Intergenerational Altruistic Links:

A Model of Family Coresidence

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Abstract

This analysis uses linked mother-child data from the 1979 National Longitudinal Survey of Youth (NLSY) and the 1979 Children/Young Adult Survey to investigate the presence of an intergenerational component to the launching process. We find that children who departed late or returned to the parental home are more likely to have coresident parents later in life, with this effect being most pronounced among upper and middle income youths, as well as youths from black or Hispanic families. We present both linear and non-parametric models of this effect, and contextualize it with a mixed motivation behavioral model of intra-family generosity which exhibits preferences consistent with these new facts.

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1 Introduction

There are many ways in which parents can support their children as they develop—for example, prenatal care, childhood health care, primary and secondary education involvement, and postsecondary education finances. During the recent economic downturn, media outlets such as the *Chicago Tribune*, CNN, and the *New York Times* have highlight an additional dimension to parents' support of children—prolonged coresidence or "boomerang" behaviors, in which adult children either continue to live with or move back in with their parents past the typical age of launching.

Over the last few decades, researchers have observed a delay in marriage, an increase in the frequency of parental coresidence, and an increase in financial transfers from parent to child (Glick, 1986; Furstenberg, 2010; Aquilino, 1990). No matter the cause, the traditional path to independence—school completion, full-time employment, independent housing, marriage, children—has lengthened and shifted over the last 30 years, resulting in a lower rate of marriage, a higher rate of extramarital childbearing, and longer and more frequent occurrence of adult children living with their parents (Settersten & Ray, 2010).

Simultaneously, the public has seen the rise of the "sandwich" generation—the parents of the boomerang generation who face supporting not only their own children but also their parents, who may require transfers of time, money, or coresidence. While the literature has commented on the existence of these phenomena, it has not yet posited a relationship between the two. This paper will present three competing models of coresidence behavior from the family transfers literature, and provide empirical evidence in favor of a mixed motivation behavioral model.

Motivation

When coresidence is used to smooth consumption, it takes the place of government aid programs that are also intended to serve as a supplement in times of transition (e.g. Temporary Assistance for Needy Families). Coresidence can be an efficient way for family members to help each other, as joint residence permits consumption of an array of "public" goods, including housing, electricity, water, and potentially food and transportation. Identifying factors influencing coresidence among a broader cohort can help policymakers understand how government aid interacts with parental transfers (as suggested in Rosenzweig and Wolpin, 1994).

It is also important to consider the effect of children's coresidence on the parent generation, who are "sandwiched" between the competing claims of their own aging parents and dependent children. Financial support results in a direct loss of disposable income, but coresidence may take a similar toll on parental happiness. Rosenzweig and Wolpin (1994) find that parents value privacy and prefer for their adult children to live independently, and parents with empty nests report higher marital satisfaction (White and Edwards, 1990). Bures (2009) finds that families with children (adult or otherwise) living at home are less likely to move than those with empty nests. Extending the launching process in this manner may delay the parent generation from being able to "downsize" or relocate for other reasons. The substitution of parental resources for governmental ones, therefore, is not without cost.

Finally, one must consider the longer-term impacts of prolonged coresidence on those late to leave the parental home. Leopold (2012) finds that late home leavers maintain closer relationships with their parents, although it is unclear whether this is because of continued dependence or strengthened family ties. If parents receive future benefits in exchange for permitting extended coresidence, a comprehensive evaluation must include these components to accurately portray the intertemporal tradeoffs of coresidence.

2 Data and Sample Characteristics

The sample used in this analysis comes from the 1979 National Longitudinal Survey of Youth, which consists of 12,686 males and females born between 1957 and 1964. Questions range from basic demographics to financial practices, job history to sexual behavior, and drug use to political participation. For some categories of questions, participants are asked to recall monthly or weekly characteristics of their life over the last year. The interviews take less than 90 minutes, and participants (in early years, both the parent and the youth) were paid for their time.

Sample

Due to the longitudinal nature of the survey, there is a large amount of attrition and missing information for the later waves. While the Bureau of Labor Statistics attempts to survey every member of the original cohort, many original respondents have migrated or are otherwise out of contact. Furthermore, the wave-like nature of the survey means that the respondents were at different life stages when first contacted in 1979. Approximately 7,000 of the respondents must be excluded from this analysis because they were first observed living separately from their parents (many of whom were 20+ when first surveyed in 1979), thus no age of first exit can be recorded. Another 43 individuals are excluded because they are never observed to live separately from their parents (perpetually coresident). This leaves a sample of 4,872 men and women, whose characteristics are displayed in Table 2.

3 Models of Coresidence

Altruism

In the classical model of intra-family altruism proposed by Becker (1981), a benevolent wage-earner (usually the patriarch of a household) maximizes not just his own utility but also some weighted measure of another household member's utility. Adapted to the coresidence framework, we have a parent maximizing his utility from consumption and some function of his child's utility, $\psi(U_c)$, wherein the parent chooses *t* to transfer to the child as well as consumption *Z* and coresidence (*d*=1) is jointly determined:

$$under\ coresidence\ (d = 1) \qquad U_p = U(Z_p, d, \psi(U_c)) \qquad (1a)$$

$$under\ independent\ housing\ (d = 0) \qquad U_p = U(Z_p, \psi(U_c)) \qquad (1b)$$

$\frac{\partial U_p}{\partial \psi(U_c)} > 0$ (parent is altruistic and gets utility from the child's consumption)

all else equal (transfers and income), $U_p|(d = 0) > U_p|(d = 1)$ (parents prefer independent living)

all else equal (transfers and income), $U_c|(d = 0) > U_c|(d = 1)$ (children prefer independent living)

$\psi(U_c)$ is a monotonically non-decreasing function of U_c

the parent's budget constraint is $Z_p + t = Y_p$

the child's budget constraint is $Z_c = Y_c + t - h * (1 - d)$

Given that coresident children do not need to pay rent, if the child's income is low enough, it is more efficient for the parent and child to live together than have the parent subsidize the child through transfers, as this indirectly increases consumption for the child (by allowing the child to spend *h* housing cost on consumption instead of rent) and directly increases consumption for the parent (who no longer needs to transfer *t* out of his consumption budget).

Empirically, income potential tends to rise over time and peak between age 45 and 55, before dropping off rather sharply around retirement age. One can imagine that families with lower degrees of altruism will shift toward independent living at a lower threshold income than those with higher degrees of altruism, but generally, assuming the child’s income potential (and thus consumption potential) is monotonically non-decreasing over time for the first 40 years of life, it is easy to see that coresidence is optimal early in life (e.g. during childhood and emerging adulthood when the child’s income potential is low) and non-optimal in the middle of life. If we assume children are altruistic toward their parents, we also have a prediction for parents moving in with children during later adulthood, should parent income/wealth (and thus consumption) fall below a certain threshold. Further, should economic circumstances (e.g. job loss during a recession) jeopardize the consumption of either party, we may observe coresidence outside of these typical life cycle timings (as described in Kaplan, 2012).

Thus altruism could explain why we observe coresidence among both emerging adults and elderly parents. However, empirical tests of altruism such as the one performed by Altonji, Hayashi, and Kotlikoff (1992) as well as results from Cox and Rank (1992) have rejected the theory of a single budget constraint and favor exchange motivations for intra-family transfer behavior. Furthermore, altruism alone does not suggest that we would see a connection between these two phenomena, unless there is heterogeneity in altruism and that this degree of altruism is an inheritable family characteristic.

Exchange

On the opposite end of the spectrum, the exchange hypothesis suggests that observed generosity is due to a “tit-for-tat” arrangement between parents and children, and not maximization of joint utility. While the decision to have children itself is often viewed as an exchange to provide old-age security (Leibenstein, 1957; Nugent, 1985), this is perhaps less the case in developed nations with extensive savings and support networks for the elderly. Instead, we will take the decision to have children as exogenous to our problem and focus instead on the parental decision to support children during emerging adulthood.

In their review of the intra-family transfer literature, Arrondel and Masson (2006) define exchange as “the implicit contract where (e.g.) parents trade prior education, or the promise of future inheritance, for children’s support in their old age, is expected to be mutually advantageous—if enforceable.” Indeed, enforceability of this contract is the challenge, due to the distinct timings of each generation’s need. If the link between children’s late departures and parents’ future coresidence were exchange, we would need an additional mechanism to cause children to hold up their end of the bargain when it was their turn to provide housing, due to the distinctly separate timing of these events. Alternatively, we could be observing two sets of exchanges, where parents trade coresidence to children for simultaneous time transfers early in life, and then the children do the same with the parents later in life, but there is nothing to suggest that those two behaviors would be exhibited by the same individuals, so we cannot explain why child coresidence correlates with parental coresidence via exchange alone.

We could reconcile the phenomenon of these two coresidence behaviors (children residing with parents at older ages and then parents residing with children in old age) with a pure altruism model, but this would require several assumptions on the distribution and inheritance of altruistic tendencies to predict what we observe in the data. Therefore, we will propose an alternative model which features characteristics of both altruism and exchange, requiring fewer assumptions about heterogeneity and gaining commitment on the part of the child generation.

Mixed Motivations

The transfers literature has proposed several mixed models. Indirect reciprocity, also called retrospective altruism, describes the familial cycle of every parent generation providing goods/services to every child or elderly grandparent generation (Bevan & Stiglitz, 1980; Cox & Stark, 1996). This is not an exchange transaction, as there is not necessarily a two-way trade occurring, but the behavior also differs from altruism, and instead functions as a habituation or self-enforcing altruism mechanism. Cox and Stark refer to this as a demonstration effect that causes generations to repeat their parents' seemingly altruistic (or lack thereof) behavior.

In order to adapt these mixed motivation models to the distinct timing challenges of coresidence, we will adopt some enforcement mechanisms from the behavioral literature. It is generally accepted that parents care to some degree about their children, and it is not unreasonable to extend this to parents caring about what their children think of them. Rabin (1993) pioneered the approach of incorporating of social goals in economic modeling, following empirical work by Weisbrod (1988) and Train (1987). Rabin presents a model of fairness where in which agents are willing to sacrifice their own utility to punish or reward individuals for being unfair or fair, respectively. Benabou and Tirole (2005) expand on this framework to analyze whether the existence of rewards and punishments diminishes the potential for signaling generosity, and demonstrate that under certain conditions, it is difficult to arrive at a separating equilibrium due to the signaling "noise" created by rewards and punishments, whether those rewards are tangible (e.g. money) or intangible (e.g. praise/shame). If even ungenerous individuals behave generously (given large enough rewards), this casts doubt on the "true" generosity of those seen exhibiting generous behavior, and can in fact reduce the payoff from generous behavior.

This tendency to care about social goals such as others' opinions has also been documented empirically (e.g. in Arai et. al, 2000), such as when individuals do not take advantage of welfare or other publically available support due to concern about "public face." In short, there is an extensive behavioral literature suggesting that the way we behave toward other people is in part determined by what we think they think of us—their esteem for us.

Ellingsen and Johanneson (2007, 2008) propose a model of worker-employer relations in which worker effort is affected by employer generosity, as this perceived employer generosity determines how much the worker cares about the employer's opinion of his effort level. In their model, beliefs about generosity and respect are determined in one period. For the purposes of our analysis, we adapt this framework of generosity and esteem to a two-period model where a child's esteem for his parent is not just generated by chance, but instead determined by that parent's previous generosity toward the child—in particular, by the parent's generosity in permitting extended coresidence. In other words, how I (the child) behave toward my parents is a function of what I think of them, because I only care about their opinion of me if I think highly of them.

We model the behavior of the members of a 2-generation, 2-period game, where the child generation members are emerging adults (support from parents during childhood is taken as given), and their parents comprise the other generation. We elect to use a two-period signaling game in order to reflect the distinct timings involved in coresidence exchange. We present a very simple model in which there are two types of parents and children—generous and ungenerous—who decide whether or not to provide residence to each other during two periods.

We observe the education, residence, and fertility of the young generation, the income and family characteristics of the parent generation, and the family linkages (siblings, parents, etc.) among these individuals. The young receive a stochastic wage offer, low or high, and can choose whether to continue coresiding with their parents or move out. In the second period, elderly parents receive an unobserved stochastic income, low or high, which is their only source of financial support (excluding in-kind services). The middle generation (parents in the first period, children in the second) can choose to block or permit coresidence by each generation.

In this model, we prohibit access to credit markets, which is logical for the young generation who are unattractive to lenders, and potentially plausible as well for the middle generation if the intra-family interest rate on the exchange of in-kind goods such as residence exceeds that of the market. As a consequence, there is no borrowing or saving.

The model is parameterized as follows:

- T_c represents the amount (of a costly good such as time or residence) parents transfer to children, and T_p represents current valuation of future transfers from children to parents
- θ_c is child's type, θ_p is parent's type (private information at the start of the game)
    - For both generations, type 1 is "generous" and type 2 is "ungenerous"
    - $\theta_{c1} > \theta_{c2} > 0$ (generous children get more utility from generosity)
- $c_1 T_c$ is the total cost of transfers for generous parents;

  $c_2 T_c$ is the total cost of transfers for ungenerous parents; $c_2 > c_1$
- $c(T_p)$ is the cost function for children;

- $p(T_c)$ is the probability the child holds the parent in esteem given T_c
- r is the parent's valuation of child's esteem

Parents maximize total utility by choosing the optimal amount of costly transfer, where transfers increase the probability of being held in high esteem this period, which both types value, and transfers also affect the likelihood of future transfers from children (which depend on both child type and the child's esteem for the parent); that is:

$$\max_{T_c} U = -c_1 T_c + rp(T_c) + E[T_p | p(T_c), \theta_c] \quad \textit{if type 1 (generous)} \tag{2a}$$

$$\max_{T_c} U = -c_2 T_c + rp(T_c) + E\left[T_p \middle| p(T_c), \theta_c\right] \quad \textit{if type 2 (ungenerous)} \tag{2b}$$

The child gets utility from transfers to the parent according to her type, but pays a cost $c(T_p)$ for that transfer, with her problem being:

$$\max_{T_p} U = -c(T_p) + \theta_1 T_p p(T_c) \quad \textit{if type 1 (generous)} \tag{3a}$$

$$\max_{T_p} U = -c(T_p) + \theta_2 T_p p(T_c) \quad \textit{if type 2 (ungenerous)} \tag{3b}$$

Proposition 1: *There exists a separating equilibrium satisfying the Intuitive Criterion in which parent type is fully revealed by amount transferred to children, wherein ungenerous parents give* T_c^**=0 and generous parents give* $T_c^* > 0$.

Proof

The Intuitive Criterion (Cho and Kreps, 1987) tells us that because transfers are costly, ungenerous parents must select $T_c = 0$, and thus $p(T_c)$ must also be 0. Therefore, transfers from the generous parents must be just high enough that ungenerous parents are indifferent between faking generosity and choosing $T_c = 0$.

Suppose we had a pooling equilibrium where ungenerous parents chose T_c such that they were believed to be generous, that is, such that $p(T_c) = 1$:

$$\max_{T_c} U = Y_c - c_2 T_c + r * 1 + E[T_p|1, \theta_c] \ \textit{if type 2 (ungenerous)} \tag{2c}$$

Then $T_c^2 \leq \frac{r+E[T_p|1,\theta_c]}{c_2}$, and so generous parents will choose T_c^{1*}=$\frac{r+E[T_p|1,\theta_c]}{c_2}$ (as utility is decreasing in transfer amount once esteem is established), and we gain separation on types (assuming that indifferent ungenerous parents choose to give nothing rather than fake generosity). However, this must mean that ungenerous parents will choose $T_c^{2*} = 0$.

Solving for the child's decision, because transfers are costly without esteem (remember if $T_c = 0, p(T_c) = 0$), ungenerous parents must then receive T_p= 0. Generous parents' transfer receipt depends on child type—

$$\max_{T_p} U = -c(T_p) + \theta_1 * 1 \ \textit{if type 1 (generous)} \tag{3c}$$

$$\max_{T_p} U = -c(T_p) + \theta_2 * 1 \ \textit{if type 2 (ungenerous)} \tag{3d}$$

Generous children will give T_p such that $c'(T_p)$=θ_1, and ungenerous children will give T_p such that $c'(T_p)$=θ_2.

For the parents, the motivation to give is forward-looking, akin to Cox and Stark's demonstration effect: parents give because of a behavior they wish to instill in their children. For the children, the motivation to give is backward-looking (as it depends on parent generosity), often called "retrospective" or "golden rule" generosity (Arrondel & Masson, 2001).

This model features both esteem and exchange characteristics and most closely resembles a serial reciprocity model, in which good behavior is enforced through the family network (members care about other members' opinions as well as how that affects the likelihood of future transfers). It can be directly adapted to the coresidence framework by viewing T as a continuous measure of parental generosity (perhaps through time transfers), which has some threshold parameter $\dot{T}$ past which the generosity level is sufficient to permit coresidence.

This model also easily adapts to one in which T is offered by the parent and observed by the child but not necessarily taken up, perhaps due to stochastic income draws. Individuals would still gain esteem for the offer of T, and future offers of T from children would depend on what the parental offer would be (regardless of use). Furthermore, this model can be adapted to allow the possibility of type inheritance, which would affect the expected value of R in the parent's utility function (as expected child type would depend on observed parent type).

For this model to be an accurate depiction of behavior, it requires that the incidence of generosity from parents (in this case, coresidence) is correlated with generosity from children, *regardless of child's type.* Furthermore, this model also provides a framework in which Cox and Stark's demonstration effect could enforce a family cycle of generosity, causing correlation in coresidence behavior across generations.

Econometric Model

The theoretical model presented features a testable empirical regularity—that children receiving coresidence support during emerging adulthood provide that same support to their elderly parents later in life, or that generosity from parents spurs future generosity by children. We model the incidence of elderly parents living with adult children as a function of those same children's coresidence behaviors that would have burdened parents during emerging adulthood:

$$\Pr(parents\ coreside) = \beta_0 + \beta_1 child\ exited\ late + \beta_2 child\ returned\ home + \beta_3 child\ demographics + \beta_4 family\ resources + \varepsilon_i \quad (4)$$

Here, child demographics include gender, race, marital status, fertility, education, and score on the Armed Forces Qualifying Test (a measure of intellectual ability). Family resources consist of the number of siblings of the child, the number of children of the child, and income quartile. In this way we approximate the support network available to and observed by the child's parents—children with more children of their own (at a given income) have fewer resources to share with parents, but parents with more children have more opportunities from which to draw resources.

If either β_1 or β_2 is positive and significant in equation (4), we have preliminary evidence for the esteem reciprocity model in which the visibility of the middle generation's actions enforces the family insurance scheme. While this could also be consistent with a pure altruism model in which altruistic tendencies are inherited, the previous literature (Altonji, Hayashi, and Kotlikoff, 1992, and Cox and Rank, 1992) has cast doubt on pure altruism, and the model presented contains parameters that will soak up altruistic tendencies.

4 Results

As shown in Table 3, youth who exit at age 24 or older are 15 percentage points more likely to have coresident parents later in life, a relationship which survives controlling for a variety of economic and demographic factors. Those who return to the parental home are 20 percentage points more likely to end up with coresident parents. Race also plays a role—Hispanic children are seven percentage points more likely than white children to end up with parents living with them, and black children surpass whites by four points, although the difference between Hispanic and black children is not significant. Those who have not migrated from their "home" region (see Data Appendix for definition) are five points more likely to have coresident parents. Furthermore, support networks appear to play a role—parents with more children are less likely to live with any one individual child, and children who have more children of their own are more likely to have coresident parents.

Table 4 serves to justify the linear approach used in Table 3, using a set of dummy variables for various ages of exit to capture the relationship nonparametrically. The coefficients on ages 21 and later are significant, positive, and (generally) increasing, suggesting that the linear approach is merited and that children who "inconvenience" their parents by departing at later ages "repay" their parents by permitting coresidence as their parents age. Although the individual coefficients are not all significantly different, coefficients over a range are—an exit at 22 has a significantly smaller effect than an exit at 26 or later.

In Table 5, we see that this relationship is indistinguishable between youths of lower middle and middle income families, and also between those of upper middle and upper income families. However, we can infer some relationships from these larger groupings—a late exit by a higher-earning individual increases the likelihood of coresident parents compared to those earning at or below the mean, and a return by those same individuals has a significantly smaller effect than one by their lower-earning counterparts. Other notable patterns include that low-earning youngest children are more likely to have coresident parents than higher earning youngest children or low-earners with younger siblings, and higher-earning married individuals are much less likely to have coresident parents than single high earners or low-earning married individuals.

In Table 6, we see that while white and black children have indistinguishable effects from later exits, returns have a far stronger effect for black and Hispanic children than for whites. The migration and birth order coefficients are significant only for black children, with youngest children being seven points more likely to have coresident parents and those who don't migrate increasing that probability by 10 points.

In Table 7, we explore an alternative specification—using last observed exits instead of first exits. The return variable is excluded as last exits incorporate much of that variation, but it doesn't significantly affect the trend of the last exit coefficients. Like in the nonparametric first exit specification, we see an increasing trend in likelihood of coresident parents as exit age increases, and similar results for our control coefficients.

5 Conclusion

This paper presents preliminary evidence in favor of a mixed motivation transfers model. We present evidence that behaviors by youth that inconvenience parents during emerging adulthood are correlated with future youth generosity (permitting parent coresidence in old age). These results are robust to including controls for family size (of both the parent and the child) and regional relocation. We find that this does vary by income, which suggests that there may be more pecuniary forms of signaling between upper income parents and children. Similarly, the strong results for the family size of both generations suggests that the support network available to the parents plays a role in determining their residence. This paper adds to the emerging family transfers literature of mixed motivation models by presenting empirical evidence consistent with a model of esteem and reciprocity.

Modeling these behaviors is important for policy in that there is significant potential for government action to crowd out family support networks. An increase in government support to emerging adults decreases the need for parental transfers at that age, and thus adds noise to the signaling game, preventing parents from precisely communicating their types. This communication breakdown could have repercussions for parental support in old age, as children would be unable to determine which parents were generous and which were ungenerous.

Future research will incorporate the NLSY geocoded data to provide valuable insights into the local labor market characteristics of both the parent and the youth's residences around the time of home-leaving. This would allow a more in-depth analysis of the economic circumstances surrounding these decisions, examining changes in the signaling potential due to variations in employment possibilities.

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Appendix A: Tables and Figures

[Hold for Table 1: Living Arrangements of Older Persons Around the World]

Table 2: Descriptive Statistics of Sample

	Count (N)	Mean	Std Dev	Min	Max
Dependent Variable					
Ever coresident parents	6,413	24%	43%	0	100%
Education/Income					
AFQT	6,144	41,082	28,802	0	100,000
Highest grade completed	6,413	13.2	2.5	0	20.0
Average income from 30 to 45	6,272	$ 49,988	$ 51,981	0	$ 974,100
Assets	5,850	$ 6,048	$ 12,003	0	$ 127,729
Demographics					
Female	6,413	50%	50%	0	100%
Hispanic	6,413	19%	39%	0	100%
Black	6,413	30%	46%	0	100%
Oldest	6,405	20%	40%	0	100%
Youngest	6,405	25%	43%	0	100%
Total Siblings	6,405	3.8	2.6	0	19.0
Exit variables					
Observed out in 1979	6,413	7%	26%	0	100%
Age at first exit	6,199	21.6	3.0	16	50.0
Age at last exit	6,199	27.0	7.5	16	50.0
Exited past 23	6,413	20%	40%	0	100%
Ever returned	6,413	61%	49%	0	100%
Family formation					
Never married	6,413	18%	39%	0	100%
Married	6,413	82%	39%	0	100%
Ever separated or divorced	6,413	41%	49%	0	100%
Teen parent	5,089	24%	42%	0	100%
Age at first birth	5,089	24.4	5.9	10	47.0
Any biological children	6,019	72%	45%	0	100%
Biological Children	6,019	1.6	1.4	0	11.0

Note: Sample is from the 1979 National Longitudinal Survey of Youth.

Table 3: Probability of Parents Living with Adult Children (LPM)

	(1)	(2)	(3)
Exited past 23	0.165***	0.152***	0.151***
	(0.0139)	(0.0147)	(0.0148)
Ever returned	0.227***	0.206***	0.206***
	(0.00965)	(0.0103)	(0.0104)
Ever separated/divorced		0.0545***	0.0556***
		(0.0117)	(0.0119)
Female		-0.0279**	-0.0291**
		(0.0113)	(0.0115)
Black		0.0452***	0.0438***
		(0.0150)	(0.0152)
Hispanic		0.0721***	0.0729***
		(0.0160)	(0.0162)
Total siblings		-0.00615***	-0.00594**
		(0.00227)	(0.00243)
Biological children		0.0399***	0.0406***
		(0.00496)	(0.00502)
Ever married		-0.193***	-0.193***
		(0.0195)	(0.0197)
Oldest			-0.00433
			(0.0147)
Youngest			0.0113
			(0.0134)
Lives where raised			0.0505***
			(0.0156)
Constant	0.0709***	0.224***	0.167***
	(0.00670)	(0.0416)	(0.0459)
Observations	6,413	5,720	5,586
R-squared	0.087	0.146	0.149

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: Columns 2 and 3 include controls for child's education, income quintile between ages 30 and 45, and dummies for birth year.

Table 4: Probability of Parents Living with Adult Children (Nonparametric)

	(1)	(2)	(3)
Exited at 19	-0.0194	0.0209	0.0177
	(0.0230)	(0.0261)	(0.0268)
Exited at 20	0.0305	0.0423	0.0402
	(0.0237)	(0.0265)	(0.0272)
Exited at 21	0.0468*	0.0662**	0.0594**
	(0.0246)	(0.0273)	(0.0279)
Exited at 22	0.0790***	0.0954***	0.0914***
	(0.0257)	(0.0283)	(0.0289)
Exited at 23	0.0926***	0.116***	0.110***
	(0.0267)	(0.0295)	(0.0302)
Exited at 24	0.116***	0.126***	0.119***
	(0.0299)	(0.0324)	(0.0329)
Exited at 25	0.150***	0.160***	0.159***
	(0.0328)	(0.0353)	(0.0359)
Exited at 26	0.212***	0.226***	0.222***
	(0.0366)	(0.0389)	(0.0396)
Exited at 27	0.215***	0.230***	0.231***
	(0.0476)	(0.0528)	(0.0537)
Exited at 28	0.351***	0.342***	0.335***
	(0.0521)	(0.0529)	(0.0533)
Exited 29+	0.367***	0.357***	0.352***
	(0.0429)	(0.0445)	(0.0450)
Ever returned	0.230***	0.210***	0.210***
	(0.00983)	(0.0104)	(0.0106)
Ever separated/divorced		0.0583***	0.0587***
		(0.0117)	(0.0118)
Female		-0.0275**	-0.0285**
		(0.0113)	(0.0114)
Ever married		-0.190***	-0.189***
		(0.0193)	(0.0195)
Black		0.0395***	0.0381**
		(0.0150)	(0.0152)
Hispanic		0.0706***	0.0708***
		(0.0158)	(0.0161)
Total siblings		-0.00632***	-0.00588**
		(0.00224)	(0.00240)
Biological children		0.0426***	0.0432***
		(0.00498)	(0.00504)
Live where raised			-0.000818
			(0.0147)
Constant			0.0118
			(0.0133)
			0.0439***
Observations			(0.0156)
R-squared	0.0367*	0.176***	0.125**

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Columns 2 and 3 include controls for child's education, birth order, and income quintile between ages 30 and 45.

Table 5: Probability of Parents Living with Adult Children by Income (LPM)

	Low	Lower Middle	Middle	Upper Middle	Upper
Exited past 23	0.153***	0.131***	0.135***	0.163***	0.163***
	(0.0350)	(0.0342)	(0.0329)	(0.0317)	(0.0313)
Ever returned	0.241***	0.216***	0.266***	0.175***	0.157***
	(0.0311)	(0.0270)	(0.0255)	(0.0199)	(0.0185)
Ever separated/divorced	0.0785*	0.0863***	0.0209	0.0271	0.0497**
	(0.0440)	(0.0331)	(0.0282)	(0.0213)	(0.0212)
Female	-0.0455	-0.0516*	0.0252	-0.0411*	-0.0571***
	(0.0331)	(0.0294)	(0.0273)	(0.0211)	(0.0211)
Ever married	-0.118***	-0.223***	-0.160***	-0.381***	-0.290***
	(0.0444)	(0.0413)	(0.0443)	(0.0568)	(0.0602)
Total siblings	0.00782	-0.0184***	-0.00546	-0.00793	-0.00620
	(0.00560)	(0.00493)	(0.00543)	(0.00514)	(0.00556)
Biological children	0.0434***	0.0473***	0.0318**	0.0395***	0.0492***
	(0.0106)	(0.0123)	(0.0133)	(0.0102)	(0.0103)
Oldest	0.0157	-0.0423	-0.0325	0.0197	-0.00231
	(0.0440)	(0.0384)	(0.0359)	(0.0270)	(0.0256)
Youngest	0.0880**	-0.00394	0.00734	0.0157	-0.00972
	(0.0389)	(0.0352)	(0.0325)	(0.0255)	(0.0222)
Black	0.0425	0.0109	0.0526	0.0403	0.0838**
	(0.0409)	(0.0352)	(0.0352)	(0.0293)	(0.0336)
Hispanic	0.0321	0.118***	0.0925**	0.109***	0.00940
	(0.0461)	(0.0423)	(0.0363)	(0.0319)	(0.0303)
Live where raised	0.0756	0.0893**	0.0174	0.0422	0.0340
	(0.0599)	(0.0429)	(0.0395)	(0.0282)	(0.0246)
Constant	-0.00197	0.0392	0.157	0.313***	0.373***
	(0.133)	(0.119)	(0.112)	(0.102)	(0.0961)
Observations	1,019	1,005	1,054	1,192	1,316
R-squared	0.097	0.137	0.136	0.173	0.142

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: Columns 2 and 3 include controls for child's education and dummies for birth year. Income quintile was determined based on average household income from age 30 to 45.

Table 6: Probability of Parents Living with Adult Children by Race/Ethnicity (LPM)

	White	Black	Hispanic
Exited past 23	0.146***	0.142***	0.166***
	(0.0214)	(0.0254)	(0.0335)
Ever returned	0.178***	0.254***	0.216***
	(0.0131)	(0.0208)	(0.0280)
Ever separated/divorced	0.0521***	0.0535**	0.0642**
	(0.0146)	(0.0253)	(0.0299)
Female	-0.0406***	-0.00654	-0.0313
	(0.0145)	(0.0226)	(0.0290)
Ever married	-0.226***	-0.163***	-0.205***
	(0.0320)	(0.0312)	(0.0469)
Total siblings	-0.0120***	-0.00230	-0.00586
	(0.00383)	(0.00388)	(0.00518)
Biological children	0.0506***	0.0428***	0.0251**
	(0.00724)	(0.00863)	(0.0114)
Oldest	-0.000652	-0.0241	0.00815
	(0.0183)	(0.0308)	(0.0371)
Youngest	-0.00420	0.0734***	-0.0285
	(0.0161)	(0.0284)	(0.0366)
Live where raised	0.0192	0.107***	0.0476
	(0.0194)	(0.0330)	(0.0419)
Constant	0.302***	0.101	0.202*
	(0.0649)	(0.0911)	(0.112)
Observations	2,667	1,720	1,054
R-squared	0.148	0.144	0.137

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: Columns 2 and 3 include controls for child's education, income quintile between ages 30 and 45, and dummies for birth year.

Table 7: Probability of Parents Living with Adult Children (Nonparametric)

	(1)	(2)	(3)
Last exited at 20	-0.00467	-0.00484	-0.00624
	(0.0192)	(0.0196)	(0.0200)
Last exited at 21	-0.0262	-0.0289	-0.0331*
	(0.0186)	(0.0192)	(0.0198)
Last exited at 22	-0.00998	-0.00478	-0.00854
	(0.0193)	(0.0205)	(0.0210)
Last exited at 23	-0.0317*	-0.0324*	-0.0425**
	(0.0181)	(0.0188)	(0.0192)
Last exited at 24	-0.00429	-0.00671	-0.00861
	(0.0194)	(0.0198)	(0.0205)
Last exited at 25	0.0233	0.0198	0.0151
	(0.0213)	(0.0221)	(0.0226)
Last exited at 26	0.0579**	0.0656***	0.0578**
	(0.0231)	(0.0238)	(0.0243)
Last exited at 27	0.115***	0.101***	0.0959***
	(0.0284)	(0.0292)	(0.0300)
Last exited at 28	0.199***	0.197***	0.185***
	(0.0327)	(0.0340)	(0.0343)
Last exited at 29	0.218***	0.205***	0.210***
	(0.0359)	(0.0372)	(0.0378)
Last exited at 30	0.302***	0.290***	0.287***
	(0.0376)	(0.0393)	(0.0399)
Last exited 31+	0.443***	0.416***	0.412***
	(0.0185)	(0.0201)	(0.0206)
Ever separated/divorced		0.0300***	0.0299**
		(0.0115)	(0.0117)
Female		-0.0139	-0.0140
		(0.0110)	(0.0112)
Ever married		-0.145***	-0.143***
		(0.0188)	(0.0190)
Black		0.0240*	0.0243*
		(0.0146)	(0.0147)
Hispanic		0.0587***	0.0602***
		(0.0156)	(0.0158)
Total siblings		-0.00429*	-0.00409*
		(0.00222)	(0.00237)
Biological children		0.0446***	0.0447***
		(0.00498)	(0.00504)
Oldest			-0.00649
			(0.0144)
Youngest			0.0118
			(0.0130)
Live where raised			0.0302*
			(0.0157)
Constant	0.114***	0.215***	0.179***
	(0.0132)	(0.0406)	(0.0448)
Observations	6,199	5,565	5,441
R-squared	0.191	0.225	0.227

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Columns 2 and 3 include controls for child's education, income quintile between ages 30 and 45, and dummies for birth year. Omitted last exits are those before age 20.

Appendix B: Data Appendix

Respondent living with parents—if the respondent reported "in parental household," he/she was marked as living with his/her parents. For respondents not reporting "in parental household" or "independent housing" but with parental figures present on the roster, no coresidence was reported (e.g. respondent reports dorm but lists parent(s) on roster was not recorded as coresidence).

Parents living with respondent—if respondent reports independent housing (own home/apartment) and there are one or more parents on the roster (parents or step-parents) and the respondent is 25 or older, this is recorded as parents coresiding.

Respondent lives where raised—the most frequent region until age 20 is recorded as the "growing up" region, and the "current" region is recorded as the most frequent region from age 30 onward. A respondent "lives where raised" if these two regions match.

Maximum age observed—I include only those observed at least until age 30, which drops another XXX (primarily white) individuals from my sample.

Birth cohort restriction—the earliest "large" wave of exits occurs between age 18 and 19, so I exclude those born before 1960 as they were 19 or older at the time of first surveying.

Exits from the parental home—

> -Never-coresiders—there are about 1,300 individuals who are never observed inside the parental home, so no age of departure can be recorded. However, an age can be imputed for "exited by XX" dummy variables, so they are included in such regressions.
>
> -An exit is defined as an observation in which the respondent is not in the parental home in a period immediately following a period in which he/she was in the parental home. In the case of missing data, an observation in the parental home followed by some number of missing observations followed by an observation out of the parental home is recorded as an exit at the time of the first missing. This does not significantly affect my estimates, as the number of imputed exits is small (214 imputed out of 6,413 exits).

Sample Selection	
Full NLSY	12,686
First exit observed or exited before 1979	12,393
Observed through age 30	10,281
Born after 1959	6,413