 and Figure 7, the characteristics of family head are shown. Note that these curves do not limit to the time between their first leaving and their first returning (or being censored) but are a general portrait of all available data for target groups.

[Figure 1 about here.]

For ratio of family income to need (RIN) in Figure 1, adult children have the same RIN as their parents do when they live together. After moving out, adult-child in leaver's family has a slower increase in the RIN than their parents do but soon catch up with them and achieve their highest lifetime family-size adjusted income around age 50. Differences between leavers and returners are apparent. For both parents and adult children, leavers have higher RIN than returners through individuals' lives, and leavers have higher potential in accumulating their RIN. The smooth plateau between age 30 and age 40 implies stagnant RIN growth that might exist in returners' families. On the other hand, the difference of median RIN between individuals and parents emerge in the early age (around 20) for leavers but in later age (around 30) for returners. In short, returners have much more disadvantage than leavers after they leave home, and the upward income mobility between individual and parents is much lower for returners than for leavers. Unlike leavers' parents, returners' parents always have lower RIN in most of their life.

[Figure 2 about here.]

For self-reported health in Figure 2, though health tends to decline with age in all subgroups, both parents and adult children report better health in leavers' families than returners'. In particular, returners' parents generally suffer even worse health conditions than leavers' parents, and this may well explain why returners go back to their parents' nest. These parents might need an extra family support and care from their coresiding adult children.

[Figure 3 about here.]

[Figure 4 about here.]

Marital status represents the major difference between leavers and returners, and the difference suggests a strong association with coresidence decision making. Figure 3 indicates that the highest percentage of returners who are married (31%) in a lifetime is only somewhat more than half of that of leavers (50%), and these returners face higher marital instability after age 40. Returners' parents also have a much steeper declining marriage rate than leavers' parents, and we even observe a cross-over when returners pass forty. The reason could be observed from life-cycle divorce (including separated and widowed) rate in Figure 4. Both parents and adult children in returners' families encounter an astounding increase in their divorced/separated/widowed rates, which are also much higher than leavers' in terms of magnitude and elevation.

[Figure 5 about here.]

Meanwhile, in Figure 5 the patterns of percentage remaining single are generally similar between leavers and returners. Due to the exclusion of those who are single and never leave home, leavers show almost the same pattern as returners. Note there are still some unmarried parents in both leaver's and returner's families, and the percentage is higher for returners' parents (about 12%) than leavers' parents (about 4%).

[Figure 6 about here.]

For both shapes and scale of employment status in Figure 6, leavers and returners do not show great differences, especially as compared with differences in

marital status patterns. Leavers still have a higher employment rate than returners in a lifetime for both parents and children. There is 10% difference on average between leavers' families and returners' for parents, but the gap for adult children is much larger. Returners still face higher instability of being unemployed, and this suggests adult children's employment might play a more important role than parent's employment on coresidence.

[Figure 7 about here.]

After examining several hypothetical determinants of coresidence, in Figure 7 I illustrate the proportion of different coresidence types in both leavers' family and returners'. In previous parts I combined living with both parents, living with father only, and living with mother only as the same, but now I distinguish between these different coresidence types. Leavers are more likely to live with both parents than with only mother before age 30, but for returners the crossing age is 20. This reflects that living with single-mom is common for adult children in returners' families, and the pattern corresponds to previous graphs of marital status.

Among the 435 returners, there are 114 (26%) individuals who return to a family with both parents, 51 (12%) to a father-only family and 270 (62%) to a mother-only family. The rate of living alone increases dramatically from age 18 to almost its maximum at age 30, 95% for leavers' families and 70% for returners'. Besides, returners tend to return to mother-only family after age 30, and the proportion keeps rising up to 35% in age 50, while the proportion of living with father-only family in both leavers' families and returners' is relatively low and stable. The

longevity of female parents serves to heighten the probability of coresidence, not only because they have longer life span than their male counterparts, but also because they may need more support from adult children once widowed. Therefore, the control in gender of returners' parent is necessary in further analyses.

In sum, each life-cycle portrait shows vivid patterns of how these possible time-dependent determinants, including RIN, health, marriage, employment, might influence the coresidence decisions and predict whether one is a leaver or returner. Next, I explore the possible effects of time-independent determinants on coresidence. There are two relevant methods to perform the analysis: one is to estimate the hazard function for different categories of each variable, such as female and female, or high education and low education; the other is to compare the average duration before events happen, which here refers to the duration of leaving home for returners and for leavers (censored duration). The former method will be demonstrated by the final event history model, and now the ANOVA group comparisons of duration means will be illustrated.

4.3 ANOVA Group Comparisons

[Table 2 about here.]

Table 2 shows the average duration away from home in each category for leavers and returners. As in Table 1, leavers have longer durations away from home than returners in all categories, and the general patterns by different variables are similar for leavers and for returners. For both leavers and returners, males and the

African American have shorter durations away from home than their counterparts, and the main reason why younger cohorts also have shorter duration is just they do not reach the age of returning home yet. Returners' durations of leaving do not differ by their educational level, but leavers who have higher education tend to have longer durations. Normally people with higher education spend longer time on studies and leave home later than those below high school, but the opposite result suggests some leavers move out before they earn a high school diploma or college degree. In contrast, a possible explanation of no difference by returners' education is that higher educated people leave home late, but they also return home late because they might have better economic resources to forestall early returning. Finally family composition influences returning years: returners have longer durations when returning to female-headed families than returning to a family with both parents.

Since the time-independent variables as well as the time-dependent variables affect coresidence in various ways, the estimation of parameters by including these determinants simultaneously is necessary to obtain their true effects. However, traditional multivariate analysis fails to incorporate the events, durations, censored cases, and multiple time-dependent covariates into a single model, therefore a full explanatory model is only possible when employing the event history method.

4.4 Event History Model

[Table 3 about here.]

Table 1 and its sets of graphs show cross-sectional descriptions of leavers' and returners' characteristics in terms of adult children's age. Nevertheless, how these characteristics play a determining role in predicting coresidence is still not clear. Table 3 demonstrates the parameter estimates (Beta) and hazard ratio (exponentiated Beta) of various sets of explanatory variables. Event history models provide rich information about how the risk of coresidence might change according to different explanatory characteristics. Model 1 to Model 4 are restricted models to estimate effects of major coresidence determinants: economic independence, self-administered health, life events, and adult children's age and cohort. Model 5 and Model 7 are estimated only for Cohort II (born in 1953-1960) and Cohort III (born in 1961-1968) to test the robustness of unavailable health data, since health questions were administered beginning in 1984, and younger cohorts will have more health history through their lives. Model 6 and Model 8 are another set of comparison for all three cohorts. Model 7 and Model 8 are also full models designed to estimate the complex effects when including all determinants simultaneously. Among all restricted models and full models, gender, race, and the education of both parents and children are controlled to gauge the net effects of the variables of interest.

Model 1 shows how ratio of income to need (RIN) influences risk of coresidence. An additional ten times increase in RIN of adult-child's family reduces the coresidence risk by 47%, but parent's RIN does not affect the risk. These results are consistent with the predictions of the autonomy hypothesis, rather than the affluence hypothesis, when using RIN solely. Additional analyses show that when using family income instead, every ten thousand dollars increase in adult-child's income

will decrease the risk of coresidence by 25%. This is comparable to Rosenzweig and Wolpin's (1993:107) simulation that "a one-period \$5000 increase in the offspring's earnings reduce the probability of coresiding with a parent in that period by 13.9%," though the hazard rate I use and the probability in their article are not exactly the same.

However, using only family income fails to control the family needs and family size, especially for the highly different composition between adult children's family and parents'. The decrease in income might accompany with the further decrease in adjusted threshold, therefore RIN might even increase. Therefore, RIN seems an appropriate remedy to measure standard need (poverty threshold), which changes according to family size and family composition. Further conclusions will be drawn later in the full models.

Model 2 shows how self-administered health status influences the risk of coresidence. Both the adult children's and parents' health have positive relationship with coresidence risks: every one score higher in adult children's health increases the risk by 19%, and for parent's health it is 31% increase. The positive relationship is against the theory that declining health increases likelihood of coresidence. One possible explanation is that using only health might exclude other informative variables, and that all controlled variables have significant effects suggests a possible interaction between health and other determinants, such as life events. Additional analyses are performed using both health and all life-events, and the result is very similar to the final full model.

Model 3 shows some most influential determinants on the risk of coresidence. Those families with single adult children away from home are 4.5 times more likely to coreside than those with married adult children, holding other factors constant, and those families with divorced adult children away from home are 2.6 times more likely than those with married adult children. Those families with a never-married parent are 1.65 times more likely to coreside than those with married parents, but those families with divorced parents are 26% less likely to coreside than those with married adult-child. These findings suggest that single adult children, divorced adult children and unmarried parents tend to coreside after nest leaving, but divorced parents seems to have a weak positive tendency not to coreside.

For employment status in Model 3, employed adult children are almost half as likely to return to the parent's nest than non-employed children, and this finding also supports autonomy hypothesis that not only do life events matter, but also individuals' economic independence contributes to the decision to not coreside. Nevertheless, parents who are employed are 64% more likely to have their children return home than unemployed parents. This positive effect shows parent's employment acts to attract adult children, rather than buying out the parents' freedom. A further extended explanation is that children need support when unemployed, and employed parents could provide financial and residential support.

Model 4 shows older cohorts are more likely to return to the nest, controlling for age. The cohort born between 1953 and 1960 is 2.5 times more likely to return home than those born between 1969 and 1978, and the positive effect decays for the younger cohort. This finding contradicts some research (e.g. Goldscheider et

al. 1999) that younger cohorts are more likely to return home. Additional analysis shows that without controlling for age, Model 4 and final model also display the same findings, and the design of longitudinal data might also demonstrate different scenario from those cross-sectional research. For the same cohort, younger people are more likely to return, especially for those between age 18 to age 25. The reasons might include their temporary transitions in marriage and employment status, or other unstable economic and health conditions. Since different dynamic characteristics of children and parents have specific impacts on coresidence when used alone, to obtain the most comprehensive explanations, using full models which include all hypothetical determinants is necessary to answer my research questions.

Before heading to final model, I use Model 5, Model 6 and Model 7 to test the robustness of available health data only from 1984 to 2005. Model 5 is a nested model from Model 7, and their significant levels are almost the same. At least for cohort II and Cohort III (those born between 1961 and 1978) samples, the model is robust when using limited health data. Model 6 is also a nested model from Model 8 (full model), and I find their significant levels are also very similar when using the full samples. These comparisons suggest that limited health data has only a small influence on the final model, and the attrition of sample size seems acceptable. Additional analysis (not shown) shows almost the same significant levels for Model 2, Model 7, and Model 8 when imputing unavailable individual's health status with their first available data. In short, the robustness of including limited health data seems appropriate to the final full model.

However, difference appears comparing Model 5 to Model 6. When excluding Cohort I, estimates of adult children's marital status, adult children's employment, and gender of adult children become insignificant. The same pattern happens when comparing Model 7 to Model 8. This suggests the characteristics of adult children become more influential for older cohorts than younger cohorts, and it could also, to a lesser extent, reflect smaller sample size and larger accompanying standard errors as well as the diminished statistical significance when cohort I observations are omitted. There are relatively more marital disruptions and unemployment happening to the older cohort, and remaining single will also increase their risk of coresidence. Therefore, a cohort comparison will be demonstrated later to show these distinctions.

Model 8 is the final full model which shows the relative significances of all the hypothesized determinants. Economic independence has no effects on coresidence, and it suggests neither affluence nor autonomy hypothesis is supported. Health of adult children also has no effect, but better health of parents increase the likelihood of coresiding (20% more likely for one-point higher), which is opposed to the hypothesized negative relation. Adult children's divorce (2.2 times) and single (1.9 times) status increase the risk of coresidence, and so does having an unmarried parent (2.1 times). Adult children's unemployment also increases the risk by 1.7 times. Note that parents' divorce and parents' employment are no longer associated with coresidence, as compared to results in restricted Model 3.

Age and cohort seem the most dominant factors shaping coresidence patterns. Intuitively, families having younger adult children away from home are consequently

more likely to coreside, but older cohort have higher likelihood to coreside after nest-leaving. The cohort born between 1953 and 1960 (2.8 times) and those born between 1961 and 1968 (2.4 times) are more likely to return home than those born between 1969 and 1978, after controlling for all other determinants and age. The result suggests the necessity to make further cohort comparison.

Other control variables, such as gender and education also affect the risk of coresidence. Male adult children are 1.8 times more likely to coreside than female adult children, and mothers are 3 times more likely to coreside with nest-leaving children than fathers. Parents with lower education tend to coreside, but the effect is moderate. Both race and adult children's education have no influence on coresidence.

4.5 Cohort, Duration, and Age Group Comparisons

[Table 4 about here.]

Table 4 shows a cohort comparison, as well as duration and age group comparisons, based on Model 8 in Table 4. The clear patterns show some effects are evident for older cohorts, such as parents' health, adult children's marital status, adult children's unemployment, gender of adult children and parents, and education of parents. These findings indicate that the effect of marital disruption and unemployment are greater for older cohorts, and it might be relevant to the longer duration away from home for these older cohorts. The mean age of leaving nest and returning nest are 23.0 v.s. 33.9 for Cohort I, 22.9 v.s. 28.7 for Cohort II, and 22.7 v.s. 25.9 for Cohort III. Therefore, older cohorts might suffer more marital or

employment disruptions, and these life events of adult children as well as parents' health have major effects on the risk of coresidence.

In contrast, parents' life events dominate the risk for the youngest cohort.⁵ Compared to older cohorts, the youngest cohort does not suffer much marital disruption of themselves during their short period away from home, therefore parents' marital status becomes significant in their model after controlling for age. If these nest-leaving adult-children have an unmarried parent, they are 24 times more likely to return home, and having a divorce parent also increase the risk by 3.2 times. However, these effects are not significant in the other two older cohorts. Though Model 8 shows both adult children's and parents' characteristics matter, the further delineated cohort comparisons shows there are huge difference between different cohorts.

Similar approaches are applied to group comparison based on duration away from home and the age of leaving. Theoretically, these determinants of coresidence might have different effects to early-leaving adult children and to recent-leaving ones, as well as to those leave in younger adulthood and to those leave in older age. Consequently, I use ten years (away from home) and age 22 as cutting points to categorize two sets of comparison groups: Duration Group I & II, as well as Age Group I & II.

⁵Though note that coefficients for the adult children's marital status are about the same for cohort 1 vs. cohort 3. The smaller sample of cohort III therefore likely plays some role in the results.

Comparing only the major difference between the duration models, adult children's divorce status and parents' single status both affect the shorter-duration group returning home, and parents' health, adult children's unemployment, race, and parent's education affect the longer-duration group. It seems that marital disruptions have a relatively limited influence on adult children who have already been away for a long time, but their own unemployment, race, as well as parent's health and education do matter. The positive or negative relationships in both models are the same as those in the full model (Model 8).

When comparing the difference in models by age of the adult children, parents' health, adult children's gender, and parents' education affect the early-leaving group, but adult-children's health and unemployment affect the late-leaving group. It seems the early-leaving adult children are more likely to return home if they are male, they have less educated parents, or their parents are healthier. For the late-leaving adult children, however, their better health and unemployment increase the coresidence risk. The moderate effect of adult children's health does not appear in previous models, and it suggests the unique characteristics of these later-leaving adult children.

Chapter 5

Conclusion

5.1 Finding

This paper shows the unambiguous distinctions between leavers and returners. To examine the determinants of coresidence between parents and adult children, my analyses yield several conclusions: 1) Net of other factors, economic independence has no effects on coresidence, and it suggests neither affluence nor autonomy hypothesis is supported. 2) Health of adult children has no effect, but better parents' health increases the likelihood of coresidence (20% more likely for one-point higher on self-reported health), which is opposed to the hypothesized negative relation. 3) Marital status is the most important factors besides age and cohort. Adult children who are divorced (2.2 times) or single (1.9 times) are more likely to coreside with their parents, and having an unmarried parent is (2.1 times) more likely to return home. 4) Adult children's unemployment increases the risk by 1.6 times, but parents' employment as well as parents' divorce are not influential. 5) Age and cohort are the factors most strongly associated with coresidence. Families having younger adult children away from home are consequently more likely to coreside, but older cohorts have higher likelihoods to coreside after nest-leaving. The cohort born between 1953 and 1960 (2.8 times) and those born between 1961 and 1968 (2.4 times) are more likely to return home than those born between 1969 and 1978, after

controlling for all other determinants and age. This result suggests the necessity of further cohort comparisons. 6) Male adult children are 1.8 times more likely to coreside than female adult children, and having a single-mother is 3 times more likely to coreside with nest-leaving children than having both parents. 7) A year increase in parents' education contributes to a 6% decrease in risk of coresidence, but both race and adult children's education have no influence on coresidence. 8) A cohort comparison shows that marital disruption and unemployment of adult children influence older cohorts' coresidence, but marital disruption of parents affects younger cohorts' coresidence.

5.2 Discussion

Broadly speaking, the affluence hypothesis (parents' needs matter) and the autonomy hypothesis (children's needs matter) could be extended to the parents' or children's health condition, marital status, and employment status. In this thesis, however, the affluence hypothesis and autonomy hypothesis are only referred to economic independence, which is the ratio of income to needs (RIN) more specifically. This narrowed viewpoint allows a clearer cut between various characteristics of parents and adult children. Though neither affluence nor autonomy hypothesis is supported, it only suggests that economic independence is relatively insignificant compared with other variables. Though this finding provides limited support for the classical debate on whether parents' needs matter or adult children's needs matter, children's marital and employment status as well as parents' health seems suggest

adult children might play a more important role in determining coresidence.

From literature there is a strong support of negative relationship between parent's health and coresidence, but my estimate shows a positive relationship. There are two possible explanations. One is that previous research only considered the need of parents, and children's needs were seldom considered simultaneously. Aquilino (1990) and Ward et al (1992) both argued once the children's need is considered, parental dependency has little bearing on coresidence at any point in the life course. Not only do parent's dependency due to poor health and need of care not matter here, but the well-maintained health and ability to support children are major forces allowing children to return. The other explanation is that self-administered health is a subjective measure, and parents' health might be positively correlated to their relationships with children and their attitudes of coresidence. Better health suggests better relationship between parents and children and higher opportunity that they will coreside together.

Most previous research assumes coresidence is a competition between children's needs and parents' needs, but based on the findings of this study I argue that a rational support for significant life events is the main factor. My findings suggest that neither adult children's economic independence, as represented by income alone, nor elder parents' income matters after controlling age and cohort. It is mainly parents' good health that allows them to support their children returning home when significant life events, such as getting divorced, separated or widowed, endanger adult children's ability to live alone. Research has also found that a large majority of parents maintain their own households, and most nest-returning happens in parents'

households (Aquilino 1990).

In sum, life-cycle portraits of time-varying determinants show an unambiguous distinction between nest leavers and nest returners. My event history analyses show strong evidence that marital status and employment status of adult children are the most important time-dependent determinants of nest-returning controlling for age and birth cohorts, and older cohorts have higher propensity to return to parent's nest. Coresidence is not a competition between children's need and parent's need, but a rational support for significant life events. The findings support neither the affluence hypothesis nor the autonomy hypothesis, and I argue this evidence might result from controlling significant life events, age and birth cohorts, and analyzing their risk or propensity by longitudinal data and method. A robust and consistent result shows that parents in good health support adult-child's returning home when significant life events, such as getting divorced, separated, widowed, or employed, endanger adult-child's ability living alone.

Two limitations exist in this thesis. First, the duration of coresidence and repeated nest-returning behaviors are not measured due to the additional complexity introduced by examining these issues. Not only does the duration between nest-leaving and nest-returning matters, but the period of coresidence might be affected by dynamic characteristics of both parents and children. I already establish possible determinants that explain the nest-returning decisions, but the elongation of coresidence might be affected by these determinants in different ways. Failure to maintain the coresidence shows us more information about how living arrangements change with personal dynamic characteristics. Moreover, repeated nest-returning

will provide greater details about the dynamics of coresidence behavior. Frequency, duration, and sequence of coresidence will bring us richer understanding of the coresidence and life events.

The second limitation is I did not explore the distinct characteristics of stayers who never leave home, especially those who are in the same cohorts as leavers and returners. There might be similarity and difference between the returning coresidence and continuing coresidence, though some researchers found both coresidence respond to similar factors (Ward and Spitze 1996). More specific comparison should be made between nest-leaver, nest-returner, and permanent stayer when their birth cohorts and age are controlled.

Table 1. Descriptive Statistics of Nest Leaver and Nest Returner

Time-Independent Variable	Nest Leaver		Nest Returner	
	N	%	N	%
<i>Cohort</i>				
Born in 1953-1960	2,379	40	187	43
1961-1968	1,854	31	156	36
1969-1978	1,772	30	92	21
<i>Gender : Male</i>	2,876	48	237	54
<i>Race : White</i>	3,420	57	157	36
	MEAN	Std	MEAN	Std
<i>Duration of Away from Home(years)</i>	13.4	8.7	8.5	6.8
<i>Years of Education</i>				
Individual	13.0	2.0	12.3	1.9
Parent	11.4	3.4	10.6	3.3
Time-Dependent Variable*				
	MEDIAN		MEDIAN	
<i>Ratio of Income to Need (RIN)</i>	Individual	Parent	Individual	Parent
Child at age 10	2.6	2.7	1.7	1.8
20	4.0	5.0	3.0	3.3
30	8.7	8.8	6.1	6.3
40	14.2	11.0	9.4	6.7
50	19.6	10.4	11.5	8.2
	MEAN		MEAN	
<i>Self-Administered Health</i>	Individual	Parent	Individual	Parent
Child at age 20	3.9	3.2	3.8	2.9
30	3.9	3.0	3.7	2.8
40	3.6	2.9	3.5	2.5
50	3.5	2.8	2.7	2.5
<i>% Married or Permanently Cohabiting</i>				
Child at age 20	23	66	23	62
30	44	71	28	50
40	46	64	33	34
50	54	59	42	0
<i>% Single or Never Married</i>				
Child at age 20	68	5	72	12
30	35	3	46	12
40	21	1	19	3
50	13	2	17	20
<i>% Widowed, Divorced, or Separated</i>				
Child at age 20	8	29	5	26
30	21	26	26	38
40	32	35	48	63
50	33	39	42	80
<i>% Employed for Family Head</i>				
Child at age 10	85	85	74	74
20	78	79	68	70
30	83	56	69	48
40	85	23	62	20
Samples	6005		435	

Source: Panel Study of Income Dynamics (PSID), 1968-2005

* The descriptive statistics is based on available subsamples.

Table 2. Duration of Away from Home for Leavers and Returners

Time-Independent Variable	Leaver			Returner		
	Mean	Std	Pr > F†	Mean	Std	Pr > F†
<i>Cohort</i>			<.0001 ***			<.0001 ***
Born in 1953-1960	18.6	8.9		11.6	7.8	
1961-1968	12.9	7.0		7.0	5.4	
1969-1978	7.0	4.4		4.7	3.4	
<i>Gender</i>			<.0001 ***			0.0894 *
Female	14.3	8.7		9.1	7.0	
Male	12.5	8.5		8.0	6.6	
<i>Race</i>			<.0001 ***			0.0009 ***
Black	12.6	8.6		9.3	7.0	
White	14.1	8.7		7.0	6.2	
<i>Education</i>			0.0014 ***			0.8065
Below High School	12.5	8.6		8.2	6.8	
High School	13.7	8.8		8.4	6.6	
Some College	13.6	8.5		8.8	7.2	
<i>Return to family of</i>						0.0013 ***
Both Parents or Only Father				7.1	6.6	
Mother Only				9.3	6.8	
N	6005			435		

Source: Panel Study of Income Dynamics (PSID), 1968-2005

† ANOVA Between Group Comparison. * $p < .1$. ** $p < .05$. *** $p < .01$.

Table 3. Non-proportional Hazards Models for Risk of Coresidence after Nest Leaving

Variable Sample Estimate	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
	All Cohorts	Beta H Ratio#	All Cohorts	Beta H Ratio	All Cohorts	Beta H Ratio	Age & Cohort	All Cohorts	W/O Health	All Cohorts	W/O Health	All Cohorts	Full Model	All Cohorts	Full Model	All Cohorts
Time-dependent Variables																
<i>Economic Independence</i>																
Adult-Child's Family RIN†	-0.64	0.53 ***														
Parent's Family RIN‡	-0.07	0.94														
<i>Self Administered Health of</i>																
Adult-Child		0.17	1.19 **													
Parent		0.27	1.31 ***													
<i>Life Events</i>																
<i>(ref. Married)</i>																
Adult-Child' Marital Status (Single=1)			1.51	4.51 ***												
Adult-Child' Marital Status (Divorced=1)			0.93	2.55 ***												
Parent's Marital Status (Single=1)			0.50	1.65 **												
Parent's Marital Status (Divorced=1)			-0.30	0.74 *												
Adult-Child' Employment(Employed=1)§			-0.60	0.55 ***												
Parent's Employment(Employed=1)§			0.49	1.64 ***												
<i>Age of Adult-Child</i>																
<i>(ref. age 36-40)</i>																
18-25							5.52	249.84 ***	5.73	308.06 ***	5.51	245.96 ***	5.58	264.51 ***	5.08	160.03 ***
26-30							3.41	30.19 ***	3.74	42.11 ***	3.52	33.71 ***	3.70	40.40 ***	3.32	27.52 ***
31-35							1.85	6.35 ***	1.89	6.60 ***	1.99	7.30 ***	1.91	6.77 ***	1.83	6.22 ***
41-45							-1.48	0.23 ***	-1.58	0.21 *	-1.35	0.26 ***	-1.63	0.20 *	-1.40	0.25 ***
46-50							-2.90	0.06 ***			-3.18	0.04 ***			-3.01	0.05 ***
Time-independent Variables																
<i>Cohort Effect</i>																
<i>(ref. Born in 1969-1978)</i>																
Cohort I (Born in 1953-1960)							0.91	2.48 ***			1.32	3.75 ***			1.03	2.81 ***
Cohort II (Born in 1961-1968)							0.79	2.20 ***	1.00	2.71 ***	0.94	2.56 ***	0.99	2.68 ***	0.89	2.44 ***
Control Variables																
Gender of Adult-Child (Male=1)	0.48	1.62 **	0.31	1.37 **	1.02	2.77 **	0.31	1.36 **	0.34	1.40	0.66	1.94 ***	0.41	1.51 *	0.58	1.79 ***
Gender of Parent (Father=1)	-1.20	0.30 **	-1.64	0.19 **	-1.32	0.27 **	-0.97	0.38 ***	-0.92	0.40 ***	-0.79	0.45 ***	-0.90	0.41 ***	-1.12	0.33 ***
Race of Adult-Child (White=1)	-0.01	0.99	-0.52	0.60 **	-0.06	0.94	-0.39	0.68 ***	-0.51	0.60 *	-0.13	0.88	-0.53	0.59 *	-0.32	0.73
Education of Adult-Child (Years)	0.00	1.00	-0.08	0.92 **	-0.09	0.92 **	0.06	1.06 *	0.11	1.12	0.07	1.07	0.09	1.09	0.07	1.07
Education of Parent (Years)	0.00	1.00	-0.05	0.95 *	-0.06	0.94 **	-0.02	0.98	-0.03	0.97	-0.04	0.96	-0.04	0.96	-0.07	0.94 *
-2 Log L (with covariates)	6274		4237		4456		5771		1475		3436		1423		2714	
X2	415		289		372		1274		427		915		416		712	
DF	7		7		11		12		18		20		20		22	
% of Events	7.5		5.4		7.1		7.1		6.4		7.4		6.3		6.4	
Samples	5490		5230		4025		6084		2070		3805		2038		3523	

Source: Panel Study of Income Dynamics (PSID), 1968-2005

† Ratio of Family Income to Need (RIN) here is in ten times # Hazard Ratio = Anti-log of Beta. § Family Head. * p<.05. **p<.01. ***p<.001.

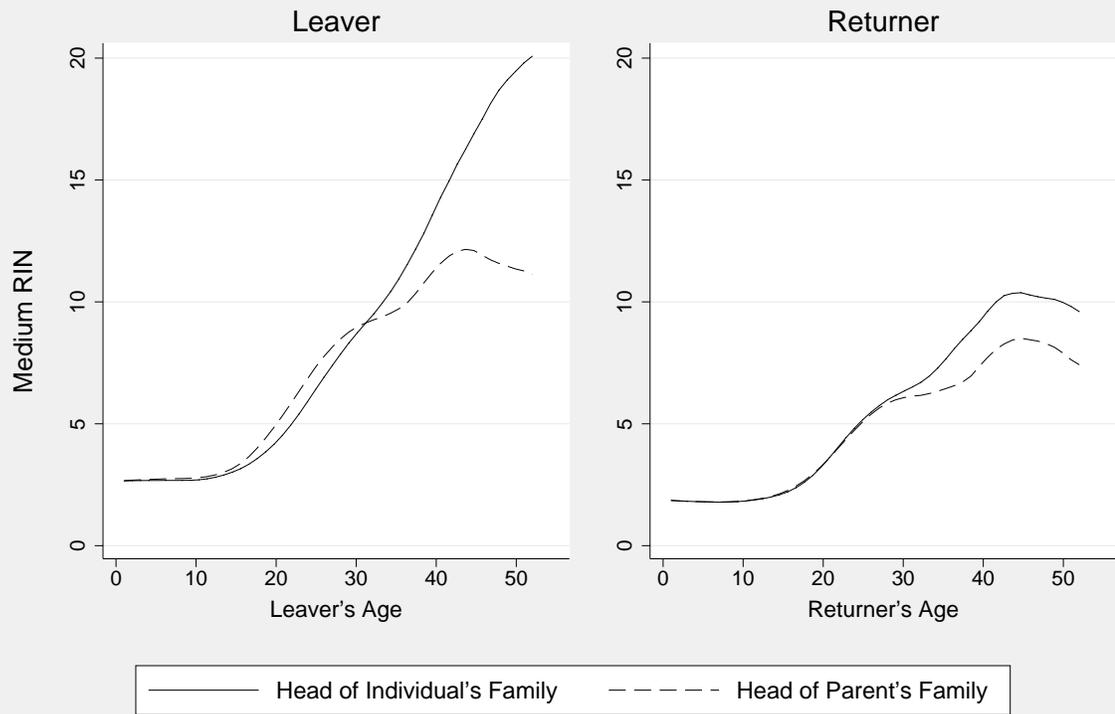
Table 4. Comparison with Non-proportional Hazards Models for Risk of Coreidence after Nest Leaving (by Cohort, Duration, and Age Groups)

Estimate	All Sample (=Model 8)		Cohort I (Born in 1953-1960)		Cohort II (Born in 1961-1968)		Cohort III (Born in 1969-1978)		Duration Group I (Duration <= 10Yrs)		Duration Group II (Duration > 10Yrs)		Age Group I (Leaving Age <= 22)		Age Group II (Leaving Age > 22)	
	Beta	H Ratio#	Beta	H Ratio	Beta	H Ratio	Beta	H Ratio	Beta	H Ratio	Beta	H Ratio	Beta	H Ratio	Beta	H Ratio
Time-dependent Variables																
<i>Economic Independence</i>																
Adult-Child's Family RIN†	-0.10	0.90	-0.16	0.85	0.00	1.00	-0.30	0.74	0.10	1.10	-0.20	0.82	-0.17	0.84	-0.04	0.96
Parent's Family RIN‡	0.02	1.02	0.16	1.17	0.02	1.02	0.12	1.13	-0.09	0.91	0.05	1.06	0.05	1.05	-0.04	0.96
<i>Self Administered Health of</i>																
Adult-Child Parent	0.03	1.03	0.07	1.08	-0.03	0.97	-0.22	0.81	0.01	1.01	0.08	1.08	-0.08	0.92	0.29	1.34 *
	0.19	1.20 **	0.19	1.21 *	0.26	1.30 **	0.05	1.05	0.10	1.11	0.34	1.41 ***	0.27	1.31 ***	0.05	1.06
<i>Life Events (ref: Married)</i>																
Adult-Child' Marital Status (Single=1)	0.78	2.19 ***	0.90	2.46 **	0.36	1.44	0.98	2.68	0.74	2.10 **	0.72	2.06 *	0.67	1.96 *	0.71	2.03 *
Adult-Child' Marital Status (Divorced=1)	0.65	1.92 **	0.70	2.01 *	0.45	1.56	0.74	2.10	0.66	1.94 *	0.58	1.78	0.68	1.97 *	0.89	2.45 *
Parent's Marital Status (Single=1)	0.72	2.05 **	0.44	1.55	-0.08	0.92	3.18	24.02 ***	1.35	3.87 ***	0.00	1.00	0.71	2.02 *	1.05	2.85 **
Parent's Marital Status (Divorced=1)	0.17	1.19	-0.05	0.95	-0.07	0.93	1.15	3.16 *	0.34	1.40	-0.09	0.92	0.22	1.25	0.08	1.08
Adult-Child' Employment(Employed=1)§	-0.45	0.64 **	-0.59	0.55 **	-0.56	0.57 *	0.18	1.19	-0.22	0.80	-0.59	0.56 **	-0.25	0.78	-0.90	0.41 ***
Parent's Employment(Employed=1)§	0.11	1.11	0.24	1.27	0.14	1.16	-0.27	0.76	0.26	1.29	-0.25	0.78	-0.03	0.97	0.13	1.13
<i>Age of Adult-Child (ref: age 31-35)</i>																
18-25	3.25	25.74 ***	-17.09	0.00	3.19	24.31 ***	5.39	218.72 ***	1.64	5.14 ***	4.79	120.34 ***	4.79	120.34 ***	4.11	61.14 ***
26-30	1.49	4.43 ***	0.92	2.51 *	1.55	4.70 ***	3.19	24.20 ***	0.68	0.51 **	1.45	0.23 **	2.27	9.70 ***	1.87	6.51 ***
36-40	-1.83	0.16 ***	-1.85	0.16 ***	-2.20	0.11 ***	-16.66	0.00	-1.01	0.36 *	-3.49	0.03 ***	-3.29	0.04 ***	-2.06	0.13 ***
41-45	-3.22	0.04 ***	-2.98	0.05 ***	-3.91	0.02 ***			-1.22	0.30	-4.92	0.01 ***	-5.24	0.01 ***	-3.25	0.04 ***
46-50	-4.84	0.01 ***	-4.83	0.01 ***					0.30	1.35	-6.61	0.00 ***	-7.44	0.00 ***	-5.26	0.01 ***
Time-independent Variables																
<i>Cohort Effect (ref: Born in 1969-1978)</i>																
Cohort I (Born in 1953-1960)	1.03	2.81 ***							0.53	1.70	1.63	5.09 **	0.70	2.02 *	2.04	7.86 ***
Cohort II (Born in 1961-1968)	0.89	2.44 ***						0.70	2.01 **	1.50	4.50 **	0.66	1.94 **	1.81	6.13 **	
Control Variables																
Gender of Adult-Child (Male=1)	0.58	1.79 ***	0.71	2.04 **	0.40	1.49	0.66	1.94	0.53	1.70 *	0.67	1.96 **	0.47	1.60 *	0.46	1.59
Gender of Parent (Father=1)	-1.12	0.33 ***	-1.46	0.23 ***	-1.19	0.30 ***	-0.39	0.67	-0.77	0.46 **	-1.54	0.22 ***	-1.09	0.34 ***	-1.31	0.27 ***
Race of Adult-Child (White=1)	-0.32	0.73	-0.13	0.88	-0.99	0.37 ***	0.60	1.82	-0.20	0.82	-0.57	0.57 *	-0.27	0.77	0.02	1.02
Education of Adult-Child (Years)	0.07	1.07	0.03	1.03	0.11	1.11	0.20	1.23	0.04	1.04	0.05	1.05	0.11	1.11	-0.10	0.90
Education of Parent (Years)	-0.07	0.94 *	-0.11	0.90 **	-0.06	0.94	-0.08	0.93	-0.05	0.96	-0.12	0.89 **	-0.07	0.93 *	-0.05	0.95
-2 Log L (with covariates)	2714		1019		960		275		1349		1144		1471		820	
χ ²	712		294		317		147		164		309		553		293	
DF	22		20		19		18		22		21		22		22	
% of Events	6.4		6.5		6.8		5.1		12.1		4.1		6.7		6.0	
Samples	3523		1485		1375		663		1018		2505		2133		1390	

Source: Panel Study of Income Dynamics (PSID), 1968-2005

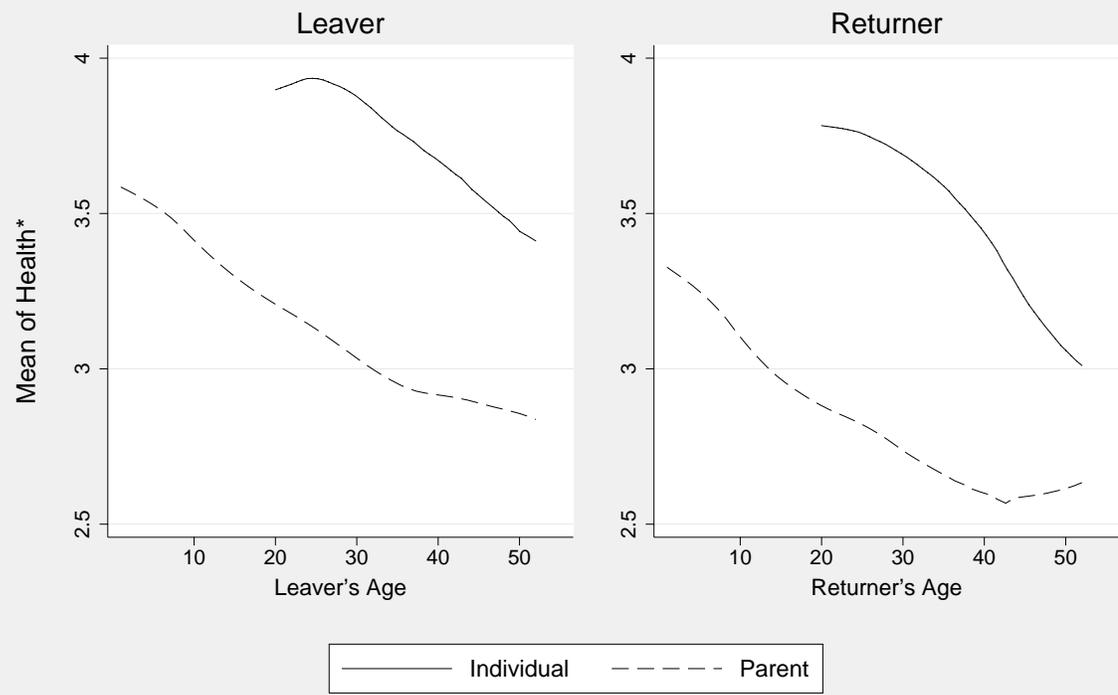
† Ratio of Family Income to Need (RIN) here is in ten times. § Family Head. # Hazard Ratio = Anti-log of Beta * p<.05. **p<.01. ***p<.001.

Figure 1. Life-Cycle Ratio of Family Income to Need (RIN) by Individual's Age



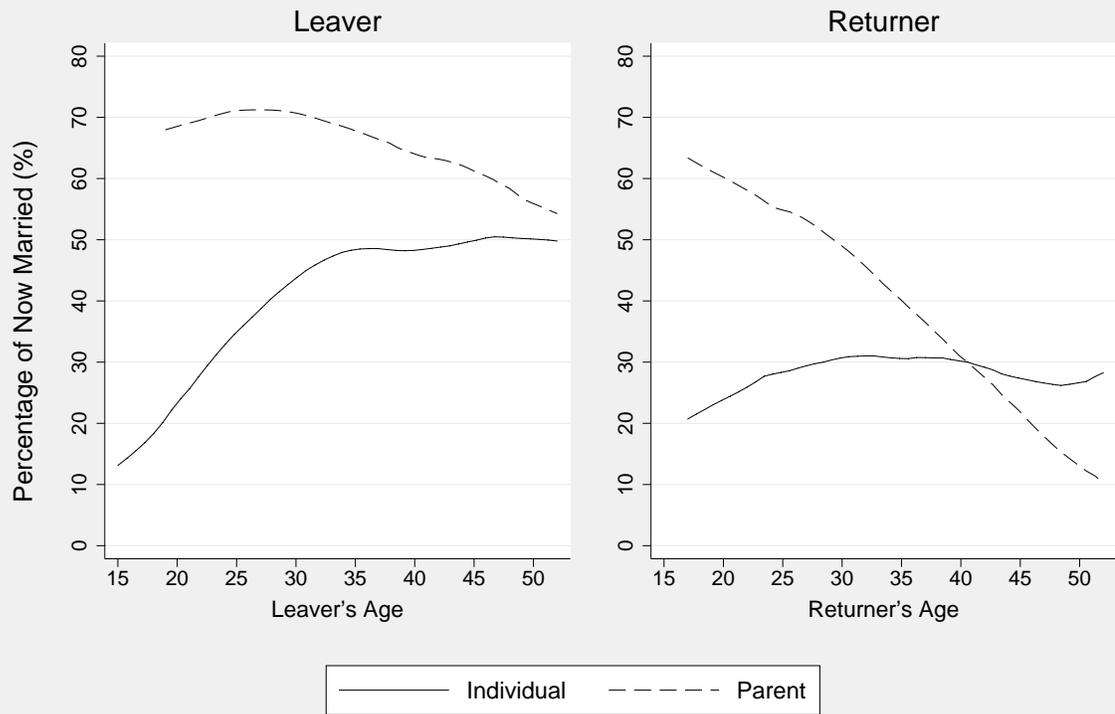
Source: Panel Study of Income Dynamics (PSID), 1968–2005.

Figure 2. Life-Cycle Self-Administered Health by Individual's Age



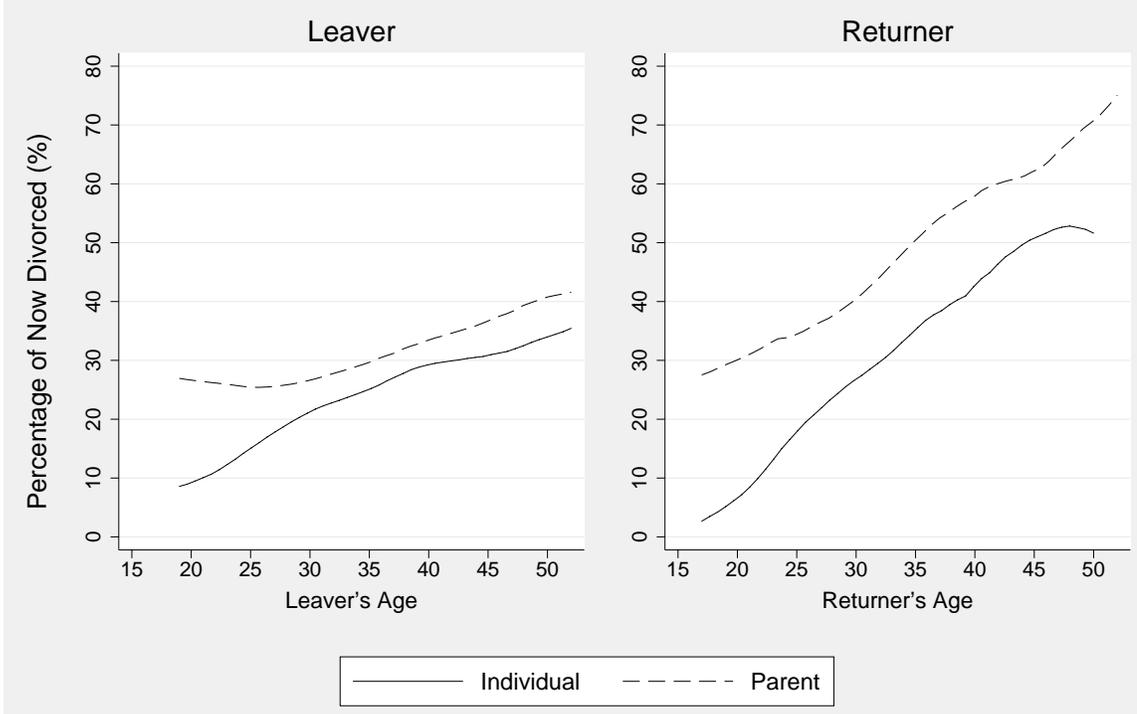
*Health: Excellent(5), Very Good(4), Good(3), Fair(2), and Poor(1).
 Source: Panel Study of Income Dynamics (PSID), 1968–2005.

Figure 3. Life-Cycle Marital Status (Married) by Individual's Age



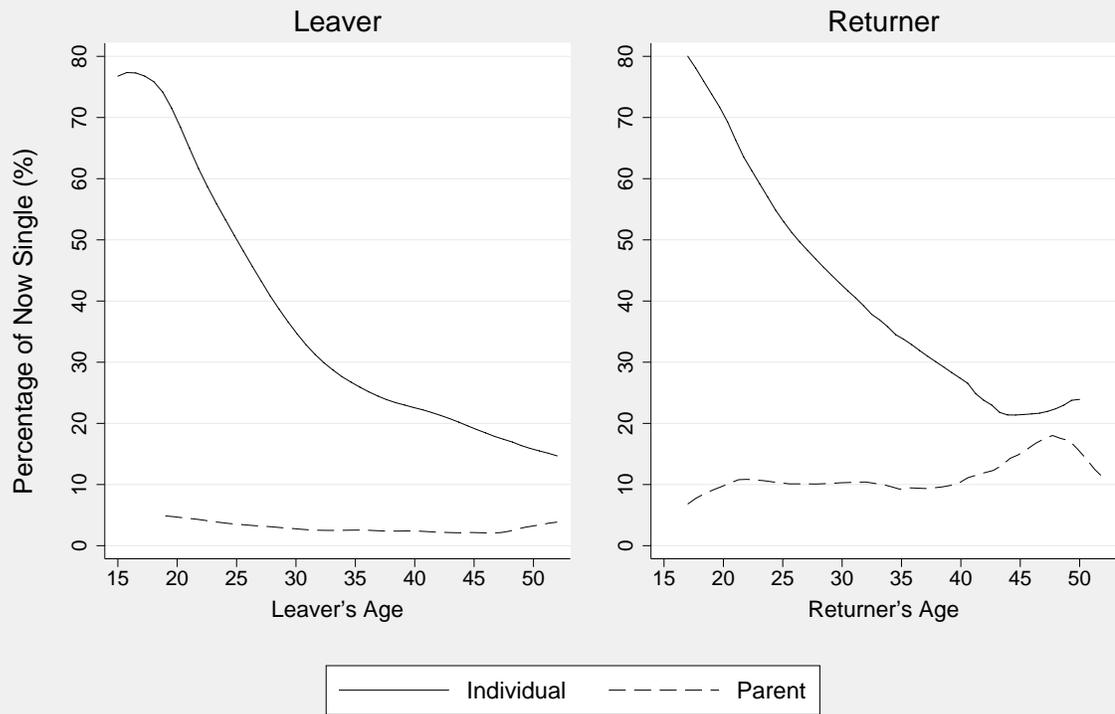
Source: Panel Study of Income Dynamics (PSID), 1968–2005.

Figure 4. Life-Cycle Marital Status (Divorced) by Individual's Age



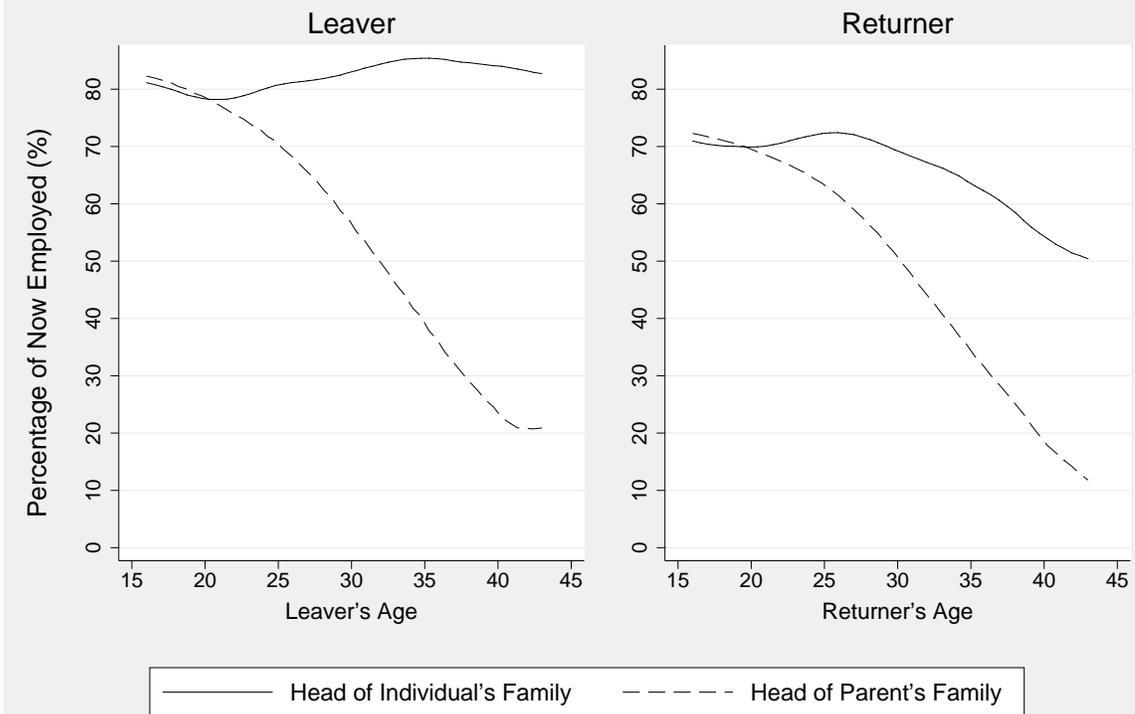
Source: Panel Study of Income Dynamics (PSID), 1968–2005.
Note: Separated or widowed is also included

Figure 5. Life-Cycle Marital Status (Single) by Individual's Age



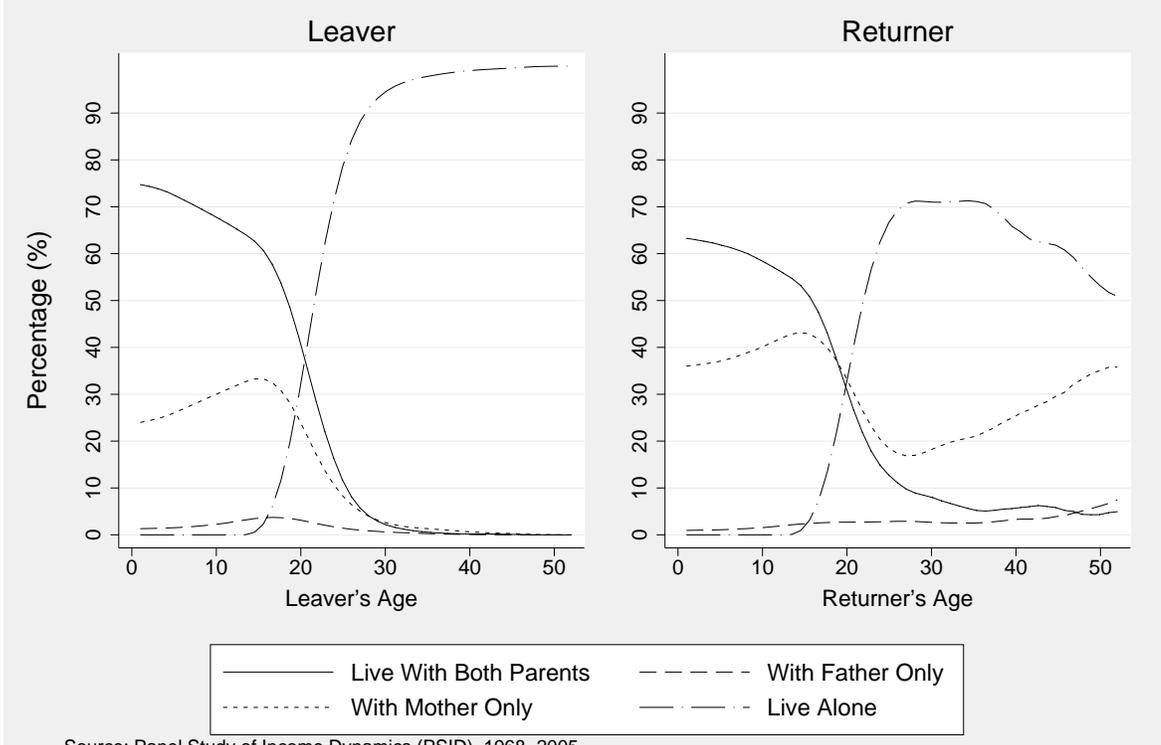
Source: Panel Study of Income Dynamics (PSID), 1968–2005.

Figure 6. Life-Cycle Employment Status by Individual's Age



Source: Panel Study of Income Dynamics (PSID), 1968–2005.

Figure 7. Coresidence Type by Individual's Age



Source: Panel Study of Income Dynamics (PSID), 1968–2005.

Reference

- Allison, Paul D. 1995. *Survival Analysis Using SAS: A Practical Guide*. Cary, NC: SAS Institute Inc.
- Alwin, Duane F. 1996. "Coresidence Beliefs in American Society. 1973 to 1991." *Journal of Marriage and the Family* 58:393-403.
- Angel, Ronald, and Marta Tienda. 1982. "Determinants of Extended Household Structure: Cultural Pattern or Economic Need?" *The American Journal of Sociology* 87:1360-1383.
- Aquilino, William S. 1990. "The Likelihood of Parent-Adult Child Coresidence: Effects of Family Structure and Parental Characteristics." *Journal of Marriage and the Family* 52:405-419.
- Avery, Roger, Frances Goldscheider, and Alden Speare. 1992. "Feathered Nest/Gilded Cage: Parental Income and Leaving Home in the Transition to Adulthood." Pp. 375-388: Population Association of America.
- Choi, Namkee G. 2003. "Coresidence between Unmarried Aging Parents and their Adult Children: Who Moved in with Whom and Why?" *Research on Aging* 25:384-404.
- Crimmins, Eileen M., and Dominique G. Ingegneri. 1990. "Interaction and Living Arrangements of Older Parents and their Children: Past Trends, Present Determinants, Future Implications." Pp. 3-35.
- DaVanzo, Julie, and Angelique Chan. 1994. "Living Arrangements of Older Malaysians: Who Coresides with their Adult Children?" *Demography* 31:95-113.
- Davis, Maradee A., and Deborah J. Moritz. 1997. "Living Arrangements, Changes in Living Arrangements, and Survival among Community Dwelling Older Adults." *American Journal of Public Health* 87:371-377.
- Elder, Glen H. 1996. "Human Lives in Changing Societies: Life Course and Developmental Insights." Pp. 31-62 in *Developmental Sciences*, edited by R. B. Cairns, Jr. G. H. Elder, and E. J. Costello. New York: Cambridge University Press.
- Ermisch, John, and Pamela Di Salvo. 1997. "The Economic Determinants of Young People's Household Formation." *Economica* 64:627-644.
- Goldscheider, Frances. 1997. "Recent Changes in U.S. Young Adult Living Arrangements in Comparative Perspective." *Journal of Family Issues* 18:708-724.
- Goldscheider, Frances, and Calvin Goldscheider. 1994. "Leaving and Returning Home in Twentieth Century America." *Population Reference Bureau Bulletin*:1-35.
- Goldscheider, Frances, Calvin Goldscheider, Patricia St Clair, and James Hodges. 1999.

- "Changes in Returning Home in the United States, 1925-1985." *Social Forces* 78:695-720.
- Lee, Gary R., and Jeffrey W. Dwyer. 1996. "Aging Parent-Adult Child Coresidence: Further Evidence on the Role of Parental Characteristics." *Journal of Family Issues* 17:46-59.
- Messineo, Melinda J., and Roger A. Wojtkiewicz. 2004. "Coresidence of Adult Children with Parents from 1960 to 1990: is the Propensity to Live at Home Really Increasing?" *Journal of Family History* 29:71-83.
- Mitchell, Barbara A., Andrew V. Wister, and Ellen M. Gee. 2004. "The Ethnic and Family Nexus of Homeleaving and Returning among Canadian Young Adults." *Canadian Journal of Sociology / Cahiers canadiens de sociologie* 29:543-575.
- Rosenzweig, Mark R., and Kenneth I. Wolpin. 1993. "Intergenerational Support and the Life-Cycle Incomes of Young Men and Their Parents: Human Capital Investments, Coresidence, and Intergenerational Financial Transfers." *Journal of Labor Economics* 11:84-112.
- Ruggles, Steven. 2003. "Multigenerational families in nineteenth-century America." *Continuity and Change* 18:139-165.
- . 2007. "The Decline of Intergenerational Coresidence in the United States, 1850 to 2000." *American Sociological Review* 72:964-989.
- Silverstein, Merril. 1995. "Stability and Change in Temporal Distance between the Elderly and Their Children." *Demography* 32:29-45.
- Speare, A., and R. Avery. 1993. "Who Helps Whom in Older Parent-Child Families." *Journals of Gerontology* 48:S64-S73.
- Troll, Lillian E. 1971. "The Family of Later Life: A Decade Review." *Journal of Marriage and the Family* 33:263-290.
- Ward, R., and G. Spitze. 1996. "Will the children ever leave? Parent-child coresidence history and plans." *Journal of Family Issues* 17:514-539.
- Ward, Russell A., and Glenna D. Spitze. 2007. "Nestleaving and Coresidence by Young Adult Children: The Role of Family Relations." 29:257-277.
- Ward, Russell, John Logan, and Glenna Spitze. 1992. "The Influence of Parent and Child Needs on Coresidence in Middle and Later Life." *Journal of Marriage and the Family* 54:209-221.
- Weinick, Robin M. 1995. "Sharing a Home: The Experiences of American Women and Their Parents over the Twentieth Century." *Demography* 32:281-297.
- White, Lynn. 1994. "Coresidence and Leaving Home: Young Adults and Their Parents." *Annual Review of Sociology* 20:81-102.