Lonneke van den Berg   *University of Amsterdam*

Matthijs Kalmijn🆔   *University of Amsterdam and Netherlands Interdisciplinary Demographic Institute**

Thomas Leopold   *University of Amsterdam***

Leaving and Returning Home: A New Approach to Off-Time Transitions

Objective: This study offers a new approach to off-time transitions and applies it to the link between leaving and returning home.

Background: It is no longer uncommon for young adults to return after having left the parental home. Previous research has mostly examined returning home in isolation from leaving home, although these two transitions are closely intertwined.

Method: Using longitudinal data from the German Socio-Economic Panel Study, the authors examine the link between leaving and returning home in a two-step model. The model captures home leaving in a selection model and links off-time leaving to the subsequent risk of returning home. This measure of off-time leaving is sensitive to specific individual circumstances.

Results: The findings show that the new measure of off-time leaving is a better predictor for returning home than age at leaving home. Young adults who leave home more off-time are more likely to return home. Experiences after leaving home significantly mediate part, but not all of the effect of off-time home leaving on returning home.

Conclusion: The processes of leaving and returning home are linked: Off-time time home leavers are more likely to return home than on-time leavers.

Implications: The findings contribute to research on returning home and the life course by demonstrating the importance of previous transitions. The new measure of off-time transitions could also be applied to other life course outcomes.

Department of Sociology, University of Amsterdam, Nieuwe Achtergracht 166, Building REC B/C, 1018 WV Amsterdam, the Netherlands (l.vandenberg@uva.nl).

*Department of Sociology, University of Amsterdam, Nieuwe Achtergracht 166, Building REC B/C, 1018 WV Amsterdam, the Netherlands; Netherlands Interdisciplinary Demographic Institute.

**Department of Sociology, University of Amsterdam, Nieuwe Achtergracht 166, Building REC B/C, 1018 WV Amsterdam, the Netherlands.

Introduction

The transition to adulthood has moved from a pattern that was early, contracted, and simple toward a pattern that is late, protracted, and complex (Billari & Liefbroer, 2010). This pattern is reflected in several events that characterize the transition to adulthood (Rindfuss, Swicegood, & Rosenfeld, 1987). One of these events is leaving home to start an independent household. In recent years, the average age at leaving home has increased, pathways out of the parental home have diversified, and it is no longer uncommon for young adults to return after leaving home—a phenomenon sometimes

termed *boomeranging*. Research has shown that 19% of young adults in Germany and approximately 40% of young adults in the United States return home (Berngruber, 2015; Goldscheider & Goldscheider, 1999). Boomeranging is a good example of increasing fluidity in the life course.

Studying the process of returning home is important because it affects several aspects of the lives of young adults and their families. On the one hand, returning to the parental home protects young adults against labor market risks, offers emotional and financial support, and indicates a good relationship with the parents (Kaplan, 2012; Lewis, West, Roberts, & Noden, 2016). On the other hand, returning is sometimes regarded as a sign of failure (Pickhardt, 2011) and could negatively impact well-being, relationships, and parental savings (Copp, Giordano, Longmore, & Manning, 2015; Lewis et al., 2016; Maroto, 2017; Tosi & Grundy, 2018).

Previous research has explained boomeranging mainly by experiences of the young adult after leaving home. These studies have examined the effects of experiencing life course events (Arundel & Lennartz, 2017; DaVanzo & Goldscheider, 1990; Kleinepier, Berrington, & Stoeldraijer, 2017; Stone, Berrington, & Falkingham, 2013), financial problems (Arundel & Lennartz, 2017; Gee, Mitchell, & Wister, 1995; Oksanen, Aaltonen, & Rantala, 2016), and mental problems (Sandberg-Thoma, Snyder, & Jang, 2015).

By examining returning home solely as an effect of experiences after leaving home, most previous studies have ignored the link between leaving and returning home. Theoretical work on the life course and the transition to adulthood, however, emphasizes this connection (e.g., Goldscheider, Goldscheider, St. Clair, & Hodges, 1999). One of the basic tenets of life course theory is that prior transitions have consequences for later transitions. From this perspective, returning home is not only explained by experiences after leaving home but also by the timing and conditions surrounding leaving home. Previous studies have provided suggestive evidence for this notion. For example, young adults were more likely to return home if they had left home at a young age (Berngruber, 2015; Billette, Bourdais, & Laplante, 2011; Goldscheider et al., 1999; Kleinepier et al., 2017) and if they did not leave for union formation (Billette et al., 2011; Gee et al., 1995; Goldscheider et al., 1999).

Our aim is to study the link between leaving and returning home in a more systematic manner. We make a theoretical contribution that goes beyond the context of our research and the transition that we study by offering a new approach to "off-time" transitions. Previous research has defined off-time transitions as transitions that are experienced at a nonnormative age. However, as leaving home has become an increasingly complex transition, defining off-time only by age does not adequately capture whether leaving home is out of step with the sequence of psychological and demographic changes occurring across individual transitions to adulthood. Instead, we propose a measure that is sensitive to specific individual circumstances by comparing observed home leaving transitions to expected home leaving transitions. This approach defines expected transitions as "on-time" and unexpected transitions as "off-time," where expectations are derived from a comprehensive selection model that contains a wide array of well-known predictors of leaving home.

Concretely, we examine the link between leaving and returning home in a two-step Heckman selection model with longitudinal prospective data for young adults aged 17 to 35 years from the German Socio-Economic Panel Study from 1984 to 2015. In the first step, we estimate the inverse Mills ratio as a measure of off-time leaving. Next, we use this estimate as a predictor of returning home. We draw on the Bayesian information criteria (BIC) to test whether our measure improves on the commonly used measure, age at leaving home. Finally, we examine to what extent subjective well-being, economic circumstances, and turning points after leaving home explain the effect of off-time home leaving on returning home.

Theoretical Background and Hypotheses

Leaving and Returning Home in the German Context

Although our aim is to make a more general contribution to life course theory, it is important to briefly describe the context in which we study the processes of leaving and returning home. In Germany, the median age at leaving home was 20.7 (women) and 22.4 (men) for the 1960s birth cohort (Billari, Philipov, & Baizán, 2001). German youth left home considerably earlier than youth in many Southern and Eastern European

countries, but later than in Nordic countries and the United States. They were also more likely to leave with a partner than in Nordic countries (45% compared to on average 35%), but less likely than in Southern Europe (on average 70%; Billari et al., 2001). Previous research has shown that 19% of the home leavers in Germany returned home (Berngruber, 2015). That was not only considerably lower than in the United States (Goldscheider & Goldscheider, 1999; Norris & Tindale, 1993), but also lower than in Canada and other European countries (Mitchell, 2007).

There are several explanations for the low return rate in Germany. First, Germany has a strong welfare state that offers financial support to young adults through student loans, housing allowance, and unemployment benefits (Berngruber, 2015). Comparative research on returning home in Europe showed that returning is the least common in countries with a more extensive welfare state (Arundel & Lennartz, 2017). Second, the divorce rate in Germany is lower than in the United States (DiPrete, 2002). As divorce and separation form one of the main reasons for returning home (Stone et al., 2013), returning home might be less common in Germany. Third, leaving home for college is less likely in Germany (Mulder, Clark, & Wagner, 2002), and student housing is often not on campus. So, semiautonomous home leaving for education (Goldscheider & DaVanzo, 1985; Norris & Tindale, 1993), that is, living on campus during the semester and with parents during breaks, is uncommon in Germany. Hence, although graduation from college is an important reason for returning in the United States (Mulder & Clark, 2002) that might less often be the case in Germany. Last, as young adults in Germany left home at a later age than young adults in the United States, their lives might be more stable which reduces the need of returning home.

Off-Time Home Leaving

The notion of off-time transitions was first introduced in the literature on age norms as transitions that were not in line with the normative model or script of the life course (Modell, 1980). Researchers in this literature argued that off-time transitions could lead to adverse outcomes because nonnormative transitions are sanctioned by society and because young adults might not be ready for their new role. Indeed, studies in this field have shown that experiencing transitions

such as marriage at an early age were associated with adverse outcomes such as divorce (Elder, 1998; Hogan, 1978; Rindfuss et al., 1987).

However, age is a crude or even "empty" measure of an off-time transition if there is no direct meaning attached to the age at which the transition is experienced (Settersten & Mayer, 1997, p. 239). In the case of leaving home, the presence of sanctions in society for leaving at a certain age or of age norms for leaving home is questionable. Billari and Liefbroer (2007) have shown that only a minority of young adults in the Netherlands perceived societal, parental, and friends' norms about the age of leaving home. The absence of strong age norms and the complexity of the leaving home transition suggest that off-time home leaving requires a more differentiated approach that focuses on specific circumstances of the individual. Therefore, our conceptualization of off-time and on-time home leaving does not refer to the extent to which the timing to leave home is in line with the normative age at leaving home, but to the extent to which the timing of leaving home fits with specific individual circumstances that affect the likelihood of leaving home.

These circumstances are the factors that push young adults out of the parental home or pull them toward independent living. Young adults are pushed out of the home if there are few resources that make staying in the parental home attractive. These resources are economic (good housing conditions), social (family structure, support of parents, quality of the parent–child relationship), and community resources (ties to neighbors and local area). Young adults are also more likely to leave home if there are pull factors that make independent living more attractive, such as being in a steady relationship and being employed.

Research typically assumes that young adults leave the parental home if the benefits of leaving outweigh the costs of leaving (De Jong-Gierveld, Liefbroer, & Beekink, 1991; South & Lei, 2015). When that is the case, the decision to leave home corresponds to the individual circumstances, rendering leaving home an "on-time" decision. This does not have to occur at the average or "normative" age at leaving home. Young adults could leave home "on-time" at younger ages if the decision to leave home fits with their individual circumstances at that age. Some young adults, however, might leave even though that would

not be expected based on the relevant push and pull factors. For example, young adults might leave home even though they live in a "feathered nest," are not in a steady relationship, and do not pursue education or an occupational career. For them, the decision to leave home at that time does not fit with their individual circumstances and could be seen as "off-time."

The concept of bounded rationality could explain why young adults leave even though that is not expected. Bounded rationality entails that individuals are limited in their knowledge and in their capabilities to estimate the consequences of their decisions (Simon, 2000). In the case of leaving home, young adults base their decision to leave home on limited information about their life after leaving home. Off-time leavers might leave because they do not realize all consequences of leaving or because they do not perceive any alternatives to leaving the parental home. Moreover, young adults could be bounded in their capabilities to weight different domains of life. Off-time leavers might base their decision to leave only one domain of their life such as enrolment in education, hereby disregarding other aspects of their lives.

Bounded rationality could also be used to explain why off-time leavers would be more likely to return. If off-time leavers leave because they do not realize all effects of leaving home, their experiences after leaving might be disappointing and push them back to the parental home. Moreover, they might perceive more alternatives to leaving home after they have left home. For example, they might find out that it is possible to commute to college. Last, if they leave because of only one domain of their lives, changes in that domain or experiences in other domains of their lives could push them back to the parental home.

Previous research on the link between leaving and returning home is limited. Most research on this link has focused only on the pathway out of the parental home or on the age at leaving. These studies found that young adults who left at an early age and those who left without a partner were more likely to return home (Berngruber, 2015; Billette et al., 2011; Gee et al., 1995; Goldscheider et al., 1999; Goldscheider & Goldscheider, 1998; Kleinepier et al., 2017). One study on returning home showed that young adults who were less likely to leave the parental home, called "unexpected leavers," were more likely to return to the parental home (DaVanzo &

Goldscheider, 1990). Although this early study did not specifically focus on the link between leaving and returning home, it introduced a conceptual approach that captured more aspects than just age or the pathway out of the parental home. Based on these considerations, we formulate the following central hypothesis: The more "off-time" the transition was out of the parental home, the more likely it is that young adults return home (Hypothesis 1).

Experiences After Leaving Home

Not only the leaving home transition but also experiences after leaving home are relevant for understanding why people return home. We focus here on the following three types of experiences: subjective well-being, economic circumstances, and turning points. These factors do not only affect returning but, more importantly for our goals, also might explain (part of) the effect of off-time home leaving on returning home.

First, as argued in the previous section, young adults have only limited information about life after leaving home when they decide to leave the parental home. For some young adults, the experiences of independent living are disappointing, not corresponding to their expectations. As a result of this disappointment, their well-being might deteriorate and they might return home to get emotional support from parents. To our knowledge, only one previous study examined the effect of satisfaction with life after leaving home on the likelihood of returning home. This study showed that young adults who were in emotional distress were more likely to return to the parental home (Sandberg-Thoma et al., 2015). Based on these considerations, we expect that young adults who experience a decline in subjective well-being after leaving home are more likely to return home (Hypothesis 2a).

Subjective well-being after leaving home might also explain part of the effect of off-time leaving on returning home. Off-time leavers leave home even though there are few factors that push them out of the parental home or pull them toward independent living; they are expected to experience fewer benefits and higher costs of living independently. Hence, they might be more likely to be disappointed with their life after leaving and decide to return home. We expect that declines in subjective well-being after leaving home partially explain

why off-time leavers are more likely to return home (Hypothesis 2b).

Second, living in adverse economic circumstances after leaving home might increase the likelihood that young adults return home. Young adults who live in adverse circumstances after leaving home experience the economic burden of living independently. They might return home to live in better housing, to relieve their economic burden or because they face difficulties in making ends meet. Previous research found that financial difficulties indeed increased the chance of returning home (Arundel & Lennartz, 2017; Gee et al., 1995; Matsudaira, 2016; Stone et al., 2013). Hence, we expect that young adults who live in adverse economic circumstances after leaving home are more likely to return home (Hypothesis 3a).

Adverse economic circumstances might also explain part of the effect of off-time home leaving on returning home. Off-time leavers are more likely to be in an unstable financial situation when they leave the parental home, as they leave even though there are few pull factors toward independent living, such as stable employment. Moreover, off-time leavers might be more likely to be ill prepared to leave home, making it difficult to find good and affordable housing. Hence, we expect that living in adverse economic circumstances partially explains why off-time leavers are more likely to return home (Hypothesis 3b).

Third, experiencing turning points after leaving home might affect the likelihood to return home. The first two turning points associated with returning home are changes in partnership; moving in with a partner, and separation from a partner. A substantial share of the home leavers moves in with a partner within the first years after leaving home (Billari et al., 2001; Mulder & Manting, 1994). Living with a partner is associated with greater commitment, more stability, and living in long-term housing (Feijten & Mulder, 2002). As a result, young adults who live with a partner are less likely to return home (Arundel & Lennartz, 2017; Berngruber, 2015; Billette et al., 2011; Kleinepier et al., 2017; Sandberg-Thoma et al., 2015; Stone et al., 2013). Young adults who separate from a partner might need to relocate or might be in need of economic and emotional support from parents. Hence, young adults who divorce or separate from a cohabiting partner are more likely

to return home (DaVanzo & Goldscheider, 1990; Kleinepier et al., 2017; Stone et al., 2013).

Another key turning point after leaving home is a change in employment status. Employment often entails financial independence from the parents and could be seen as another step in the transition to adulthood. Hence, entering employment decreases the chance of returning. Losing employment might trigger returning home, and young adults might return because they are in need for economic and emotional support from the parents (Arundel & Lennartz, 2017; DaVanzo & Goldscheider, 1990; Kleinepier et al., 2017; Matsudaira, 2016; Norris & Tindale, 1993; Stone et al., 2013). Previous research found also effects of graduation on returning home (DaVanzo & Goldscheider, 1990; Stone et al., 2013). However, this might not be the case in Germany, as on-campus living is uncommon in Germany. Based on these considerations, we expect that young adults who separate from a partner or lose employment after leaving home are more likely to return home, whereas those who start living with a partner or become employed are less likely to return home (Hypothesis 4a).

Young adults who leave home off-time might be more likely to experience "negative" turning points and less likely to experience "positive" turning points. Off-time leavers leave when there are few factors such as employment or a steady relationship that pull them toward independent living. Hence, off-time leavers might be less likely to move in with a partner or to be employed after leaving home. Moreover, off-time leavers who do become partnered or employed might be more likely to have a more recent, not yet stable partnership or employment, which might be more likely to dissolve. We expect that experiencing turning points after leaving home partially explains why off-time leavers are more likely to return home (Hypothesis 4b).

Method

Data and Sample

We used data from 31 waves (1984–2015; German Socio-Economic Panel Study [SOEP] long version 32-1, release 2017) of the SOEP, a longitudinal household panel (see https://www.diw.de/en/soep). For our purposes, the data yielded several benefits. First, the genealogical panel design allowed

us to link children to their parents and to use relevant parental information. Second, the SOEP follows young adults also after leaving the parental home. In combination with the large sample size, this allowed us to employ a two-step model for leaving and returning home with year-specific predictors. Last, the SOEP covers a wide range of topics such as economic characteristics, life satisfaction, and demographic transitions, allowing us to use a rich set of measures for leaving and returning home.

Our original sample for the leaving home analyses consisted of 11,792 individuals who were between 17 and 23 years old and lived in the parental home at first observation. This age restriction limited the possibility that an individual had already returned home before the observation period started. Robustness checks with younger age restrictions yielded similar results. We dropped individuals from the sample ($n = 614$) who had missing values on at least one of the variables. Individuals who were observed only once were also removed from the sample ($n = 127$) because leaving home could not be observed for these cases. This resulted in a final sample of 11,051 individuals "at risk" of leaving home. The risk period started in the year in which the young adult turned age 18 and first participated in the SOEP. For 20% of the cases, the risk period started somewhat later, namely when their parents first participated in the SOEP. The risk period ended when they left the parental home. Observations were right censored when the child turned age 34, dropped out of the survey, or in 2014. The use of event-history analyses accounts for this right censoring (Yamaguchi, 1991, p. 5).

Our analyses of returning home were restricted to individuals who had left home, a sample of 4,292 individuals. Young adults were dropped from the sample if they were observed only once after leaving home ($n = 460$) or if they had missing information on one of the independent variables ($n = 3$). Robustness checks showed that the young adults who dropped out of the panel differed on some observable characteristics from those who stayed in the panel. Dropouts were younger, more likely to have experienced an increase in health satisfaction after leaving home, more likely to live in poverty, less likely to live with a partner, and more likely to have recently started studying. Overall, these differences suggest that dropouts were less stable than those who remained on the panel. This panel attrition might imply that we underestimate the number of returns because several of these more "unstable" characteristics increase the likelihood to return home. However, this reasoning is speculative, as these dropouts might have differed on other grounds that we did not measure and that might make returning home less likely, such as living at a greater distance from the parental home. In other words, the bias can go either way. The final sample for the returning home analyses consisted of 3,829 individuals "at risk" of returning home. The risk period for returning home started when the young adult left the parental home. Observations were right censored when the respondent turned age 35, dropped out of the study, or in 2015. Of our final sample, 260 returned to the parental home.

Analytical Strategy

Our analytical strategy followed the sample selection model approach introduced by Heckman (1977). This model was developed to account for baseline differences due to selection in nonrandomly selected samples. Here we used the approach in a more substantive manner. We employed the two-step (rather than the maximum likelihood) estimation of the Heckman model because in our person-period data, the dependent variables (leaving and returning home) could not occur at the same time. There has been debate about the robustness of Heckman's estimation approach. One problematic issue is that in many applications, it is difficult to find variables that are in the selection equation but not in the substantive equation; this exclusion restriction facilitates the statistical identification of the model (Puhani, 2000). In our use of the Heckman model, this issue is less problematic because we have several variables that are only used in the selection or the substantive model.

In the first step, we specified a selection model estimating the probability of leaving home. This model was estimated as an event-history probit model with standard errors clustered at the individual level. Event-history models account for right censoring in the data. Dynamic measures for all commonly used predictors for leaving home were included in this model. We did this to minimize the number of unobserved factors and to maximize the accuracy of our measure. This was important because otherwise we

could have underestimated the effect of off-time leaving on returning home. We have improved the goodness of fit by including an interaction between age and two of the predictors, income and life satisfaction of the parent. After estimating this model, we calculated the inverse Mills ratio (IMR) for leaving home.

In the second step, we included the IMR as a predictor in an event-history probit model to estimate returning home. The IMR is a decreasing function of being selected so that higher values reflect lower probabilities of leaving home (for those who did leave). Consequently, the IMR measures the extent to which home leaving occurred off-time. There was substantial variation in the IMR beyond age, the correlation of the IMR with age was −0.502. This implies a moderate negative relation between age and the IMR.

Subsequently, we assessed whether the IMR was a better predictor of returning home than age at leaving home as an alternative measure of off-time leaving. We then added covariates that measured experiences after leaving home to the model. Finally, we conducted a mediation analysis to study the extent to which these factors explained the relationship between the IMR of leaving home and returning home. We used a mediation method that was developed specifically for logistic probability models (Karlson, Holm, & Breen, 2012).

Measures

Tables 1 and 2 include information on all of the variables used in the leaving home and returning home analyses. Our outcome variables, the annual probabilities of leaving and returning home, were based on the household identifier and the relationship to the head of the household. At first observation, all young adults shared the household identifier with at least one parent who participated in the SOEP. Young adults were coded as having left home if their household identification number changed, they were no longer a child of the head of the household, and they did not share the same household as their parents. The survival curve for leaving home showed that 50% of the young adults left the parental home by age 25.

Young adults were coded as returned home if after they left home, they again shared a household with their parents and they were not (partner of) the head of the household. The survival curve for returning home shows that 8% of the young adults who left home returned within 5 years. Life table estimates give a return rate of 10% within 10 years after leaving the parental home. These estimates were lower than in a previous German study (Berngruber, 2015), in which 19% of home leavers returned. Probably the main cause of this difference is that prospective panel data do not capture short-term leaves and returns to the parental home. Whether this is a drawback is not clear.

The following demographic characteristics of the young adults were included as predictors of leaving home: age, age squared, gender, year of birth, region, and migration background. All demographic measures were time-constant. All other predictors of leaving home were time-varying and lagged by one wave to prevent endogeneity issues, as the indicators otherwise might be effects rather than causes of leaving. We included the following push factors as predictors of leaving home: parental household income, homeownership, housing conditions, life satisfaction of the young adult, life satisfaction of the parent, number of household members younger than age 18, and family structure (intact, widowed, repartnered, single). We included the following pull factors: activity status and being in a steady relationship.

In the returning home analyses, the key variable of interest was the IMR of leaving the parental home as calculated by the selection model. This variable was time-constant, measured in the wave that the young adult left home. We included three indicators for change in subjective well-being after leaving home: the absolute change in satisfaction with life, the dwelling, and health between the current wave and the last observation in the parental home. We used two indicators for living in adverse circumstances after leaving home: poverty and poor housing conditions. Turning points were measured with the following three indicators: lived with a partner, partnership dissolution, and employment status. Lived with a partner and partnership dissolution were coded 1 if the young adult experienced this between the first wave after leaving the parental home and the current wave. We minimized endogeneity bias by coding it this way, as young adults rarely return home with a partner. For employment status, we followed previous research (DaVanzo & Goldscheider, 1990; Stone et al., 2013) and defined a categorical variable that captured changes in activity status (employed,

Table 1. *Descriptive Statistics for Leaving Home Analyses*

Variables	M	SD	Minimum	Maximum	Description
Left home	0.031		0	1	Dummy indicating if the young adult no longer lives with the parents, based on the household identifier and the relationship to the head of the household
Age	18.780	1.415	17	33	Mean centered
Age^2	354.695	57.080	289	1,089	Mean centered
Male	0.526		0	1	Dummy variable (man = 1, woman = 0)
Year of birth	1981.822	9.800	1962	1997	Mean centered
East Germany	0.403		0	1	East = 1, West = 0
Migration background					Based on country of birth of the individual and the parents as reported by the individual or parents
Native	0.705		0	1	
First-generation migrant	0.113		0	1	
Second-generation migrant	0.182		0	1	
Life satisfaction	7.619	1.691	0	10	"How satisfied are you with your life, all things considered?" 11-point Likert scale ranging from 0 (*completely dissatisfied*) to 10 (*completely satisfied*). Mean centered
Poor housing conditions	0.364		0	1	Based on the household survey. "How would you describe the condition of the building you live in?" ("in good condition" = 0, "in need of partial or complete renovation or near collapse" = 1)
Homeowner	0.526		0	1	Based on the household survey, filled in by head of the household ("owner" = 1, "tenant" = 0)
Parental income					Percentage of the year-specific median income of the full German Socio-Economic Panel Study sample. Measured by the sum of total family income from labor earnings, asset flows, retirement income, private transfers, public transfers, and social security pensions minus family taxes
<60%	0.113		0	1	
60–100%	0.373		0	1	
100–150%	0.339		0	1	
>150%	0.180		0	1	
Number of other household members aged younger than 18	1.015	1.111	0	10	Based on the household questionnaire
Family structure					Based on the marital history of the biological parent
Intact	0.768		0	1	
Stepfamily	0.067		0	1	
Single parent	0.137		0	1	
Widowed parent	0.028		0	1	

Table 1. *Continued*

Variables	M	SD	Minimum	Maximum	Description
Activity status					Based on the individual questionnaire. Individuals were coded as employed if they worked for
Employed	0.066		0	1	pay and were not enrolled in education. Individuals were coded as not employed, not in
General education	0.585		0	1	education if they were not registered as unemployed. Individuals were coded as unemployed if
Vocational education	0.262		0	1	they were registered as unemployed
Higher education	0.025		0	1	
Not employed, not in education	0.037		0	1	
Unemployed	0.021		0	1	
In a steady relationship	0.298		0	1	"Are you in a serious relationship?" ("yes" = 1, "no" = 0)
Life satisfaction parents	6.699	1.887	0	10	Average score of the resident parent and partner on the question: "How satisfied are you with your life, all things considered?" 11-point Likert scale ranging from 0 (*completely dissatisfied*) to 10 (*completely satisfied*). Mean centered

Note. Data are from the German Socio-Economic Panel Study 1984 to 2014. All descriptive statistics pertain to the first observation after age 17.

in education, inactive or unemployed). Changes in the current and previous waves were coded as a change because a change in employment status could have immediate and delayed effects.

Results

Results on Leaving Home

In the first step of our two-step model, we modeled selection into leaving home to calculate the IMR. The results of this event-history probit model on leaving home are presented in Table 3. The chance of leaving home increased with age (positive linear age term), but this effect weakened as age increased (negative quadratic age term). Consistent with previous research, men's transition rates were lower than women's transition rates. Based on the marginal effects at the mean of all other variables, the predicted annual probability of having left home was 8.9% for women and 4.6% for men. Young adults in the East left home earlier than young adults in West Germany, and German natives left earlier than first- and second-generation immigrants.

The findings from Table 3 show evidence for common push factors, such as poor housing conditions, homeownership, and crowding, measured by the number of children aged younger than 18 years living in the parental home. Consistent with previous research (Iacovou, 2010), the effect of parental income was dependent on age. At the mean age, only young adults from the highest parental income group were more likely to leave home than those from the lowest income group. At later ages, differences between young adults from the lowest and all other income groups increased; young adults from all higher parental income groups had a higher likelihood to leave home than those from the lowest. Living in a nonintact family, especially living in a stepfamily, was associated with earlier home leaving. The effect of the average life satisfaction of the parents on leaving home was dependent on age. Whereas a lower life satisfaction of the parents functioned as push factor around and below the mean age, there was no difference in the likelihood to leave the parental home by parental life satisfaction at later ages. There was no significant effect of the child's own life satisfaction on leaving home.

We also found evidence for pull factors. Young adults who had a partner were significantly more likely to leave the parental home. This effect translated into a five percentage point

Table 2. *Descriptive Statistics for Returning Home Analyses*

Variables	M	SD	Minimum	Maximum	Description
Returned home	0.028		0	1	Dummy indicating if the young adult lived with one or both parents after having lived independently based on the household identifier and the relationship to the head of the household
Inverse Mill's ratio	0.028	0.697	−1.72	2.45	Based on the selection model for leaving home. mean centered
Change in health satisfaction	0.332	2.812	−10	10	"How satisfied are you today with the following areas of your life?" 11-point Likert scales ranging
Change in life satisfaction	0.062	1.908	−9	10	from 0 (*completely dissatisfied*) to 10 (*completely satisfied*). Linear variables coded as absolute
Change in satisfaction with the dwelling	−0.172	2.098	−10	10	difference in satisfaction with health, life, and dwelling between the lagged wave and the last wave living in the parental home. Mean centered
Poverty	0.311		0	1	Coded 1 if the income was lower than 50% of the year-specific median income of the full German Socio-Economic Panel Study sample
Poor housing conditions	0.371		0	1	Based on the household survey. "How would you describe the condition of the building you live in?" ("in good condition" = 0, "in need of partial or complete renovation or near collapse" = 1)
Partnered	0.522		0	1	Coded 1 if the individual has lived with a partner at least once between the first wave out of the parental home and the current wave. Individuals who have never lived with a partner are coded 0
Partnership dissolution after leaving home	0.043		0	1	Coded 1 if the individual separated from a cohabiting or married partner between the first after leaving home and the current wave. Coded 0 if the individual did not separate from a partner
Employment status					Based on the employment and education status as reported by the individual. Individuals were
Continuously employed	0.277		0	1	coded as continuously employed, in education, or unemployed or inactive if they have been
Continuously in education	0.220		0	1	observed in this status in the current and two previous waves. Individuals were coded as student
Continuously unemployed or inactive	0.034		0	1	if they were enrolled in education, regardless of whether they were also employed at that time
Student to employed	0.171		0	1	
Unemployed or inactive to employed	0.069		0	1	
Student to unemployed or inactive	0.053		0	1	
Employed to unemployed or inactive	0.070		0	1	
Employed to student	0.064		0	1	
Unemployed to student	0.042		0	1	

Note. Data are from the German Socio-Economic Panel Study 1984 to 2015. All descriptive statistics pertain to the first observation after leaving home.

Table 3. *Event-History Probit Model on Timing of Leaving Home*

Variables	Model 1	
	Coefficient	SE
Age (centered)	0.220***	0.026
Age^2 (centered)	−0.027***	0.001
Male	−0.653***	0.036
Year of birth	−0.003	0.002
East Germany (ref. West)	0.191***	0.040
Migration background (ref. no)		
First generation	−0.197**	0.063
Second generation	−0.057	0.051
Parental income (ref. < 60%)		
60–100%	0.048	0.076
100–150%	−0.032	0.080
>150%	0.225*	0.088
Parental Income (Ref. < 60%) × Age (Centered)		
60–100% × Age (Centered)	0.064*	0.026
100–150% × Age (Centered)	0.106***	0.026
>150% × Age (Centered)	0.100***	0.027
Homeowner parental home (ref. tenant)	−0.295***	0.040
Poor housing conditions	0.119**	0.037
Family structure (ref. intact)		
Stepfamily after divorce	0.464***	0.072
Single parent after divorce	0.345***	0.058
Widowed parent	0.140	0.094
Life satisfaction (centered)	0.006	0.011
Number of household members younger than age 18	0.130***	0.019
In a steady relationship	0.735***	0.037
Activity status (ref. employment)		
General education	−0.542***	0.076
Vocational education	−0.182***	0.051
Higher education	−0.478***	0.055
Not employed, not in education	0.008	0.085
Unemployed	0.015	0.073
Life satisfaction parent	−0.040**	0.012
Life Satisfaction Parent (Centered) × Age (Centered)	0.014***	0.003
Constant	−2.496***	0.098
Pseudo R^2	0.111	
Number of observations	48,952	
Number of individuals	11,051	

Note. Data are from the German Socio-Economic Panel Study 1984 to 2014. ref. = reference.

†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

difference in the annual predicted probability at the mean of the other variables. Young adults who were studying were less likely to leave home than employed young adults.

Results on Returning Home

Off-time home leaving and returning home. Next, we tested our central hypothesis about the effect of off-time leaving. Model 1 in Table 4 provides support for this hypothesis. There was a positive and significant effect of the IMR on the probability of returning home. Young adults for whom the departure from the parental was less expected, indicated by higher values of the IMR, were more likely to return home. The effect of the IMR is illustrated in Figure 1. Among those who left most on-time (first quintile of the IMR) only 4% returned home within 5 years, compared to 13% among those who left most off-time (fifth quintile).

In Model 2 (Table 4) we estimated the effect of the age at leaving home to test whether this more commonly used indicator of off-time home leaving is preferable over our measure of off-time leaving. The BIC of Model 2 was 14.22 higher than the BIC in Model 1. This result indicated that the IMR predicted returns to the parental home with higher accuracy than age at leaving home. Next, we tested whether a model including both age and the IMR (Model 3) was preferable over a model including only the IMR (Model 1). The IMR remained significant in this model in which the linear and squared ages at leaving home were included. The change in BIC, however, suggested that the best model included only the IMR as indicator of off-time home leaving. Overall, the results confirmed that the processes of leaving and returning home were linked.

Experiences after leaving home. Next, we examined our hypotheses by adding other indicators to the model on returning home. These analyses are presented in Table 5. Consistent with our expectation (Hypothesis 2a), we found a significant negative effect of changes in health and life satisfaction after leaving home (Model 2, Table 5). There was no effect of a change in satisfaction with the dwelling after leaving home.

In Model 3, we added the indicators of adverse economic circumstances. In line with our expectation (Hypothesis 3a), young adults were more likely to return to the parental home

Table 4. *Goodness of Fit Comparison of Event-History Probit Models on Timing of Returning Home*

Variables	Model 1		Model 2		Model 3	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Years after leaving home (ref. 1)						
2 years	−0.099	0.065	−0.104	0.065	−0.101	0.065
3 years	−0.188 **	0.072	−0.195 **	0.072	−0.192 **	0.072
4 years	−0.466 ***	0.093	−0.482 ***	0.093	−0.475 ***	0.093
5 years	−0.557 ***	0.105	−0.571 ***	0.105	−0.568 ***	0.106
Age at leaving home (centered)			−0.063 ***	0.009	−0.035 **	0.012
Age at leaving home squared (centered)			0.003	0.002	−0.001	0.003
Inverse Mills ratio (centered)	0.266 ***	0.341			0.187 ***	0.045
Constant	−1.956 ***	0.042	−1.947 ***	0.042	−1.961 ***	0.043
BIC	2,547.095		2,561.311		2,554.966	
Number of observations	14,393		14,393		14,393	
Number of individuals	3,829		3,829		3,829	

Note: Data are from the German Socio-Economic Panel Study 1984 to 2015. BIC = Bayesian Information Criteria; ref. = reference.

†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

FIGURE 1. SURVIVAL CURVE FOR RETURNING HOME, BY LIKELIHOOD TO LEAVE HOME.
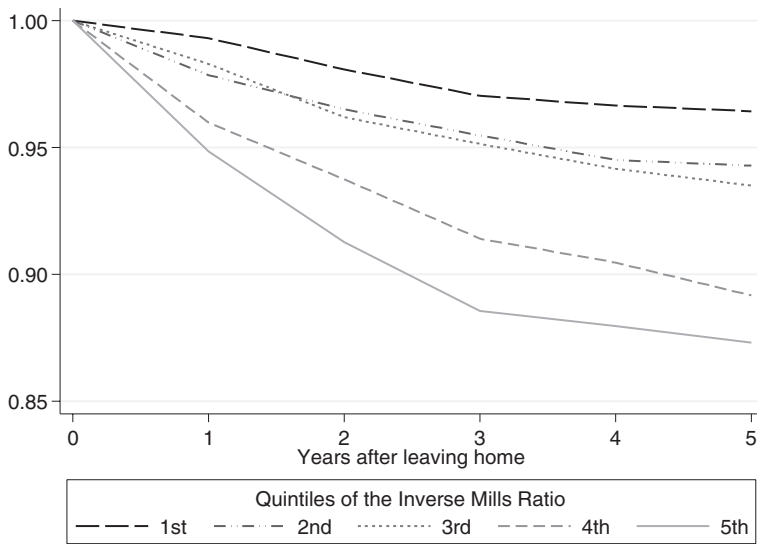
if they lived in poverty in the previous wave. The average annual predicted probability to return home, based on average marginal effects, was 2.2% for those living in poverty, compared to 1.6% for those who did not live in poverty. This seemed a small difference in absolute terms but was substantial in relative terms. There was no effect of living in poor housing conditions.

Model 4 (Table 5) added the indicators for turning points after leaving home. The effects for

partnership transitions were consistent with our expectations. Young adults who lived together with a partner after leaving home were significantly less likely to return home. The average annual predicted probability to return home was only 0.7% for those who ever lived with a partner after leaving home compared to 5.1% for those who up to that wave never lived together with a partner. Young adults who experienced partnership dissolution after leaving home were more

Table 5. *Event-History Probit Model on Timing of Returning Home*

Variables	Model 1		Model 2		Model 3		Model 4	
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Years after leaving home (ref. 1)								
2 years	−0.099	0.065	−0.107	0.065	−0.093	0.066	−0.115	0.071
3 years	−0.188**	0.072	−0.202**	0.072	−0.188*	0.073	−0.231**	0.083
4 years	−0.466***	0.093	−0.482***	0.093	−0.462***	0.095	−0.556***	0.109
5 years	−0.557***	0.105	−0.566***	0.106	−0.539***	0.107	−0.622***	0.129
Inverse Mill's ratio (centered)	0.266***	0.034	0.258***	0.035	0.242***	0.037	0.201***	0.043
Change in satisfaction with health			−0.020*	0.010	−0.020*	0.010	−0.024*	0.011
Change in satisfaction with life			−0.039**	0.015	−0.039**	0.015	−0.035*	0.016
Change in satisfaction with the dwelling			−0.000	0.013	−0.000	0.013	−0.002	0.013
Living in poverty					0.133*	0.061	−0.024	0.068
Living in poor housing conditions					−0.004	0.054	−0.036	0.059
Lived with a partner after leaving							−1.042***	0.095
Experienced partnership dissolution							1.505***	0.111
Employment status (ref. continuously employed)								
Continuously in education							0.067	0.091
Continuously unemployed or inactive							0.189	0.140
Student to employed							0.145	0.092
Unemployed or inactive to employed							0.264*	0.120
Student to unemployed or inactive							0.370**	0.136
Employed to unemployed or inactive							0.332**	0.119
Employed to student							0.052	0.132
Unemployed or inactive to student							−0.019	0.176
Constant	−1.956***	0.042	−1.961***	0.043	−2.004***	0.052	−1.850***	0.076
Pseudo R^2	0.044		0.050		0.052		0.168	
Number of observations	14,393		14,393		14,393		14,393	
Number of individuals	3,829		3,829		3,829		3,829	

Note: Data are from the German Socio-Economic Panel Study 1984 to 2015. ref. = reference.

†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

likely to return home. The average annual predicted probability to return home was 16.7% after partnership dissolution, compared to 1.3% for those who did not experience partnership dissolution after leaving home.

We did not find a significant difference between young adults who were employed and young adults who were in education or unemployed or inactive. We did, however, find that young adults who became unemployed or inactive were significantly more likely to return than young adults who were continuously employed. For the recently unemployed or inactive young adults, the average annual predicted probability was 2.9% compared to 1.4% for those who were continuously employed. In contrast to our expectations, young adults who recently became employed after a period of unemployment or inactivity were also significantly more likely to return than those who were continuously

employed. This might be a delayed effect of the previous unemployment spell. Young adults who started studying did not differ significantly from employed young adults. The effect of poverty disappeared in Model 4, suggesting that this effect was explained by partnership and employment transitions.

KHB analyses. In a final step, we used mediation analyses to examine whether off-time home leaving was mediated by the other covariates. The findings of these analyses are presented in Table 6. We first examined the mediation effect of change in satisfaction with dwelling, life, and health after leaving home. Subjective circumstances after leaving home formed a marginally significant mediator ($p < .10$) of the effect of off-time home leaving on returning home. This gave weak support to our expectation (Hypothesis 2b) that subjective well-being after leaving home explained why off-time home leavers were

Table 6. *Mediation Analysis (Khb) for the Effect of Off-Time Home Leaving on Returning Home*

Mediation variables	Coefficient	SE	Percentage explained	Cumulative percentage explained
Model 2: Subjective circumstances after leaving home	0.009†	0.004	3.6	3.6
Model 3: Living in adverse economic circumstances after leaving home	0.021 ∗	0.009	7.8	7.5
Model 4: Experiencing turning points after leaving home	0.141 ∗∗∗	0.020	39.9	32.4
All mediators	0.150 ∗∗∗	0.021	42.7	42.7

Note. Data are from the German Socio-Economic Panel Study 1984 to 2015; 14,393 observations, 3,829 individuals.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

more likely to return home. Next, we examined the mediation effect of living in adverse economic circumstances after leaving home. The findings supported our expectation that adverse economic circumstances mediated part of the effect of off-time home leaving on returning home (Hypothesis 3b). However, these indicators mediated only 7.8% of the effect of the IMR.

We found stronger support for Hypothesis 4b, as turning points accounted for 39.9% of the effect of off-time home leaving on returning home. This mediation effect was weaker when controlled for the other mediators (32.4%). In total, all mediators explained 42.7% of the effect of off-time home leaving on returning home. However, even after controlling for experiences after leaving home, the IMR still had a significant net effect on returning home.

Additional analyses. We completed several additional analyses. First, we completed robustness checks with other modeling techniques. We estimated a linear probability model instead of a probit event-history model for returning home within 5 years because the Heckman selection model was developed for a probit model followed by a linear regression. We also used the predicted probability of leaving home as an alternative indicator to the IMR. Both robustness analyses supported our general findings on the IMR and mediation effects. Second, we tested several other indicators (health of the parents, parent–child relation, childhood mobility) as predictors in our selection model to minimize the risk of unobserved factors. These checks supported our findings in the returning home analyses. As these indicators had no significant effect (health parents, parent–child relation) or were not observed in every wave (childhood mobility, parent–child relation), we decided to exclude them from the final model. Third, we examined several variables as

control variables in the returning home analyses. Returning home was lower among young adults from stepfamilies or whose parents divorced after leaving home and higher among migrants. However, the inclusion of these factors did not affect our main results for the IMR and the mediators. Gender, year of birth, parental health, and parental life satisfaction had no effect on returning home and did not change our findings for the other variables. Unlike previous research (Stone et al., 2013), we did not find an interaction effect between gender and any of the covariates. Finally, we tested several other possible mediators of off-time leaving: satisfaction with housework, time spent on housework, satisfaction with income, and having a child. These indicators had no significant effect if we controlled for the other variables in the final model. As these variables were not included in every wave, we did not include these variables in our main analyses.

DISCUSSION

In this article, we examined the link between leaving and returning home by testing whether off-time home leavers were more likely to return to the parental home than on-time leavers. Our approach to off-time transitions goes beyond previous work. Whereas previous studies defined transitions as off-time based only on the age at which that transition took place (e.g., Elder, 1998; Hogan, 1978; Rindfuss et al., 1987), we introduced a definition that is sensitive to the specific individual circumstances. Using a two-step model, we conceptualized off-time leaving in terms of "unexpected" home leaving.

We found strong support for our guiding hypothesis that the processes of leaving and returning home are linked: off-time home leavers were more likely to return home than

on-time leavers. Moreover, goodness of fit analyses showed that our measure for off-time leaving was a more accurate measure than age at leaving home, an indicator that has been studied in previous research on boomeranging (e.g., Berngruber, 2015; Kleinepier et al., 2017). Theoretically, our findings could be explained by the concept of bounded rationality, whereby off-time transitions occur and are reversed because of limited information of life after leaving home. If experiences after leaving the parental home do not match expectations, off-time home leavers might return home to reverse a "poor" decision. Our evidence for the link between leaving and returning home provides support for theoretical work on the life course, which stresses the importance of the timing of transitions and the link of earlier transitions to later transitions (Elder, 1998).

Next to the link between leaving and returning home, we examined experiences after leaving home as predictors of returning home. Consistent with an earlier study (Sandberg-Thoma et al., 2015), we found that decreases in life and health satisfaction after leaving home increased the chance of returning. By looking at the change in well-being rather than absolute well-being, we were able to capture disappointment with life after leaving home. We did not find an effect of living in poverty or poor housing conditions after leaving home. One explanation for this could be that the period in which young adults live in poor economic conditions after leaving home tends to be short (Aassve, Davia, Iacovou, & Mazzuco, 2007), and home leavers might be aware of this. We did find strong support for the importance of turning points after leaving home. The findings for partnership turning points are consistent with previous research that found that young adults who live with a partner were less likely to return, and those who separate from a partner more likely to return (e.g., Berngruber, 2015; Kleinepier et al., 2017; Stone et al., 2013). Also consistent with previous studies (e.g., DaVanzo & Goldscheider, 1990; Stone et al., 2013), we found that recently unemployed youth were more likely to return. However, our other findings for employment status differed from those in earlier studies. For example, in our study, young adults who were stable employed were just as likely to return as those who were stable unemployed. These differences might be due to the German context of our study, in which living semiautonomously in a college context

is less common and the welfare state is more extensive.

A new finding is that experiences after leaving home explain some of the effect of off-time home leaving on returning home. Turning points after leaving home formed the most important mediator, explaining a third of the effect of off-time leaving. Most of the effect, however, remained unexplained even after including all common predictors of returning home in the model. This suggests that important mediators of the effect of off-time home leaving on returning home remained unobserved in our study. One such mediator could be the preference of the parents for coresidence. Off-time home leavers are on average younger and are more likely to come from a "feathered nest." As a result, the parents of off-time leavers might be more open toward their child returning home. Another explanation could be differences in the intended length of the transition. Off-time home leavers might more often have a "zest for life" and might less often see the move out of the parental home as a definite move.

Although it was not our main goal, we are among the firsts to contribute to knowledge on returning home in a European context (Berngruber, 2015; Kleinepier et al., 2017; Stone et al., 2013). In our German data, returning home was less common than in the United States and Canada. Our measure of off-time home leaving can be applied in different contexts, as the estimate indicates whether the decision to leave home is off-time relative to the behavior of other young adults in their own context. Future research in other countries could examine the link between leaving and returning home based on general as well as country-specific factors that are relevant for leaving and returning home.

We observed a lower prevalence of returning compared to previous research on returning home in Germany (Berngruber, 2015). This might mainly be explained by the panel structure of our data, which makes that we did not observe short moves out or back into the parental home. In our case, that could be an advantage rather than a disadvantage, as "shorter" moves might more often be moves that were intended to be short. For example, young adults might move back for a few months while they are waiting to move into their new home, or young adults might leave the parental home only for a short period to study abroad for a semester.

All in all, our study makes two main contributions to research on returning home and life course research in general. First, we provided support for theoretical work on the life course in which it is expected that life course transitions are linked. Our finding that leaving and returning home are linked suggests that research on returning home as well as research on other transitions could more often take earlier transitions into account. Second, our concept and measure of off-time transitions could be relevant for life course research in general. In view of the increasing complexity, diversity, and fluidity of the life course, age no longer captures the extent to which transitions are off-time. The need for an approach that captures individual circumstances applies also to other transitions than leaving home. Future research could apply this strategy to a variety of life course transitions. For example, are individuals who marry off-time more likely to divorce? Are individuals who retire "too early" more likely to reenter employment in some form? Our concept and measure of off-time transition can put research questions about life course transitions in a new light.

Note

References

Aassve, A., Davia, M. A., Iacovou, M., & Mazzuco, S. (2007). Does leaving home make you poor? Evidence from 13 European countries. *European Journal of Population/Revue européenne de Démographie*, *23*(3–4), 315–338.

Arundel, R., & Lennartz, C. (2017). Returning to the parental home: Boomerang moves of younger adults and the welfare regime context. *Journal of European Social Policy*, *27*, 276–294. https://doi.org/10.1177/0958928716684315

Berngruber, A. (2015). "Generation boomerang" in Germany? Returning to the parental home in young adulthood. *Journal of Youth Studies*, *18*(10), 1274–1290. https://doi.org/10.1080/13676261.2015.1039969

Billari, F. C., & Liefbroer, A. C. (2007). Should I stay or should I go? The impact of age norms on leaving home. *Demography*, *44*(1), 181–198. https://doi.org/10.1353/dem.2007.0000

Billari, F. C., & Liefbroer, A. C. (2010). Towards a new pattern of transition to adulthood? *Advances in Life Course Research*, *15*(2–3), 59–75. https://doi.org/10.1016/j.alcr.2010.10.003

Billari, F. C., Philipov, D., & Baizán, P. (2001). Leaving home in Europe: The experience of cohorts born around 1960. *International Journal of Population Geography*, *7*(5), 339–356. https://doi.org/10.1002/ijpg.231

Billette, J.-M., Bourdais, C. L., & Laplante, B. (2011). An assessment of heterogeneity in first home-returning trends of young Canadians. *Canadian Studies in Population*, *38*(1–2), 19–41. https://doi.org/10.25336/P66S49

Copp, J. E., Giordano, P. C., Longmore, M. A., & Manning, W. D. (2015). Living with parents and emerging adults' depressive symptoms. *Journal of Family Issues*, *38*, 2254–2276. https://doi.org/10.1177/0192513X15617797

Da Vanzo, J., & Goldscheider, F. K. (1990). Coming home again: Returns to the parental home of young adults. *Population Studies*, *44*(2), 241–255. https://doi.org/10.1080/0032472031000144576

de Jong-Gierveld, J., Liefbroer, A. C., & Beekink, E. (1991). The effect of parental resources on patterns of leaving home among young adults in The Netherlands. *European Sociological Review*, *7*(1), 55–71.

DiPrete, T. A. (2002). Life course risks, mobility regimes, and mobility consequences: A comparison of Sweden, Germany, and the United States. *American Journal of Sociology*, *108*(2), 267–309. https://doi.org/10.1086/344811

Elder, G. H. (1998). The life course as developmental theory. *Child Development*, *69*(1), 1–12. https://doi.org/10.1111/j.1467-8624.1998.tb06128.x

Feijten, P., & Mulder, C. H. (2002). The timing of household events and housing events in The Netherlands: A longitudinal perspective. *Housing Studies*, *17*(5), 773–792. https://doi.org/10.1080/0267303022000009808

Gee, E. M., Mitchell, B. A., & Wister, A. V. (1995). Returning to the parental "Nest:" exploring a changing Canadian life course. *Canadian Studies in Population*, *22*(2), 121–144.

Goldscheider, F. K., & DaVanzo, J. (1985). Living arrangements and the transition to adulthood. *Demography*, *22*(4), 545–563. https://doi.org/10.2307/2061587

Goldscheider, F. K., & Goldscheider, C. (1998). The effects of childhood family structure on leaving and returning home. *Journal of Marriage and Family*, *60*(3), 745–756. https://doi.org/10.2307/353543

Goldscheider, F. K., & Goldscheider, C. (1999). *The changing transition to adulthood: Leaving and returning home*. Thousand Oaks, CA: SAGE.

Goldscheider, F. K., Goldscheider, C., St. Clair, P., & Hodges, J. (1999). Changes in returning

home in the United States, 1925-1985. *Social Forces*, *78*(2), 695–720. https://doi.org/10.2307/3005572

Heckman, J. J. (1977). *Sample selection bias as a specification error (with an application to the estimation of labor supply functions)* (Working Paper No. 172). Retrieved from National Bureau of Economic Research website: http://www.nber.org/papers/w0172

Hogan, D. P. (1978). The variable order of events in the life course. *American Sociological Review*, *43*(4), 573–586. https://doi.org/10.2307/2094780

Iacovou, M. (2010). Leaving home: Independence, togetherness and income. *Advances in Life Course Research*, *15*(4), 147–160. https://doi.org/10.1016/j.alcr.2010.10.004

Kaplan, G. (2012). Moving back home: Insurance against labor market risk. *Journal of Political Economy*, *120*(3), 446–512. https://doi.org/10.1086/666588

Karlson, K. B., Holm, A., & Breen, R. (2012). Comparing regression coefficients between same-sample nested models using logit and Probit a new method. *Sociological Methodology*, *42*(1), 286–313. https://doi.org/10.1177/0081175012444861

Kleinepier, T., Berrington, A., & Stoeldraijer, L. (2017). Ethnic differences in returning home: Explanations from a life course perspective. *Journal of Marriage and Family*, *79*, 1023–1040. https://doi.org/10.1111/jomf.12399

Lewis, J., West, A., Roberts, J., & Noden, P. (2016). The experience of co-residence: Young adults returning to the parental home after graduation in England. *Families, Relationships and Societies*, *5*(2), 247–262. https://doi.org/10.1332/204674315X14309191424695

Maroto, M. (2017). When the kids live at home: Coresidence, parental assets, and economic insecurity. *Journal of Marriage and Family*, *79*(4), 1041–1059. https://doi.org/10.1111/jomf.12407

Matsudaira, J. D. (2016). Economic conditions and the living arrangements of young adults: 1960 to 2011. *Journal of Population Economics*, *29*(1), 167–195. https://doi.org/10.1007/s00148-015-0555-y

Mitchell, B. (2007). *The boomerang age: Transitions to adulthood in families*. New Brunswick, NJ: Transaction Publishers.

Modell, J. (1980). Normative aspects of American marriage timing since World War II. *Journal of Family History*, *5*, 210–234. https://doi.org/10.1177/036319908000500206

Mulder, C. H., & Clark, W. A. V. (2002). Leaving home for college and gaining Independence. *Environment and Planning A*, *34*(6), 981–999. https://doi.org/10.1068/a34149

Mulder, C. H., Clark, W. A. V., & Wagner, M. (2002). A comparative analysis of leaving home in the United States, The Netherlands and West Germany. *Demographic Research*, *7*, 565–592. https://doi.org/10.4054/DemRes.2002.7.17

Mulder, C. H., & Manting, D. (1994). Strategies of nest-leavers: "Settling down" versus flexibility. *European Sociological Review*, *10*(2), 155–172. https://doi.org/10.1093/oxfordjournals.esr.a036327

Norris, J. A., & Tindale, J. A. (1993). *Among generations: The cycle of adult relationships*. New York, NY: Freeman.

Oksanen, A., Aaltonen, M., & Rantala, K. (2016). Debt problems and life transitions: A register-based panel study of Finnish young people. *Journal of Youth Studies*, *0*(0), 1–20. https://doi.org/10.1080/13676261.2016.1145638

Pickhardt, C. (2011). *Boomerang Kids*. Naperville, IL: Sourcebooks.

Puhani, P. (2000). The Heckman correction for sample selection and its critique. *Journal of Economic Surveys*, *14*(1), 53–68. https://doi.org/10.1111/1467-6419.00104

Rindfuss, R. R., Swicegood, C. G., & Rosenfeld, R. A. (1987). Disorder in the life course: How common and does it matter? *American Sociological Review*, *52*(6), 785–801. https://doi.org/10.2307/2095835

Sandberg-Thoma, S. E., Snyder, A. R., & Jang, B. J. (2015). Exiting and returning to the parental home for boomerang kids. *Journal of Marriage and Family*, *77*(3), 806–818. https://doi.org/10.1111/jomf.12183

Settersten, R. A., & Mayer, K. U. (1997). The measurement of age, age structuring, and the life course. *Annual Review of Sociology*, *23*(1), 233–261. https://doi.org/10.1146/annurev.soc.23.1.233

Simon, H. A. (2000). Bounded rationality in social science: Today and tomorrow. *Mind & Society*, *1*(1), 25–39. https://doi.org/10.1007/BF02512227

South, S. J., & Lei, L. (2015). Failures-to-launch and boomerang kids: Contemporary determinants of leaving and returning to the parental home. *Social Forces*, *94*, 863–890. https://doi.org/10.1093/sf/sov064

Stone, J., Berrington, A., & Falkingham, J. (2013). Gender, turning points, and boomerangs: Returning home in young adulthood in Great Britain. *Demography*, *51*(1), 257–276. https://doi.org/10.1007/s13524-013-0247-8

Tosi, M., & Grundy, E. (2018). Returns home by children and changes in parents' well-being in Europe. *Social Science & Medicine*, *200*, 99–106. https://doi.org/10.1016/j.socscimed.2018.01.016

Yamaguchi, K. (1991). *Event history analysis*. Thousand Oaks, CA: SAGE.