INTERGENERATIONAL FINANCIAL TRANSFERS AND YOUNG ADULTS' TRANSITION IN AND OUT OF THE PARENTAL HOME

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Abstract

This paper analyzes the interplay between young adults' living arrangements and intergenerational financial transfers. Attention is paid to the prevalence of two alternative residential arrangements, co-residence with parents and residential independence from them, as well as to transitions across them. Findings reveal a positive association between parental financial assistance and co-residence: when parents provide financial support, children are more likely to live with them, remain living with them, and return living with them. Residential independence during college does not seem to endure if achieved through parental financial support, as young adults who received financial assistance during college are more likely to return home. Although causal conclusions would be hazardous and mechanisms behind such relation remain hard to disentangle, residential and financial support seem to go hand in hand, which highlights possible patterns of vulnerability and multiple dependence.

Keywords: co-residence, parental financial support, young adults, transitions

The current context of young adults' lives: parental home leaving and financial support

Young adults' transition out of the parental home and towards independence appears to have changed character over the last few decades. Traditionally, the transition to adulthood has been defined by certain marker events, such as completing formal education, entering the labor force, leaving the parental home, getting married, and becoming a parent (Hareven, 1994), in a relatively short period of time and in a more or less predictable sequence. In the latter half of the twentieth century, life course transitions have grown increasingly de-standardized and differentiated (Brückner & Mayer, 2005; Elzinga & Liefbroer, 2007), pathways to adulthood have become more heterogeneous and discontinuous (Hareven, 1994; Macmillan & Copher, 2005), the importance of traditional markers of adulthood seem to have been declining (Berlin, Furstenberg, & Waters, 2010), and it has become more and more common to forgo some transitions. In this paper, the focus is on one specific transition: the transition out of the parental home.

Leaving the parental home is one of the first major markers in defining the transition to adulthood (Billari & Tabellini, 2010), which has been seen as "the key indicator of leaving childhood behind" (Goldscheider, 1996, p.3). It is perceived as the first independent event of the life course (Mayer & Schwarz, 1989) and as an integral part of establishing independence from the parental home (Holdsworth, 2000, p. 201). The achievement of residential independence from parents is a crucial step in personal development, which denotes autonomy from the family of origin (Gaiser, 1999, p.55). Powerful meanings and expectations are associated to it: it signifies freedom and privacy (Rusconi, 2006) and it is the beginning of the process of forming an independent household, which is the focal point for several developmental progresses (Bendit, 1999, p.21).

However, changing social and economic realities have highlighted how the boundaries of independence in different spheres of life have been brightening and moving away from one's parents may not coincide with financial independence; parents may provide support to their children not only as housing, but also as financial transfers, independent of living arrangements.

In the following, I aim at investigating young adults' transitions in and out of the parental home focusing on the relevance of linked lives and specifically on the interplay between parental financial assistance and young adults' residential biographies.

Previous research

A wide range of studies has investigated the transition to adulthood and the timing and patterns of leaving the parental home in particular. However, the research record reports opposite claims about the direction of co-residence trends, depending on which historical times are compared and whether young people's marital status is taken into account. The widespread perception seems that those coming of age during the last several decades are uniquely slow in establishing independence from their parents (Kuttner, 1988; Littwin, 1986; White & Lacy, 1997). Conversely, some scholars have argued that young adults increasingly prefer to live on their own (Klinenberg, 2012). On the one hand, young people are defined as "slackers," who refuse to grow up and, according to the nesting thesis, they are hardly able to break away from their parents' home (Nave-Herz, 1997). On the other hand, the percentage of unmarried young adults who live with their parents has recently reached an all-time low (Rosenfeld, 2010).

Previous research has looked at the determinants of parental home-leaving focusing, for example, on young adults' involvement in parallel events (e.g. job, marital status), opportunities and constraints that impede or facilitate the transition (e.g. housing market, economic conditions,

circumstances within the parental home), cultural factors, and social norms (e.g. attitudes and value orientations). Different explanations have been advanced to account for young adults' living arrangements: Some have focused on the role of culture and preferences for togetherness rather than privacy (Giuliano, 2007; Manacorda & Moretti, 2006; Reher, 2005); others have stressed the role of economic and institutional factors (Aassve, Billari, & Ongaro, 2001; Blossfeld, Klijzing, Mills, & Kurz, 2005) relating the alleged postponement of young adults' departure from the parental home to the overall transformation of the transition to adulthood, to prolonged education and the consequent postponement of the achievement of economic independence, as well as to changes in marriage and family formation behavior.

Some scholars, instead, have focused on intergenerational relationships. However, little emphasis has been placed on intergenerational financial transfers and their interplay with young people's living arrangements in particular. Research on parental financial support for young adults is limited and has mainly focused on investigating types and extent of support, as well as factors associated with higher or lower assistance, rather than on its interaction with living arrangements. Research has shown that parents provide considerable support to their children, which has increased substantially in the last three decades, and differs by socio-economic status (Wightman, Patrick, Schoeni and Schulenberg, 2013). Schoeni and Ross (2005) used the 1988 Panel Study of Income Dynamics (PSID) to examine material support young people received from their parents in terms of time and money and reported large disparities by parental income, with higher income families more likely to provide assistance to their young adult children. Wightman, Schoeni and Robinson (2012), using the Transition to Adulthood supplement of the PSID, found that most young adults receive some form of support, the amounts being transferred are substantial, and family SES and college attendance are the biggest factors associated with parental assistance. Qualitative studies on European countries showed that family support is a key factor in facilitating home leaving, and individual circumstances have been found to matter when negotiating support, including the quality of relationships between parents and children (Holdsworth, 2004). However, quantitative evidence for the United States is lacking.

Research Interests and Goals

Jointly considering trends in co-residence and intergenerational transfers reveals how young adults' alternative between living with their parents or independently may assume different meanings depending on its interaction with parental financial support. As a consequence of economic and social changes, young people rely more on others, especially their parents, for support during the transition to adulthood (Waters, Carr, Kefalas, & Holdaway, 2011). Research has shown that parents view financial support as legitimate when it aims to facilitate education, employment, or family formation, and is aimed at 'scaffolding' toward independence (Swartz, Kim, Uno, Mortimer, & O'Brien, 2011). We know less, instead, about the interplay between housing and financial assistance provided by parents to their children who, during this stage, may occupy a dual status as both independent and dependent (Dey & Morris, 1999; Hamilton, 2013). This paper aims at improving our knowledge in that respect; to that end, the first goal is to clarify the extent to which young adults live with their parents or instead live independently, as well as the extent to which they transition across those different living arrangements. In light of the increasing parental assistance (Wightman et al. 2013), young people's status is more and more defined by the way in which parental financial support and residential arrangements interact; for this reason, the second research goal refers to examining the interplay between young adults' living arrangements and intergenerational financial transfers. Specifically, I aim at exploring whether and to what extent housing and financial assistance combine or substitute. Also in this case, the focus is not only on the prevalence of particular arrangements but on transitions as well.

The interaction between residential and economic support may play out differently across subgroups. While differences may be linked to a variety of family and individual characteristics, in this paper, I will focus on effects conditional on college attendance. The prolongation of education and the consequent detachment of changes in residential arrangements from financial conditions raise concerns about whether parents are financing their children's independent living or are, instead, helping them to successfully launch. Specific emphasis is placed on parental support for college students: Being in college has been shown to be one of the most important factors in predicting young adults' economic dependence on their parents, as well as their moving away from the parental home (Hamilton, 2013; Wightman et al., 2012). College attendance may be a reason for living separately from one's parents but, at the same time, may increase the need and the likelihood to receive economic support, especially considering the rising cost of tuitions. Consequently, the interest emerges in whether financial assistance from parents when attending college may moderate the effect of college attendance on the likelihood of moving in and out of the parental home.

Method

Data

I use data from the National Longitudinal Study of Adolescent Health (Add Health) (Harris, 2009), a nationally representative study of youths in the United States. The Add Health Survey consists of four waves conducted between 1994 and 2008, starting, in wave 1 (w1), from a sample of students in grades 7-12. Respondents were followed with a series of in-home interviews at waves 2-4. Supplementary data were also collected, among which a questionnaire on family and relationships administered to parents at wave 1. This provides information from childhood through adolescence and beyond, allowing a life course perspective in the analysis. For this study, I select non-disabled respondents participating in both waves 3 (w3) and 4 (w4) and who were assigned a sampling weight (N=6,836). I exclude cases in which respondents were living away from their parents before they were 18 years old. All the following analyses adjust for the complex sample design using weights and strata (Chantala, 2006).

Measures

Residential Arrangements

Residential arrangements capture whether a respondent is living with at least one parent, including step-parents and in-laws, or not (*co-residence with parents: no=0; 1=yes*). Living arrangements are measured, for each respondent, at two points in time, at wave 3 and at wave 4. Wave 3 was collected in 2001-2002, when respondents were between 18 and 28 years old (mean=22, SD: 1.64) while wave 4 was collected in 2008-2009, when respondents were between 25 and 34 years old (mean 28, SD 1.57).

Intergenerational Financial Transfers

Measures of intergenerational transfers indicate whether parents are economically supporting their children. Wave 3 includes a set of questions asking whether a respondent received any financial support from a parent in the previous 12 months, based on which I define a dichotomous indicator for any assistance received (any financial support: no=0; yes=1) in case

respondents reported receiving financial support from any of the six parents about which they were asked (current and former residential mothers and fathers as well as nonresidential biological mothers and fathers). At wave 4 respondents were asked whether and how often a parental figure paid a respondent's living expenses or gave \$50 or more to pay living expenses during the previous 12 months, as well as whether they received any financial gifts or loans from their parents or relatives to help with a home. ii Respondents who indicated they received any help are considered financially supported at wave 4. Furthermore, a categorical variable was constructed indicating the frequency of support at wave 4, distinguishing between "never", "yes, but don't know how many time", "1 or 2 times", "3 or 4 times", taking the highest report between assistance from mother and father figure. iii While information on the amount of money received is available also at wave 3, due to uncertainty in defining the amount received, iv such distinction is only made for support at wave 4. In the following analyses, I will use the term "recent" to refer to financial transfers received during the previous 12 months, that is, transfers measured at the same time as residential arrangement outcomes. The word "earlier" will be used, instead, to refer to transfers measured at a previous interview compared to the residential outcomes.

Control variables

Several factors related to family and individual characteristics may possibly affect the attractiveness and the feasibility of alternative choices about living arrangements, as well as the likelihood of intergenerational transfers. To account for such factors possibly making the relationship between living arrangements and intergenerational transfers spurious, the following analyses include a number of control variables. Table 1 shows descriptive statistics for all the variables included in the following multivariate analyses.

I control for socio-demographic individual characteristics with a dummy for sex, a continuous variable for age, and a categorical variable for race/ethnicity. Time-varying individual characteristics include: a dummy distinguishing young adults in a marital or cohabitating union from singles; a categorical variable distinguishing between those working full time (defined as working 30 or more hours a week), those working part time, and those not working; a dichotomous indicator of college attendance; and a categorical indicator for level of education. To account for the effect of family characteristics, I consider a range of variables indicating parental resources, family structure, and parenting styles. Time constant variables related to one's family context were measured at wave 1 (when respondents were in grades 7-12). To control for the effect of family resources, I looked at parental education as well as family income. Since income and education effects did not substantively differ, I only present results about parental education, which is operationalized as a dummy for college-educated parents, indicating parents with at least some college. A more detailed categorical variable for parental education led to the same substantive conclusions, therefore I chose for a simpler operationalization. This seems to support other research (Wightman et al. 2013) which found that the offspring of college-educated parents were consistently more likely to receive any support from their parents than those whose parents had less than a college education, while the difference between the middle and bottom educational categories of parental education was not significant. To account for the effect of family structure, I include a dummy indicating whether the family was intact (i.e. two parents) during childhood (wave 1). To acknowledge the effect of parental control, supervision and parenting styles, child's involvement in any extracurricular activities is taken as an indicator for parenting style (Cheadle & Amato, 2011). In preliminary

analyses, I examined a range of other control variables: to account for family relations, I considered a variable measuring closeness to parents; to better account for parenting styles, I considered variables capturing parental involvement in PTA, level of autonomy given to the child during childhood, as well as the extent to which parents encouraged independence during childhood. Lastly, as research has shown that poor location is related to home leaving patterns (Cobb-Clark, 2008), which is linked to the availability of resources in a geographic location, I included an indicator of neighborhood disadvantage. As none of those variables showed significant effects or led to an improvement in model fit, I did not include them in the final analyses.

[Table 1 about here]

Analytic Strategy

To examine the prevalence of alternative living arrangements and their association with financial transfers, I use logistic regression analysis and account for the effect of recent and earlier financial assistance from parents on young adults' residential situation at the last observation (at wave 4), controlling for a number of individual and family characteristics.

To investigate transitions between living arrangements, I estimate manifest Markov models. In transition models, the influence of past outcomes on the present outcome is explicitly expressed by modeling the conditional expectation of the response variable as a function of past outcomes (Markov process), as well as explanatory variables (Molenberghs & Verbeke, 2005; Yu, Morgenstern, Hurwitz, & Berlin, 2003). In the present case, the outcome is a dichotomous variable capturing whether a respondent is living in the same household with his/her parent(s) or not. Residential arrangements are observed, for each respondent, at two points in time (wave 3 and wave 4), and the interest is in analyzing how young adults are distributed in co-residence and residential independence states as well as how they transition across them. Using Markov models, I estimate the transition probabilities from the state at time t-1 to the state at time t. The outcome at t is assumed to depend on the state at t-1 (first-order Markov process). Denote the outcome for respondent i at time t by y_{it} . The probabilities to be estimated are the transition probabilities $P(y_t = r \mid y_{t-1} = s)$, where s and r refer to a particular residential state. Note that this is a manifest Markov model in which the classification error probabilities are assumed to be equal to zero and do not need to be estimated. Analyses were performed using the Latent GOLD software (Vermunt & Magidson, 2008), in which the model probabilities are parameterized using logistic equations (see equation A1 in the Appendix) and the logit parameters can be interpreted as the log odds of making a transition from state s to state r rather than staying in state s (see equation A2 in the Appendix). Note that in the transition probabilities equation the "no transition" category serves as the reference category and the reference category changes with the origin state (transition coding, for more details see Magidson, Vermunt & Tran, 2007). Additionally, covariates' effects on the transition probabilities can be included. In the following analyses, the main focus is on the effect of parental financial assistance, while a host of individual and family characteristics are controlled for.

Results

Descriptive analyses (see table 2) show an association between housing and financial support: those who receive financial assistance from their parents are much more likely to cohabit with them.

[Table 2 about here]

To investigate the significance of such association, in table 3 I present the results of logistic regression models estimating the effect of economic support on living arrangements (measured at wave 4), accounting for several factors which may render such relationship spurious. Results suggest an effect of recent financial assistance on residential arrangements, which is significant even when controlling for earlier support and for other variables. Specifically, Model 1 in table 3 shows that the odds of young people living with their parents are 74 % higher when they recently received financial transfers from them. Similar results (not shown) were obtained excluding other variables from the model. In case of earlier financial support (measured at wave 3), instead, the association with co-residence (measured at wave 4), although positive, is not significant. Similar results (not shown) were obtained not controlling for covariates or for recent support.

Model 2 tests the effect of the frequency of financial assistance from parents and shows that the higher the frequency of transfers is, the higher the odds of young adults living with their parents are.

While the introduction of covariates does not change the main effect of financial assistance, some variables are found to have strong significant effects. In particular, Asians, Hispanics and Blacks are more likely to co-reside with their parents compared to Whites. College attendance, higher education, full-time work and being in a marriage or cohabitation are associated with lower odds of living with one's parents. Conversely, growing up in a two-parent family and being involved in extracurricular activities during childhood seems associated with a higher likelihood to live with parents.

[Table 3 about here]

In order to gauge the association between intergenerational transfers and transitions in and out of the parental home, table 4 illustrates the observed transitions probabilities between residential states. Respondents may be living with their parents or not at the first observation (at wave 3, t-1) and they may be staying in their initial state or change state at the second observation (wave 4, t).

[Table 4 about here]

Over half of the respondents were living outside of the parental home across observations, while about 12% were never observed living separately from their parents. The remaining 36% experienced a transition in or out of the parental home during the observation period. Of those initially observed living with their parents, over 70% had moved to independent living by the time of the second observation, and, of those living independently at the first observation, slightly less than 90% were observed in the same state at the second observation.

Table 5, shows the results from transition models looking at the association between parental financial assistance and the probability of transitioning from co-residence to independent living or vice-versa, controlling for other factors possibly confounding such relationship. As explained above, in such models, living arrangements at t (wave 4) are assumed to depend on living arrangements at t-1 (wave 3). Furthermore, the effect of parental financial transfers on living arrangements is supposed to depend on previous residential arrangements, therefore assuming an effect of intergenerational transfers on transition probabilities. When an effect is assumed to depend on the previous state, parameters can be interpreted as the log odds of making a transition from one state to another rather than staying in the same state (Manzoni, Vermunt, Luijkx, & Muffels, 2010). In interpreting the results referring to the transition probabilities, the reader should remember that "no transition" serves as the reference category

and the reference category changes with the origin state. In other words, the probabilities estimated are the probability of moving from co-residence with parents to independent living rather than remaining in the same household with one's parents and the probability of moving back living with one's parents rather than continuing living independently. All the models control for the covariates listed in table 1.

Model 1 considers the effect of any financial transfer on transition probabilities across residential states and shows that, controlling for a host of other variables, those who recently received financial assistance from their parents have 37% lower odds of moving from coresidence to residential independence and 79% higher odds of moving from residential independence back to living with parents compared to those who did not recently receive support. Model 2 looks at the effect of the frequency of recent parental economic assistance: results show that the more often parents transfer money to their (young adult) children, the less likely they are to move from co-residence to independent living, rather than staying in the parental home, and the more likely they are to move back to co-residence rather than remaining living independently.

Model 1 shows no overall significant effect of earlier financial support (measured at wave 3) on later transitions across residential states. To specifically investigate the effect of financial support during college on later transitions in and out of the parental home, Model 3 includes an interaction between earlier financial transfers and college attendance. Assistance with college tuition costs is one of the most common reasons for financial transfers from parent to their (young adult) children (Wightman et al. 2012); at the same time, college students are more likely to live away from their parents, which may generate a dual state of dependence/independence. Results show that college attendance is associated with later transitions from independent living arrangements, but the effect differs depending on whether one was financially supported by parents or not, independent of recent financial support and controlling for other variables: those who did not receive financial support during college are more likely to remain living independently rather than moving back with their parents, while those who were financially supported by their parents during college are more likely to return to the parental home rather than continuing living independently. College enrollment does not seem to have a significant effect on transitions out of an initial co-residence state instead.

In preliminary analyses I tested for possible moderating effects of other variables, but no significant effects were found.

[Table 5 about here]

Conclusions

This paper investigated the relation between intergenerational transfers and (transitions between) young people's residential arrangements, accounting for both individual and family-related factors known to affect the feasibility and attractiveness of housing arrangements and parental support, possibly making their relationship spurious. Findings revealed a significant association between parental financial assistance and living arrangements, net of other individual and family characteristics: when parents and children live together, parents are more likely to provide financial assistance, which indicates that residential and financial support tend to combine, rather than substitute each other. Results demonstrated that economic support was associated not only with the prevalence of co-residence rather than independent living, but also with the likelihood of transitioning in and out of the parental home. Specifically, the presence of recent financial transfers was associated both with lower odds of moving from previous co-residence with parents to current independent living rather than remaining living with one's

parents, as well as with higher odds of moving back with one's parents rather than remaining living independently. Significant results in the same direction were also found concerning the frequency of financial support.

No significant results were found considering overall earlier financial support. However, one should be cautious in interpreting these results. In fact, between 5 and 8 years may have passed between the time earlier financial support was measured and the time living arrangements were measured. Given the length of time between the two observations, it is difficult to know whether the absence of an effect indicates that financial support has no effect on living arrangements, or instead the effect faded over time, or other events may have happened which may have affected the relationship.

Considering the growing importance, as well as the high costs, of a college education, I investigated the association between parental support and transitions in and out of the parental home for college students specifically. Results showed that young people attending college are less likely to transition from independent living (while in college) back to co-residence with their parents later; however, while this holds true for those not receiving economic support, parental financial assistance during college reverses the relation, so that those who received financial support from their parents are more likely to move from independent living back to living with their parents rather than remaining residentially independent.

Discussion

Demographic trends associated with the second demographic transition (Lesthaeghe, 2010; Van de Kaa, 2001), among which educational expansion, changes in family formation, as well as career patterns, have raised awareness of the blurring boundaries between different stages in young people's lives (Cordon, 1997), generating increasing interest in exploring how they transition to adulthood. This paper investigated the transition out of the parental home, as one of the first and main markers of the transition to adulthood.

Whereas demographic changes, hard economic times, worsening employment prospects, and declining wages have been recognized as some of the factors determining new circumstances in breaking away from the parental nest and explaining the timing and patterns of the transition to adulthood, assumptions about parental support to their children have also been changing significantly (Dey & Morris, 1999). Parenthood is increasingly defined as a life-long relationship which gives rise to unconditional parental obligations, and children have relatively high expectations of parental support (Goldscheider & DaVanzo, 1986). Responsibilities seem to be shifted from state to family: parents are regarded as having continued obligations towards their children and young adults are nowadays receiving substantial financial assistance from their parents (Schoeni & Ross, 2005). Yet, to date, attention to intergenerational transfers in the context of the transition to adulthood has been scarce. This paper contributes to shedding light on patterns of young adults' living arrangements and their association with parental financial assistance. This has not only theoretical significance, but also has policy implications, given the link with housing, employment, and education, among other institutions. Furthermore, the importance of the event of leaving home both to the individuals who are leaving as well as those who are left behind makes it particularly relevant. At the same time, this can inform the discussion on the reproduction of social inequality, as one of the mechanisms through which families pass on advantages to their children is the transfer of resources. The growing dependence of children on their parents' ability to subsidize their college, housing, low paying

jobs etc., and the inability of some parents to provide adequate support may be feared as exacerbating social inequality.

While this study shed light on the link between intergenerational support and living arrangements, the question whether staying with parents is good or bad remains open. (Prolonged) co-residence with parents may, on the one hand, relax liquidity constraints and encourage the accumulation of more human capital; on the other hand, previous research suggested that it may impair human capital and may be associated with a dampening effort to improve one's economic situation and warned about possible effects of the timing of leaving the parental home on later income (Billari & Tabellini, 2010). We also know that countries with a smaller fraction of young men living with their parents grow faster (Billari & Tabellini, 2010), which suggests that a delayed transition to adulthood might hurt a country's economic performance. Additional concerns relate to the effect of co-residence on fertility patterns. Similarly, whether parents' support to their young adult children hinders or facilitates their transition to adulthood is an open debate. On the one hand, parental support may provide young adults with the ability to complete their education without incurring substantial debt and may result in greater financial security and wealth accumulation. On the other hand, it may negatively impact young adults' assumption of responsibilities.

While results show that residential and financial support are associated, some notes of caution are in place in interpreting results. First, conclusions on the mechanisms behind this association remain speculative and go beyond the scope of this paper. Specifically, one should be careful in interpreting these results in causal terms. One possible mechanism behind the combination or residential and financial assistance may be that financial assistance retards independence in multiple domains, including housing. However, although a number of variables which could make such relation spurious were controlled for, other unobserved variables may bias such relation. The empirical patterns were confirmed when adding controls for characteristics which could affect parental assistance as well change in living arrangements. Nevertheless, it is not possible to exclude that some other factors may account for the observed associations between financial assistance and residential patterns. Furthermore, it is difficult to know whether intergenerational transfers drive living arrangements or vice-versa, and alternative causal explanations cannot be definitely ruled out. It could be that parental financial support leads young people to choose to live with their parents, for example because it increases the sense of togetherness; alternatively, it could be that young people who live with their parents get more financial help from them because living arrangements act on the likelihood of financial support. Or else, both residential and financial support could stem from the same characteristics related for example to socio-economic status, relationship quality, or parenting style. Such alternative explanations point to limitations in the ability to understand the processes that underlie the association between support from parents and residential outcomes. More frequent measurements would assist in sorting out the causal direction of the relationships observed here.

Second, this research focused on financial transfers without making distinctions among different type of financial assistance. However, parents may provide support to cover differ sort of expenses, among which rent or mortgage, vehicle, college tuitions, bills, personal loans, daily expenses, and it may be that the association between financial support and living arrangements differs depending on the type of assistance provided. Lastly, parents may provide a wealth of other forms of assistance, among which information, network and emotional support.

Appendix

Given $1 < y_t < K$, the multinomial logistic equation for model probabilities reads:

$$P(y_{t} = r \mid y_{t-1} = s) = \frac{\exp(\gamma_{rs})}{\sum_{k=1}^{K} \exp(\gamma_{ks})}$$
(A1).

Under the identifying restrictions $\gamma_{11} = \gamma_{22} = \gamma_{33} = \gamma_{44} = 0$ (see Magidson, Vermunt & Tran, 2007), the logit parameters can be written as:

$$\gamma_{rs} = \log \frac{P(y_t = r | y_{t-1} = s)}{P(y_t = s | y_{t-1} = s)}$$
(A2).

Tables

Table 1. Descriptive statistics on study measures (N=6,836).

	Ç	%				
male	0.	0.51				
female	0.	0.49				
White	0.67					
Black	0.	14				
Native American		03				
Asian		04				
		12				
		37				
some college		63				
none						
1 or more		59				
no		41				
yes).59				
		% at wave 4				
no		0.81				
yes		0.19				
no		0.45				
yes	0.81	0.55				
never		0.55				
yes, don't know how n	nany times	0.21				
1 or 2 times		0.09				
3 or 4 times		0.15				
less than HS	0.10	0.06				
HS	0.76	0.54				
associate/BA	0.13	0.33				
MA/PhD	0.01	0.07				
no	0.62	0.83				
yes	0.38	0.17				
	0.44	0.28				
_	0.45	0.02				
full-time	0.51	0.7				
no	0.70	0.37				
yes	0.30	0.63				
	female White Black Native American Asian Hispanic no college some college none 1 or more no yes no times less than HS HS associate/BA MA/PhD no yes not working part-time full-time	male 0. female 0. White 0. Black 0. Native American 0. Asian 0. Hispanic 0. no college 0. some college 0. none 0. 1 or more 0. no 0.59 yes 0.41 no 0.19 yes 0.81 never yes, don't know how many times 1 or 2 times 3 or 4 times less than HS 0.10 HS 0.76 associate/BA 0.13 MA/PhD 0.01 no 0.62 yes 0.38 not working 0.44 part-time 0.45 full-time 0.51				

<u>Table 2. Association between living arrangements and parental financial assistance</u> (at wave 4).

Co-residence w/parent(s)

		Cu	i estactic	e w/parent(b)		
		no		yes		
		Frequency	row %	Frequency	row %	
Financial assistance from	no	2685	87	407	13	3092
parent(s)	yes	2847	76	898	24	3744
		5532	81	1305	19	6836

Pearson: Uncorrected chi2(1) = 128.4029; Design-based F(1, 6832) =72.9871 P = 0.0000

Table 3. Odds ratios from logistic regression models on residential arrangements (coresidence=1 vs. independent living=0) at wave 4.

	Model 1	Model 2
Recent financial support (w4)	1.738**	
Earlier financial support (w3)	1.039	
Frequency of recent financial support (ref: never)		
don't know how many times		1.521**
1 or 2 times		1.948**
3 or 4 times		3.525**
Female	0.971	0.956
Race (ref: White)		
Black	1.546**	1.431**
Nat Am	0.660	0.601
Asian	3.040**	2.941**
Hispanic	2.368**	2.356**
Age	0.960	0.975
Attending college	0.714**	0.680**
Education (ref: less than HS)		
HS	1.011	1.074
Associate/BA	0.575*	0.631*
MA/PhD	0.366**	0.396**
Working status (ref: not working)		
Part-time Part-time	0.824	0.812
Full-time	0.563**	0.636**
Married/Cohabiting	0.187**	0.203**
Parents have some college	0.902	0.906
Intact family	1.281**	1.255*
Extracurricular activities	1.284**	1.262*
F-adjusted test statistic	1.463	1.815
p-value	0.155	0.060

Note: *p<0.05; **p<0.01

Table 4. Transition probabilities across residential states (N=6,836). Column (in black) and total percentages (in grey italics).

	Initial state		
	co-residence	independent living	
Destination (t, wave 4)	(CO)	(Ind)	Total
co-residence (CO)	0.28	0.13	0.19
	CO->CO 0.12	<i>Ind->CO 0.07</i>	
independent living (Ind)	0.72	0.87	0.81
	<i>CO->Ind 0.29</i>	<i>Ind->Ind 0.52</i>	
Total	0.41	0.59	100

Note: CO->CO indicates co-residence at w3 and w4; Ind->CO indicates a transition from residential independence at w3 to Co-residence at w4; CO->Ind indicates a transition from coresidence at w3 to independence at w4; Ind->Ind indicates independence at both w3 and w4.

Table 5. Transition models (N=6,836). Coefficients, p-values and odds ratios.

		Model 1		Model 2			Model 3			
Pr Transition (ref: no transition)		coef	p- value	OR	coef	p- value	OR	coef	p- value	OR
Recent financial assistance from parent(s) (w4)	CO -> Ind	-0.46	0.00	0.63				-0.47	0.00	0.63
	Ind -> CO	0.58	0.00	1.79				0.58	0.00	1.79
Frequency of recent financial assistance from parent(s) (ref: never)										
don't know how many times	CO -> Ind				-0.45	0.01	0.64			
	Ind -> CO				0.32	0.08	1.37			
1 or 2 times	CO -> Ind				-0.47	0.02	0.62			
	Ind -> CO				0.75	0.00	2.11			
3 or 4 times	CO -> Ind				-1.10	0.00	0.33			
	Ind -> CO				1.35	0.00	3.85			
Earlier financial assistance from parent(s) (w3)	CO -> Ind	0.32	0.10	1.37	0.37	0.05	1.45	0.25	0.25	1.28
•	Ind -> CO	0.19	0.25	1.21	0.10	0.55	1.11	-0.02	0.93	0.98
In college (w3)	CO -> Ind							0.19	0.64	1.21
	Ind -> CO							-1.06	0.01	0.35
In college * Earlier financial assistance from	CO -> Ind							0.14	0.76	1.15
parent(s) (w3)	Ind -> CO							1.11	0.00	3.04
BIC (LL)		14699.01		14610.14		14715.41				
$\overrightarrow{AIC}(LL)$		14535.09 14418.9			14524.17					
G2(df)		1443	9.15 (68	812)	1431	4.96 (6	808)	1440	4.39 (6	808)

Note: CO=co-residence; Ind=independent living. Significant results appear in bold font. All models control for age, sex, race, college attendance (at w4), education (at w4), working and marital status (at w4), parental education and childhood involvement in extracurricular activities.

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Endnotes

ⁱ This indicator captures where a respondent lives "more often" and does not distinguish between those permanently away from the parental home and those occasionally returning home, which could for example be the case for college students.

ii An alternative measure defining financial assistance based on the question about living expenses exclusively was experimented in preliminary analyses and led to substantially equivalent results.

Those who were considered financially supported because they declared to have received any financial gifts or loans from their parents or relatives to help with a home were classified as "yes, but do not know how many times", unless they declared a frequency in the question referring to living expenses.

At wave 3 respondents were asked about assistance from up to six parents and it is difficult to know whether respondents declare separate amounts across parent and such amounts should be added up or instead they attribute the same financial assistance to more than one parent. Preliminary analyses using the highest amount across potential parents did not lead to significant results.

^v Models not including recent financial support or any other control also confirmed not significant effect of earlier financial support on residential transitions (results not shown but available upon request).