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Childhood Family Structure and the Transition to Adulthood

Alicia G. VanOrman

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***** Alicia VanOrman (avanorma@ssc.wisc.edu) is a doctoral student in the Department of Sociology and the Center for Demography and Ecology at the University of Wisconsin-Madison. The author appreciates funding for this research through core funding to the Center for Demography and Ecology (R24HD047873), as well as additional funding by the Research Committee of the Graduate School of the University of Wisconsin-Madison. I thank Marcia Carlson, James Raymo and Thomas DiPrete for helpful comments and methodological advice on prior versions.

Abstract

Family structure research typically examines single outcomes (e.g., fertility, educational attainment) during young adulthood, while an emerging literature on the 'transition to adulthood' views outcomes as a developmental process with significant heterogeneity across individuals. This study links these literatures by investigating family structure as a determinant of the pathway to adulthood with family income as a potential mechanism. The data come from the National Longitudinal Survey of Youth 1997 (NLSY97) and use latent class analysis to model the transition to adulthood. Results suggest family structure differentiates broad types of pathways: nonmarital union formation and childbearing pathways from post-secondary educational attainment or marital family formation pathways. Family income partially mediates the relationship between family structure and the pathway to adulthood for youth originating from marital family structures. Income does not mediate the relationship for youth from nonmarital family structures.

Introduction

Among contemporary American youth, early adulthood acts as a transitory stage linking the more dependent stage of adolescence to the presumed independence of adulthood. Many youth develop economic and social independence from their families of origin and begin to build their own families for the first time. Consequently, the accumulation of parental endowments and investments and youth's human capital are realized and transferred into individual attainments such as educational attainment, occupation and earnings. The patterning of early adulthood has implications for future adult wellbeing, as the initial adult roles undertaken influence subsequent life course transitions and life chances. In other words, early adulthood can act as a springboard for intra and intergenerational mobility or reproduce privilege and disadvantage. Understanding how youth navigate the experience of early adulthood and how early life precursors influence the process can illuminate potential mechanisms linking childhood experience to adult achievement and attainment.

Normative expectations, institutional opportunity structures, family and peer influences, and individual attributes all affect the ways youth structure various events and role transitions during early adulthood, creating different pathways. During the anomalous 1950s, many young adults appeared to follow a mostly compact and standardized path. Recent structural and social changes have altered the experience of contemporary early adulthood (Hogan and Astone 1986; Settersten, Furstenberg, and Rumbaut 2005; Shanahan 2000). Many now view it as a lengthening, individualized and heterogeneous experience and seek to describe the varied experience and the antecedents. Attempts to succinctly summarize the pathways to adulthood generally find that pathways are differentiated by the pursuit of

postsecondary education and early family formation behaviors and that family background is an important precursor (Amato, Landale, Havasevich-Brooks, Booth, Eggebeen, Schoen, and McHale 2008; Oesterle, Hawkins, Hill, and Bailey 2010).

The distribution of parental resources such as time, money, and other resources have implications for youth accumulation of social, human, cultural, and economic capital prior to adulthood, which can then be used to navigate the transition to adulthood. Presumably, families with large amounts of capital are better positioned to help children make successful transitions to adulthood. Parental resources are unequally distributed across families, with family structure acting as one sorting mechanism (e.g., Hofferth and Goldscheider 2010; Thomson, Hanson, and Mclanahan 1994; Wu 1996). If family structure represents a distribution of parental resources, youth from stable, intact families are in prime position to follow pathways associated with higher levels of future adult wellbeing and attainment, whereas youth from less stable families or who experience parental absence may struggle to navigate or never start to follow these same pathways. A long line of research consistently finds associations between living away from one's biological father and disadvantaged outcomes during young adulthood (e.g., McLanahan and Sandefur 1994). This research typically focuses on single outcomes, rather than the interlocked nature of outcomes during early adulthood, but there is reason to believe family structure may affect the broader pathway to adulthood. The consistent negative effects of nonintact family structure across young adult outcomes signals the possibility that family structure significantly influences the early adulthood pathway.

In particular, money is a key parental resource that differs by family structure. Of course, many factors other than money impact the pathway to adulthood, but material assistance can be a deciding factor, for example, in whether youth are able to pursue postsecondary education or need to combine employment with educational pursuits. Just as noneconomic parental resources are unequally distributed across family structures, so is parental income. Therefore, family income may be an important mechanism by which family structure affects the pathway to adulthood.

Previous research linking family structure to young adult pathways generally uses a dichotomous measure of family structure rather than the more varied structures youth in nonintact families typically experience (Amato et al. 2008; Oesterle, Hawkins, Hill, and Bailey 2010; Osgood, Ruth, Eccles, Jacobs, and Barber 2005). In this study, I incorporate a longitudinal measure of family structure that documents family structure from birth through age 16 to illustrate the effects of family instability, stepfamilies, and single-parents. Through this more nuanced measure, I can determine if all types of nonintact families impact the transition to adulthood in a similar manner. Research shows varying effects of family structure depending on how nonintact families are measured, implying that using a dichotomous family structure measure may not capture the true influence of family structure. Using the longitudinal measure, I contribute to debates regarding how different types of nonintact families affect young adult outcomes while linking the literature regarding the structure of the young adulthood with the long line of literature exploring the role of the family as an important predictor of future child and young adult outcomes.

The paper proceeds as follows: Following the definition of the transition to adulthood, I discuss the potential effects of family structure on each component of the transition to adulthood and on the entire pathway, as well as how family structure may operate through family income. In the fifth section I describe the data and analytic methods followed by multivariate results. I conclude with a discussion of the strengths and limitations of this study as well as future steps to refine the analysis.

Defining the Transition to Adulthood

The life course perspective describes young adulthood as a developmental process defined by the interlocking nature of the timing and sequencing of demographic, economic and social transitions ((Elder 1974; Elder 1985; Hogan and Astone 1986; Settersten, Furstenberg, and Rumbaut 2005). Rather than focusing on single events or transitions, this perspective engages the concepts *role configurations, role trajectories* and *pathways*. *Role configurations* consist of the constellation of social roles and statuses individuals occupy at a given point, whereas *role trajectories* are formed by the sequence of discrete role transitions over time. The combination of *role configurations* and *role trajectories* form *pathways* or the interlocked trajectories of the *role configurations* (Macmillan and Copher 2005). Given the interdependency of the role configurations, pathways provide additional information regarding the socioeconomic and demographic status of youth than the individual indicators. While individual agency plays an important role in shaping pathways, social, institutional, and familial forces also act to structure expectations and opportunities (Hogan and Astone 1986; Shanahan 2000).

In industrialized and Western societies, key transitions during young adulthood include completing school, gaining full-time and stable employment, establishing residential independence, getting married, and becoming a parent. While Arnett (1998; 2000; 2001) argues that developing self-conceptions of independence, being autonomous and having financial responsibility better describe the process of achieving adulthood than specific socio-demographic indicators, a primary goal of the transition to adulthood is to achieve objective social and economic independence of the family of origin. Transitioning to employment, leaving home, finding a partner and becoming a parent each provide concrete evidence of having some means available to be independent of the family of origin, and these indicators signal adult status to others and can be tied to concrete outcomes. Likewise, specific events likely influence the series of events to follow. For example, pursuing postsecondary education generally leads to a delay in childbearing (Rindfuss, Morgan, and Offutt 1996; Upchurch, Lillard, and Panis 2002) and later transitions to full-time career employment (Mortimer, Vuolo, Staff, Wakefield, and Wanling Xie 2008). On the other hand, very early parenting tends to be nonmarital and likely hinders the pursuit of postsecondary education (Hofferth, Reid, and Mott 2001). Early, by stopping education, or inconsistent labor market transitions are linked to lower educational attainment (Aquilino 1996; Kiernan 1992). Extended parental co-residence, as well as premarital residential independence, tends to be associated with higher educational attainment (White and Lacy 1997). The directionality between home-leaving and employment is less clear: employment may be pursued as an avenue to establish an independent residence, or establishing independent living necessitates finding gainful employment. However, difficulty establishing successful

labor market transitions tends to delay home-leaving (Goldscheider and Goldscheider 1999). Early union formation increases the speed of home-leaving (Aquilino 1991) and is associated with lower educational attainment (Uecker and Stokes 2008). These empirical findings uncover potential early adulthood pathways and demonstrate the interdependency between domains of family, school, and work.

Until recently, a normative pathway to adulthood consisting of compactly completing school, finding employment, getting married and having children existed (though not followed by all youth). However, in recent decades, the degree of societal consensus regarding the normative ages and sequences for role transitions has eroded (Hogan and Astone 1986; Marini 1984a). Likewise, changes in education and the labor market—and related social changes, such as increased cohabitation and delayed marriage and childbearing—altered the normative course of young adulthood and increased variability in the pathways to adulthood (Arnett 2000; Rindfuss 1991; Settersten, Furstenberg, and Rumbaut 2005; Shanahan 2000). At the same time, despite increased heterogeneity, empirical evidence suggests there are only a few distinct pathways that young adults typically follow: most studies find between three and seven pathways depending on the sample, upper age limits, operationalization of key statuses and transitions, and methods used (point-in-time vs. time-varying, sequence-based) and they tend to be most differentiated by the pursuit of postsecondary education or early family formation (Amato et al. 2008; Macmillan and Copher 2005; Macmillan and Eliason 2003; Oesterle, Hawkins, Hill, and Bailey 2010; Osgood et al. 2005; Sandefur, Eggerling-Boeck, and Park 2005). Across all studies, the most common pathway to adulthood is defined by postsecondary education

investment and postponement of family formation: Between one-third and two-fifths of young adults follow this pathway depending on birth cohort, with increases among younger birth cohorts. Then, between one-fifth and one-third of young adults follow pathways defined by limited postsecondary education and rapid transitions to parenthood (marital and nonmarital). The remaining young adults generally follow pathways consisting of limited postsecondary education, moderate to high levels of employment and limited family formation, though the definitions of these groups varies across the studies and depends on the number of discrete pathways and the operationalization of the transition indictors.

While I do not explicitly test hypotheses regarding the structure of the transition to adulthood, I do map out how I expect young adult statuses to interlock. This map will help elucidate the specific hypotheses regarding the impact of family structure that I put forth in the next section. As shown in Figure 1, I anticipate roughly five pathways, which differentiate based on educational attainment and family formation behaviors. Specifically, I expect 1) college completion to be combined with low rates of childbearing and family formation along with high rates of residential independence and employment, 2) marriage to be combined with childbearing and at least high school completion and high rates of residential independence and employment, 3) partnering without children combined with high levels of employment and residential independence, and 4&5) failure to complete high school to be combined with high rates of nonmarital parenthood (single and cohabiting) along with lower rates of residential independence and employment.

Family Structure and the Transition to Adulthood

The family is a fundamental social institution for the rearing and socialization of children. During childhood, interactions with parents, siblings, extended family members and other individuals in the parents' social network help children form behavior expectations and develop aspirations. The family regulates and monitors expected behavior through social control mechanisms and the family provides emotional security through affection and companionship. Additionally, the family serves as the primary source of economic support during childhood. Provision of these family roles influences the psychological and social development of children as well as providing children with the necessary tools for positive schooling (and other developmental) opportunities.

Parental absence and family disruption changes how the family fulfills these roles as compared to two-parent biological families (e.g. Astone and McLanahan 1991; Fomby and Cherllin 2007; Hill, Yeung, and Duncan 2001; Hofferth and Goldscheider 2010; McLanahan 1985; Osborne and McLanahan 2007; Thomson, Hanson, and Mclanahan 1994; Wu and Martinson 1993). Single parent families are generally less able to provide as much parental time and economic support as two-parent families. In two-parent families two people theoretical fulfill parental roles and provide economically, socially, and emotionally to children. In single-parent families there is only one parent within the household to provide these supports. The nonresidential parent may contribute economically and socially, but it is likely not on a daily basis and they may have a very limited role. Having access to only one parent's resources can lead to lower levels of parental supervision and control, fewer economic resources for acquiring goods, services, and opportunities for cognitive

development, and lower levels of warmth, affection and emotional security, ultimately hindering children's positive development.

Everyday family life tends to be guided by social norms, providing expectations regarding parental roles and parent-child relationships. Stepparent families have another set of roles and relationships that need to be negotiated, but as first characterized by Cherlin (1978; Cherlin and Furstenberg 1994), stepfamilies are "incomplete institutions" with few normative guidelines for parents and children to follow. The role of stepparent and stepchild tends to be ambiguous; expectations regarding parental involvement and disciple need to be negotiated. Likewise, stepparents are not substitutes for the nonresident biological parent and they do not share the same history with non-biological children. Stepparents may also have nonresident children, meaning their parental time and money resources needs to be split across households. Thus, stepparents may not have the same incentives to invest in non-biological children. The addition of a stepparent may change the relationship between parent and child as well. Time and energy originally devoted to the child may be partially diverted to the new partner. In other words, stepfamilies may be stressful, with fewer investments in children and less parental supervision and control.

Family instability influences young adult outcomes as theorized by the social stress and crisis models. According to these models, partnership transitions are stressful and they change the material and social resources available to parents and children. For example, many partnership transitions are combined with residential mobility and changes in household income (McLanahan and Sandefur 1994). Likewise, whether the instability involves a union dissolution or re-partnering, existing routines and relationships between

parents are disrupted, requiring the development and adoption of new routines. For example, a new partner may reduce the amount of attention a parent gives to her children and the new partner and child need to develop a relationship. Additionally, the stress and change in resources may undermine psychological functioning in both parents and children, limiting parents' abilities to provide emotional and social support to their children (Meadows, McLanahan, and Brooks-Gunn 2008). As a result, children may develop or engage in problematic behaviors or seek stability in other relationships (e.g Fomby and Cherllin 2007; Osborne and McLanahan 2007; Wu 1996; Wu and Martinson 1993). The transitional period results in a short-term crisis until new routines are established, thus the negative effects should be most apparent during the transition and diminish with time. However, it is also theorized that stress cumulates across transitions, so children who experience multiple transitions may have worse outcomes (Rutter 1983).

Below, I summarize the empirical literature about how family structure and family instability is shown to affect specific outcomes for youth and young adults.

Schooling

Completing high school is frequently cited as the start of the transition to adulthood (Settersten, Furstenberg, and Rumbaut 2005), and educational trajectories have implications for nearly all other outcomes during young adulthood. Overall, nonintact family structure experiences during childhood are linked to lower overall educational attainment as compared to children raised in two-parent biological families (Hill, Yeung, and Duncan 2001; Sandefur and Wells 1999; Ver Ploeg 2002). Young adults from nonintact families are more likely to drop out of high school (Astone and McLanahan 1991; McLanahan 1985; McLanahan and

Sandefur 1994), complete fewer years of education (Hill, Yeung, and Duncan 2001; Sandefur and Wells 1999), and are less likely to pursue additional education (Ver Ploeg 2002). However, when the broad category of nonintact family is examined by specific type of nonintact structure, the direct link between family structure and educational attainment is less clear. Compared to children raised in two-parent biological families, some studies have found no effect of growing up in a single-parent family on educational attainment (Ginther and Pollak 2004) , while others found lower odds of graduating from high school (Aquilino 1996) and fewer years of completed education (Hill, Yeung, and Duncan 2001). Likewise, Ginther and Pollak (2004) found children raised in blended families had lower educational attainment than children raised in intact families, while Hill, Yeung, & Duncan (2001) found no difference between these groups. The inconsistent findings imply that while on average, experiencing some type of biological parental absence may have negative consequences for educational attainment, the effects are likely not the same or at least not of the same magnitude for all types of disrupted families

Employment

For most young adults, completing education and making successful labor market transitions are key components to achieving economic independence, though the relationship between family structure and employment transitions is not extensively studied. However, evidence shows that young adults from nonintact families have poorer labor market transitions than those who grow up in two-parent biological families: adults from single-mother families have higher rates of unemployment during young adulthood (Caspi, Wright, Moffitt, and Silva

1998; McLanahan and Sandefur 1994), and children raised in stepfamilies tend to make labor market transitions earlier than those raised in intact families (Aquilino 1996; Kiernan 1992).

Independent Residence

Nonintact family structures are linked with early home-leaving and with independent or family household formation rather than semi-autonomous and institutional living arrangements (Aquilino 1991; Cooney and Mortimer 1999; Goldscheider, Arland, and Young-DeMarco 1993; Goldscheider and Goldscheider 1998; Goldscheider and Goldscheider 1999; Goldscheider and DaVanzo 1985). This suggests that children from disrupted families are less likely to pursue residential college education and are more likely to enter co-residential unions at younger ages than young adults from intact families. Likewise, young adults who establish residential independence early tend to return home more often than those who delay until the early 20s (Goldscheider and Goldscheider 1999). There is some variation by family type: young adults raised in stepfamilies tend to leave home earlier than those raised in other family types (Aquilino 1991; Aquilino 1996; Goldscheider and Goldscheider 1998; Kiernan 1992). Results are inconsistent for young adults raised in single-mother families: Aquilino (1991) finds no difference between young adults raised in intact versus single-mother families, while Cooney and Mortimer (1999) find young adults from single-mother families make faster home-leaving transitions.

Union Formation

Young adults from nonintact families tend to engage in union formation behaviors at younger ages than young adults raised in two-parent biological families, though the types of union

formation is not consistent across family types. Some find that growing up in a mother-only family is associated with marriage at younger ages (Li and Wojtkiewicz 1994; McLanahan and Bumpass 1988) , while experiencing a family disruption tends to be associated with delayed marriage (Li and Wojtkiewicz 1994), lower probability of marriage (Kobrin and Waite 1984), or no effect on marriage (Thornton 1991). However, Teachman (2003) finds a higher rate of first marriage among women who grow up with a stepparent. Young adults who experience multiple family disruptions or spend time in nonintact family structures tend to form cohabiting unions at a higher rate (Thornton 1991) and at younger ages than their counterparts from stable families (Aquilino 1991; Cherlin, Kiernan, and Chase-Lansdale 1995; Goldscheider and Goldscheider 1999; Kiernan 1992; Teachman 2003).

Childbearing

Growing up in a nonintact family or experiencing family disruption is associated with both early and nonmarital childbearing (Aassve 2003; Hill, Yeung, and Duncan 2001; Hofferth and Goldscheider 2010; McLanahan and Bumpass 1988; McLanahan and Sandefur 1994; Wu and Martinson 1993). Hill et al. (2001) and Wu and Martinson (1993) find increased risk for premarital childbearing among women who experience multiple family transitions, regardless of pre- and post-transition family structure. However, South (1999) and McLanahan and Sandefur (1994) find that mother-only families increase the risk of premarital childbearing. Similarly, Hofferth and Goldscheider (2010) find that consistent father absence and experiencing multiple family transitions significantly increases the odds of early parenting among women but not does have an effect among men, after controlling for other family background characteristics.

Family Structure as a Precursor of Transition Pathways

As described above, children's and adolescents' family structure experiences and access to parental resources influence trajectories within different specific domains during early adulthood. However, these trajectories are interdependent, and the effect of family structure is not entirely consistent across all domains. Examining the relationship between family structure and early adulthood *pathways* may elucidate the long-term effect of family structure in two ways. First, to the extent that particular domain trajectories (for example, education or family formation) define the early adulthood pathway, a long term effect family structure may operate through the specific domain trajectory. Second, since the domain-specific trajectories occur within the emerging life course, the multi-dimensional pathway that youth follow while establishing adulthood is likely a much better predictor of future success and wellbeing than single outcomes. In other words, if family structure is weakly linked with a main driver of a transition pathway—or has counterbalancing effects on multiple transitions, then using single transitions could overstate (or understate) the long term effects of family structure. On the other hand, the negative effects of family structure could cumulate across all transitions or be strongly linked with a main driver of a transition pathway, ultimately intensifying the observed effects of family structure. In this case, family structure could be a significant driver of inequality but that is under-estimated in research using only single outcomes.

The growing literature examining the precursors of early adulthood pathways does not fully explore the effect of family structure experience. Rather, focus is placed more specifically on the effects of family socioeconomic status, which includes family structure as

a component along with personal experiences, aspirations, and abilities. When family structure is considered, it typically appears as a static measure referenced to a single age (usually 14 or 15) or point in time (current parental marital status) and only differentiates between those living with both biological parents and those not. These measures do not capture living with stepparents or experiencing family instability – two family experiences that significantly influence young adult outcomes in ways different from residing in a single-mother family. In one study, Oesterle et al. (2010) utilizes a concept of family disruption during adolescence; however, this measure did not include parental remarriages as disruptions nor did it differentiate those who originate in mother-only families from those born to married parents.

The nascent literature on how family structure affects early adulthood pathways does indeed show that family structure has an important influence on young adult's transition to adulthood. Oesterle et al. (2010) found that family disruption increases the likelihood of women following an "unmarried early mother" pathway rather than pathways without children or with children in marriage. Sandefur, Eggerling-Boeck & Park (2005) find a similar relationship: among women, nonintact family structure experiences tend to increase the likelihood of being on a pathway with early childbearing and little postsecondary education investment. Both studies find no or very limited effects among men. These studies suggest that family structure has stronger effects on family formation behaviors than on labor market trajectories, thus the lack of strong effects for men is not surprising as labor market experiences and educational trajectories tend to dominate men's pathways. Amato et al. (2008) only examines women and combines family structure with other measures of family

socioeconomic status and individual academic achievement and ability; thus, the specific effect of family structure is unclear. However, high levels of family resources and academic achievement, which includes living with both biological parents during late adolescence (ages 16-18), significantly increases the likelihood of following a pathway defined by investment in college and limited family formation as compared to all other pathways. Also, higher levels of family resources decreases the likelihood of following pathways with early parenting outside of marriage as compared to parenting within marriage. Osgood, Ruth, Eccles, Jacobs, and Barber (2005) find parental marital status is a significant predictor of the pathway to adulthood in total, but did not provide statistical tests comparing the effect of parental marital status on the different pathways.

These studies demonstrate that static measures of nonintact family experience tend to differentiate pathways defined by early nonmarital parenting and limited investments in postsecondary education from those with delayed family formation and at least some college attainment. Given that nonmarital family formation and lower educational attainment are each associated with lower economic wellbeing for children and adults (Hoffman and Foster 1997; Lerman 2002; Seltzer 2000), childhood and adolescent family structure may hinder intragenerational and intergenerational mobility. Likewise, the effects of family structure may replicate across generations as nonmarital family formation and lower educational attainment are also associated with higher rates of union instability (Bumpass and Lu 2000; Manning, Smock, and Majumdar 2004). However, these studies do not capture the dynamic nature of most family structure experiences. Including stepfamilies and using sequence-based family structure measures leads to a more nuanced understanding of family structure and

helps elucidate the mechanisms through which family structure operates. For example, as Hill, Yeung, and Duncan (2001) and Wu and Martinson (1993) show, living with a single mother per se does not increase the likelihood of nonmarital childbearing, rather it is the experience of then living with a stepparent or experiencing family instability that increases the likelihood. Likewise, Aquilino (1991; 1996) and Goldscheider and Goldscheider (1998) find similar effects for early home-leaving and forming cohabiting unions.

Based on the previously discussed linkages between family structure and specific outcomes as well as the relationship between family structure and the transition to adulthood, I hypothesize the following: 1) youth who grow up in any type of nonintact family will be more likely to follow pathways with lower educational attainment and higher levels of childbearing relative to those who grow up with continuously married parents, 2) less time in single mother families and/or less instability will be associated with fewer negative effects – thus I would expect youth who were born to married parents and subsequently experienced a parent divorce as the only transition should be more similar to those raised in intact families, 3) I expect youth from marital origin families who experienced multiple family disruptions to be similar to youth from marital origin families who experienced a parental divorce, except these youth should have a higher likelihood of following a pathway with childbearing, and 4) I expect youth from all types of nonmarital family structures to be more likely to become unmarried parents as compared all other transition to adulthood pathways.

Family Economic Resources

According to some, parental income is a key resource in determining child outcomes (e.g., Becker 1991; Duncan, Yeung, Brooks-Gunn, and Smith 1998; Hill and Duncan 1987;

Thomson, Hanson, and Mclanahan 1994). Money, above some minimum investment ensuring provision of basic necessities, enables parents to purchase high-quality opportunities for educational, cognitive, and social development and can expose children to schooling experiences, social networks, and social expectations that children with few economic resources do not have access to (Lareau 2003; Lareau and Weininger 2008; Thomson, Hanson, and Mclanahan 1994). The provision of these developmental opportunities sets the stage for positive educational and labor market transitions. In addition to providing access to social and material resources, family economic resources may shape children's expectation of future economic opportunities. Whether college, a high-paying career, or desirable marital prospects are on the horizon likely depends partly on the economic characteristics of parents through their ability to choose neighborhoods (Anderson 1990; Wilson 1987). At the same time, family economic resources may impact parenting processes related to parents' psychological functioning and parental stress. Higher economic resources may reduce parental stress and improve parental emotional well-being, which in turn may be associated with more positive parenting behaviors (Thomson, Hanson, and Mclanahan 1994).

Specific to young adulthood, social institutions and policies have not fully adapted to cover the increasing costs of the transition to adulthood, thus monetary assistance from families can help youth pursue transition pathways associated with positive young adult outcomes (Settersten, Furstenberg, and Rumbaut 2005). For example, monetary transfers may be critical for the pursuit of post-secondary education, residential independence and even pursuing full-time work (for example, low-paying potentially career-building work).

Lacking economic support, youth from low-income families may turn to adult roles, such as parenting and full-time employment as opposed to continuing schooling, at younger ages and with less preparation than those with more economic means.[1]

Low family income while growing up is associated with earlier transitions to adulthood (Hogan and Astone 1986; Marini 1984b; Shanahan 2000). Families with lower income provide less economic assistance during the transition to adulthood (Schoeni and Ross 2005). Youth from lower-income families attend four-year college at a lower rate and have lower graduation rates (Bozick and DeLuca 2005; Charles, Roscigno, and Torres 2007; DesJardins, Ahlburg, and McCall 2006; Sandefur, Meier, and Campbell 2006). Full-time employment is frequently combined with post-secondary education, extending the time to degree (Bound, Lovenheim, and Turner 2007; Fitzpatrick and Turner 2007). Young adults from low-income families may also struggle to make successful labor market transitions, partly due to poor skill sets and lower educational credentials.

The relationship between home-leaving and family income is less clear. Young adults with lower family income leave home earlier and higher income families appear to delay home-leaving primarily through encouraging delayed marriage (Avery, Goldscheider, and Speare 1992). Union formation and childbearing patterns vary by family income: youth from lower-income families are more likely to have early and/or nonmarital births (Hofferth and Goldscheider 2010; McLanahan and Bumpass 1988; McLanahan and Sandefur 1994) and to

[1] Additionally, access to higher family income could enable youth to engage in more self-exploration and potentially take more risks while establishing oneself on the labor market, which could increase economic returns later in life. Morillas, Juan Rafael. 2007. "Assets, earnings mobility and the black/white gap." *Social Science Research* 36:808-833..

form cohabiting unions at young ages (Hill and Holzer 2007). On the other hand, young adults from higher-income families are more likely to be married by age 30 (Guldi, Page, and Stevens 2007) and to marry as the first family formation event (Schoen, Landale, and Daniels 2007)

Economic resources are unequally distributed across families and family structure acts as one sorting mechanism. Family structure signals the number of potential income earners within the household: fewer adults in the household is generally associated with lower family income. Similarly, background characteristics, such as parental educational attainment, affect adults' income earning capabilities as well as family formation behaviors and family stability. Single-mother families have lower family income and are more likely to be poor than two-parent married families (Lerman 2002). In fact, nearly one third of children living in single-mother families are poor compared to roughly five percent of children in two-parent families (DeNavas-Walt, Proctor, and Smith 2010). While payments from noncustodial parents should help narrow the gap, not all single-parents have a child support order and of those with orders, not all receive regular or full payments (Bianchi 1995)[2]. Marriage itself does not always improve the economic circumstances of children living in single-mother families, as the added income depends on the economic characteristics of the stepparent and the extent to which stepparent income is shared with non-biological children; overall though, children residing in married stepfamilies are nearly as well off financially as children living with both biological parents (McLanahan and Sandefur 1994). Additionally, nonintact families appear to have lower preferences for providing economic assistance during

[2] A recent presentation by Daniel Meyer at the Institute for Poverty Research at the University of Wisconsin – Madison reiterated this description. See also Elaine Sorenson at the Urban Institute.

the transition to adulthood (Aquilino 2005). In other words, low family income or limited access to monetary assistance could be disproportionally distributed among nonintact families and may be a mechanism of family structure.

Given the links between adolescents' family economic status and the timing of role transitions during young adulthood—and the differential distribution of family income across family types, I anticipate that one way family structure affects the pathway to adulthood is through family income.

Covariates

In addition to family structure and family income, socio-demographic characteristics such as race and ethnicity and gender, along with family background characteristics such as parental education, parental age, and family size tend to differentiate the timing of adult role transitions. These same characteristics are also related to family structure and family instability. The fact that parental characteristics vary with family structure and vary with the transition to adulthood leads to concerns regarding selection. In other words, parental characteristics influence young adults' pathway to adulthood and they impact parents' ability to form and maintain stable relationships. Therefore, what appears as a link between family structure and the transition to adulthood may actually be due to the characteristics selecting parents and children into family structures and into pathways to adulthood. In order to limit selection effects and isolate the link between family structure, family income, and the transition to adulthood, the follow background characteristics should be considered.

Race and Ethnicity

Social categories of race and ethnicity structure orientations and opportunities through shared cultural histories and socioeconomic positioning which is associated with group differences in family formation patterns (Schoen, Landale, Daniels, and Cheng 2009). Black women tend to begin childbearing at younger ages (Martin, Hamilton, Sutton, Ventura, Menacker, Kirmeyer, and Mathews 2009) marry later and are less likely to marry overall than other race/ethnic groups, leading to higher rates of nonmarital childbearing among black women (Hollander 1996; Upchurch, Lillard, and Panis 2002; Ventura 2009). Therefore, black children are more likely to grow up in nonintact families than white children. Also, to the extent that family formation patterns differentiate the pathways to adulthood, it is expected that black women (and to some extent, black men) will have a higher likelihood of following pathways defined by early parenting.

Gender

Demographic and social changes over the past few decades have altered men's and women's work and educational lives such that today they follow more similar pathways to adulthood (Fussell and Furstenberg 2005). Oesterle et al (2010) and Sandefur et al (2005) examine men's and women's pathways separately and found that in general, men and women follow similar pathways, but the timing varies. Women continue to marry and begin childbearing at younger ages than men. Therefore, depending on how age is used to define the transition to adulthood, men and women could appear to follow different pathways if too young of an age is used as an endpoint.

Parental Education

Access to high levels of human and social capital greatly influences the educational trajectories of children. Highly-educated parents are more likely to encourage cultivation of social and academic skills (which are highly valued in the educational system), and they tend to possess the skills and knowledge necessary to navigate the complex web of postsecondary education (Lareau 2003; Lareau and Weininger 2008). This leads to higher levels of youth academic success during high school and greater parental investment in postsecondary education. As high levels of attachment to postsecondary education delay labor market and family-based transitions, parental education may be an important precursor to the transition to adulthood. In fact, lower levels of parental education are associated with women being more likely to follow pathways with early, nonmarital parenting (Oesterle, Hawkins, Hill, and Bailey 2010). Highly-educated parents tend to marry and remained married more often than parents with lower educational attainment. Therefore, children of highly educated parents are more likely to grow up in intact families and experience less family instability.

Others

The timing of transitions during young adulthood appears to be related to resource allocation within families as well as role-modeling. The presence of siblings may represent a strain on available financial and time resources before and during the transition to adulthood. The strain could reduce parental assistance in applying to and paying for postsecondary education. Siblings may also increase conflict within households, leading youth to seek opportunities for independence at younger ages. On the other hand, siblings can serve as

positive role models and act as a source of human and social capital. In general, growing up in large families is shown to increase the rate of family-based transitions and reduces investment in postsecondary education (Marini 1984a). Parental age can act as an indicator of parental resources – older parents tend to be more mature and psychologically able to provide higher quality investments in their children. And to some extent, adolescents model mothers' childbearing trajectories, particularly if adolescents' mothers had their first birth at very young ages (Barber 2000; Barber 2001). Adolescents of these young mothers tend to bear children at young ages, often outside of marriage; however, Oesterle et al (2010) did not find that being born to a teen mother differentiates young adult pathways.[3],[4]

To summarize, in this study I aim to determine if childhood family structure influences the transition to adulthood pathway and explore the possibility that family structure operates through family income. Examining how family structure influences the transition to adulthood can help identify the long-lasting consequences of family structure as well as how family structure could potentially contribute to limited intra- and intergenerational mobility. To the best of my knowledge, this is the first study to use a sequence-based measure of childhood family structure that captures all marital-based family transitions from birth through age 16. Given evidence that the effects of family structure vary based on the measurement of family structure, this study will provide a clearer picture of how

[3] Consistent with the life course perspective and the role of individual agency, a person's value orientation influences intentions and behavior during decision-making processes. Religiosity has been found to be particularly salient for role transitions during early adulthood. Amato et al (2008) found high levels of conservatism and religiosity to differentiate delayed family formation and high levels of postsecondary education investment from other types of pathways, particularly those involving cohabitation or nonmarital childbearing. Unfortunately there are missing data problems with youth's religious background and I have not incorporated this measure.

[4] Academic ability and college preparation affect whether youth attend postsecondary school. Much like measures of religiosity, I am concerned about the quality of this measure and have excluded at this time.

family structure affects the transition to adulthood. Through the sequence-based measure I can compare the effects of family instability, residing with a single mother or with stepfamilies, and nonmarital childbearing on young adult pathways. Compared to similar studies, I have complete data from a nationally representative data set for men and women and multiple racial/ethnic groups and can therefore model the process for nearly all young adults residing in the U.S. in the late 1990s. Previous studies examine somewhat older cohorts (Osgood et al. 2005; Sandefur, Eggerling-Boeck, and Park 2005), only women (Amato et al. 2008), or use a non-representative sample (Oesterle, Hawkins, Hill, and Bailey 2010; Osgood et al. 2005).

Data and Methods

Data

The data for this research come from the National Longitudinal Survey of Youth 1997 (NLSY97), a nationally representative cohort of 6,748 men and women born between 1980 and 1984 and an oversample of the black and Hispanic populations of 2,236 men and women, also born during those years. Individuals are sampled within households, thus there are multiple respondents from the same household. Respondents have been interviewed annually since 1997, with data available through the 2008 (Round 12) interview. These data are particularly well-suited for my research question as they include a detailed parental interview which documents parental marriages, parental education, and parental income. At baseline and during all follow-ups, data regarding respondents' transition to adulthood is captured: school enrollment and degrees, detailed employment information, living

arrangements, marriage and cohabitation histories, and childbearing. Together these data provide a portrait of the respondents' family structure and family income experience prior to completing secondary education as well as the youths' transitions during early adulthood.

Sample

I use data primarily from the Round 1 interview (1997) (ages 12-17) and the Round 12 interview (2008) (ages 23-28), supplemented by data in the intervening years as needed to construct the family structure and outcome measures. Retention has been high: 83% of all original respondents were interviewed in 2008 (Center for Human Resource Research 2010). With the assumption that children tend to reside continuously with their mothers and the need to use information from the parental interview in order to develop a dynamic family structure variable, I place multiple sample restrictions (the number and percent of the remaining sample lost at each step is reported in parentheses): the parental interview was not completed (n=1084, 12%), the responding parent was not the biological mother (n=1321, 18%), the respondent did not live continuously with the mother since birth (n=366, 6%) and the respondent did not have a valid family structure in the Round 1 interview (n=11), respondents' mother did not have complete and valid retrospective marital status information (n=135, 2%), and biological parent's marriage ended due to death (n=180, 3%). Additionally, for development of the dependent variable, transition-to-adulthood pathway, the respondent must not be missing data on the young adult statuses in 2008 (n=993, 17%). Thus I am left with a sample of 4,894 (46% of total) for modeling young adult pathways. After listwise deletion for missing covariates I am left with 3,222 respondents for modeling the relationship

between family structure and young adult pathways. Later, I provide an analysis to assess the implication of losing over half of the sample.

Methods

There are multiple approaches to modeling the transition to adulthood. One method many researchers use is latent class analysis. Latent class analysis (LCA), a subset of structural equation models, enables identification of the underlying relationship or latent structure among a set of observed variables and is frequently used to develop typologies when the observed variables are categorical (Clogg 1995; Clogg and Goodman 1984; Goodman 2002). Many view LCA as a categorical analog to factor analysis (McCutcheon 1987). The goal of LCA is to create a multidimensional discrete variable, with each level consisting of one latent class, which explains the relationship among the indicator variables (Clogg and Goodman 1984; Hagenaars and McCutcheon 2002). Statistically, once the latent variable is controlled for, the only relationship remaining between the indicator variables should be random variation (Goodman 2002; McCutcheon 1987).[5] After a latent variable is identified, individuals can be assigned to mutually exclusive and exhaustive latent classes (Goodman 2007). Then using regression techniques, other observed covariates can be used to predict latent class membership (Clogg 1995).

Latent class analysis is particularly well-suited for developing typologies of pathways through adulthood since many of the role transitions are interdependent, yet there are nearly

[5] A latent class model is identified when latent variable X with *t* classes explains the relationship among the observed variables A and B: where π_{ij}^{AB} denotes the probability that an individual has the response pattern (i,j) on variables A and B, respectively, $\pi_{ij}^{AB} = \sum_{t} \pi_{ijt}^{ABX}$ and $\pi_{ijt}^{ABX} = \pi_{t}^{X} \pi_{it}^{\bar{A}X} \pi_{jt}^{\bar{B}X}$ (McCutcheon 1987).

infinite distinct patterns of timing and sequencing. The method condenses the observed patterning of young adult social and demographic transitions into a manageable number of nearly homogenous groups, while still capturing variability across groups. Researchers have used this method in two distinct ways and have obtained similar results regardless of the exact methodology. For example, some researchers incorporate the exact timing and sequencing over the course of young adulthood (e.g. Amato et al. 2008; Macmillan and Copher 2005; Oesterle, Hawkins, Hill, and Bailey 2010). This model has the benefit of capturing age, timing, and sequencing of all events over the course of many years. On the other hand though, this methodology requires extensive data. First, longitudinal or event history data is needed. If longitudinal data is used, respondents cannot miss any interviews and must supply responses to all indictors or the models need to adjust for missing data.[6] If there is reason to believe that the timing and sequencing is important, above and beyond the combination of roles and statuses occupied near the end of the transitional period, then this method is preferable. Another method instead uses a cross-section near the end of the transitional period and utilizes the constellation of indictors at that point as a way to define the young adulthood pathway (e.g. Osgood et al. 2005; Sandefur, Eggerling-Boeck, and Park 2005). This method does not capture the exact timing and sequencing of events, but assumes that the grouping of roles at the end point serves as a good indication of how young adulthood was structured. Both methods assume that the combination of socioeconomic status, captured by measures of education and employment, and demographic statuses of marital/union status and children during young adulthood is an important indicator for

[6] The ability to handle missing data in various statistical programs is improving through the use of full information methods, but it is still a concern.

socioeconomic and demographic trajectories throughout adulthood. Built into this theory, researchers believe the combination of roles and statuses have meaning beyond the individual indicators (Elder 1974; Elder, Johnson, and Crosnoe 2003). The main difference then, is the first method also views the exact timing and sequencing as providing additional meaning.[7] However, both methods lead to similar latent classes, indicating that the choice between the two methods is motivated more by an underlying interest in the sequencing and timing as opposed to the ultimate end point. Further, examining the descriptive combination of statuses occupied at the end of the sequentially organized latent class analyses, for example Amato et al. (2008) and Oesterle et al. (2010), would lead to similar naming of the latent classes as compared to those incorporating the complete sequential picture. In this study, I approach the combination of roles and statuses occupied near the end of young adulthood as more important than the exact timing and sequencing of role transitions, therefore I use the second, cross-sectional method.

I use cross-sectional measures of educational attainment, labor market status, residential independence, union formation and childbearing to develop transition-to-adulthood pathways (TTAP) using latent class analysis. Then I use multinomial logistic regression models to examine how family structure and family income influence the pathways to adulthood. My TTAP model may be an improvement over previous models as I am using a nationally representative prospective data set with complete information captured

[7] For example, the first method could distinguish between two identical sequences with different timing: 1) complete education at age 18, marry at age 20, and have a first child at age 22; 2) complete education at age 22, marry at age 25, and have a first child at age 28. The second method could also distinguish between these two scenarios through using an education level indicator rather than an education stopping indicator (as the longitudinal methods use). But the second method could not distinguish: complete education at age 22, having a first child at age 25, and marrying at age 28 from the second sequence above, whereas the sequential method could.

in an event history format regarding fertility, marriage, employment, and living arrangements transitions for both men and women and by racial/ethnic group. The data collection method should lead to more accurate and complete information for each of the young adult transitions I include in the LCA model. Additionally, this is the first study to explicitly explore the relationship between different types of nonintact family structures and how young adults structure the transition to adulthood.

Measures

Transition to Adulthood Pathways

The dependent variable integrates information about five observed categorical variables, each measured as of the Round-12 interview (ages 23-28): highest grade completed, having had a child, marriage and cohabitation status, living independently or with a partner/roommate, and full-time employment. Highest grade completed is measured using four categories associated with normative schooling transitions: less than 12 years, 12 years, 13-15 years, and 16 years or more. Any respondent who provides a birth date for a child (whether residing with the respondent or not) during any survey is classified as having had a child. Current marriage and cohabitation status is captured using a created martial status variable: single (never married, separated, divorced, or widowed) and not cohabiting, single and cohabiting, and married. Living independently or with a partner or roommate is defined by looking across the household roster in the Round-12 interview. Any respondent who reports parents or grandparents in the household is classified as not living independently. Additionally, any respondent who reports living in a semi-institutionalized setting (dormitory or military

barracks) is also classified as not independent. Full-time employment is determined based on the sheer number of hours worked during the past calendar year, without regard to seasonal employment or periods of part-time work. I assumed an average of 30 hours per week over the course of 50 weeks reflects stable, full-time employment. Thus, any respondent who worked 1,500 hours or more during the year is coded as employed full-time. In addition to using this measure, I provide robustness checks to ensure that the varying durations of exposure to young adulthood, for example, 23 year olds are different than 28 year olds, do not lead to TTAPs that are solely age dependent.

Family Structure

Family structure is measured through age 16 using maternal retrospective marriage histories collected during the Round-1 parent interview and household roster data during subsequent interviews until the respondent reached age 16. The marital histories and household rosters allow for creating a sequence-based measure of family structure. This measure improves upon static, point-in-time measures by delineating the process of family structure over childhood and adolescence and incorporating the concept of instability into family structure type. I begin by categorizing respondents based on mothers' marital status at respondents' birth. All respondents born between a marriage start and end date or born no more than 12 months before a marriage start date are classified as marital births. Then, I use mothers' retrospective marital histories to document changes in family structure. Marital end dates between respondents' birth and 16th birthday are coded as disruptions while marriage start dates after respondents' birth are coded as stepfamily additions. For respondents younger than 16 at the Round-1 interview, I use household rosters and living arrangement data to

determined changes in family structure through age 16. At each interview round, respondents' report their relationship to all household members. If respondents report a change in relationship to the adults in the household between the Round-1 interview and subsequent interviews, the family structure variable updates accordingly. Finally, I use the number of family disruptions and stepfamily additions to create family structure pathways: Married two-parent biological family (Intact), married two-parent biological family and a parental divorce (M->D), married two-parent biological family with a parental divorce and remarriage (and possible additional transitions) (M->D->R), nonmarital single mother family (Stable single mother), nonmarital single mother family with a parental marriage (and possible additional transitions) (Nonmarital->Stepfamily).

Family Economic Resources

I measure family economic resources as gross family income within the household the youth respondent resides in during the calendar year in which respondents turned 16. I adjust for family size by dividing by the square root of family members currently residing in the household. I then create income quartiles: less than $10,000 (omitted category), $10,000 to $19,999, $20,000 to $33,999 and $34,000 or more.[8]

Covariates

To capture family experiences besides family structure and family income, I include measures for family composition: the total number of siblings and whether the respondent

[8] Future work to be done includes adjusting income using the Consumer Price Index to reflect constant 2000 dollars (family income could have come from any year 1996 and 2000.

was the eldest child. I also include maternal age at first birth (1=teenager at first birth, 0=age 20+). Maternal education is coded based on number of years of education, which I collapse into less than high school, high school, some college, and college or more, based on normative schooling transitions. The remaining measures capture respondent characteristics: age in 2008, gender (reference=male), race (non-Hispanic black, Hispanic, and white (reference)), and foreign-born (reference=born in the US).

Results

Latent Class Analysis

I begin by describing the overall sample and the proportion of the sample occupying each outcome status at the end of the observation period (unweighted). As show in Table 1, the majority of the sample is white (60%); black and Hispanic respondents make up roughly equal proportions of the remaining sample. Just over half of the sample is female and nearly 26 years old as of the 2008 interview. Close to half of the respondents have mothers with at least some college education though close to one-fifth did not graduate from high school. Nearly a quarter of respondents' mothers had their first birth as a teenager and most have at least one sibling. Almost three-quarters of the sample reside in an urban area and 35% reside in the south. The descriptive statistics of the outcome measures are shown in Table 2. In total, 34% of the sample had achieved four-years of college or more, and an additional 27% had attended at least some college, while 15% of the sample did not graduate from high school. Many respondents made family and partnership transitions by 2008: 41% have had at least one child, 28% are married, and 21% are cohabiting. On the other hand, roughly half of

respondents remain single and nearly 30% are not residentially independent of their parents (or grandparents). The majority of respondents made full-time employment transitions: nearly 60% of all young adults accumulated enough working hours in the past year to be classified as employed full-time.

In order to correctly identify the number of classes, using Latent Gold 4.5 (Vermunt and Magidson 2005), I specify models with one to ten classes and then use several model comparison techniques to choose the best fitting model. A potential problem with latent class analysis is inadvertently choosing a suboptimal solution (occurs when the log-likelihood for the selected model is not maximized and is not repeated with multiple iterations). To prevent this, I estimate models with 1,000 iterations of 100 random starting values.[9] The model with the highest log-likelihood is then used for the final optimization. To select the best fitting model, I first examine how well the model fit the data. For this test, the model fits the data when the relationships between the individual variables are independent of each other once the latent class is entered into the model. In other words, a model fits when the probability of the observed difference between the log-likelihood of the null model (one latent class) and the current alternative model (*n* classes) fails to reach statistical significance according to a chi-square distribution. After determining the minimum number of classes based on the X^2 results, I compare models with *n* and *n+1* classes using another log-likelihood difference test (significant results implies model fit improved by adding a class). I confirm the results utilizing the Bayesian Information Criterion (BIC) (smaller numbers imply better fit) and the number of parameters in the model (the model with the fewest parameters is preferred).

[9] Significantly more starting value and iterations than needed when running the analysis in total, but to be consistent across all models, I decided to leave these unchanged.

Finally I examine the various solutions to ensure the chosen solution has easily defined and unique classes. Based on these criteria I chose a six-class solution. See Table 3 for the results of the statistical tests. After choosing the six-class solution, I assign cases to a class based on the highest probability of membership (Goodman 2007). The resulting class proportions after assignment nearly match the predicted class membership proportions, suggesting using highest probability is a sufficient assignment method.

Table 2 shows the sample proportions in each class as well as the how statuses are distributed within each class. The modal class, comprising 27% of the sample, is defined as *Limited Family Formation-College Educated-Employed* (*LFF-CEE*) and is similar to the normative description of the transition to adulthood. Among this class, college going is universal, with 81% of the class obtaining at least four-years of college education. Some steps toward family formation have been made, nearly 20% are cohabiting and another 20% are married, however childbearing is very low – only 3% have had at least one child. Employment levels are high, with nearly 70% employed full-time and all living independently of their parents.

The second class, comprising 18% of the sample, is characterized by low levels of residential independence and very low levels of family formation. I label this pathway as *Trying to Find a Foothold*. Over 65% of young adults in this pathway obtain some college education with 38% achieving at least four years of college, but only 6% have achieved residential independence and just over half are employed full-time (the fourth lowest level of employment across all classes) Additionally, all young adults remain single and 2% of those in this pathway have children. The members of this class are significantly younger than those

in all other classes. This implies they have had differential exposure to young adult transitions. However, in substantive terms, the age difference is questionable. The young adults in this class are, on average, close to 4 months younger than those in *Limited Family Formation-College Educated-Employed*, about 11 months younger than *Married Parents,* six months younger than *Educated Partners* (the variance in age is equal across all groups – standard deviation of 1.4 years). While much can change over the course of a year during young adulthood, given the differential distributions across all outcomes and the fact that very few of these young adults are still in school, I do not think there is evidence that youth in this class would be more like another class if given more time.

The third class, representing 16% of the sample and can be described as *Single Parents*. In addition to high levels of parenthood (83%) and single, not cohabiting (90%), this pathway has the second lowest level of educational attainment across all classes. No members of this pathway have four years of college and 43% of those in this pathway did not graduate from high school. 29% finished high school and another 28% did complete at least some college. Two fifths of *Single Parents* are employed full-time and less than half live independently of their parents.

The fourth class consists of *Married Parents* and makes up 17% of the sample. Parenthood and marriage are universal for this pathway. Education levels are nearly evenly disturbed across high school (31%) and some college (31%), while 25% completed four years of college and 11% did not complete high school. Nearly all live independently of their families of origin and close to 60% are employed full-time.

I define the fifth class as *Employed Partners*. This pathway represents 13% of the sample and has the highest level of employment for any of the classes (84%). Most reside with a partner (54% cohabiting, 34% married) and are residentially independent of their parents (92%), but childbearing is comparatively low (4%). Moderate levels of education have been achieved with 4% completed high school and an additional 45% have some college (6% have college+).

The last pathway, 9% of the sample, is *Cohabiting Parents*. Cohabitation is universal while 95% have at least one child. Additionally, this pathway has low levels of educational attainment and employment (37% did not complete high school, 28% have some college or more and 45% are employed full-time).

Multinomial Logistic Regression Results

To determine the relationship between childhood family structure and the pathway to adulthood, I conduct a series of multinomial logistic regressions where the six pathways to adulthood are predicted by family structure and a set of background characteristics. To test economic deprivation as a mechanism of family structure, I add family income at age 16 to the final model. For the main analysis, I treat every TTAP as the comparison group. As *Limited Family Formation-College Educated-Employed* is the modal group and is likely associated with positive outcomes during adulthood, I expect family structure to be a precursor to following this pathway relative to all other pathways. Then alternating through the remaining TTAPs as comparison groups, I can determine if family structure also influences following any of the remaining pathways relative to each other. This analysis will

show if family structure influences following certain types of pathways as opposed to linking specific family structure types to specific TTAPs.

I first begin with a brief discussion of descriptive statistics of the covariates and their relationship to family structure. I then move on to discuss the results of the multivariate models. All main results are shown in Table 4. All covariates except family income are entered in every model. Family income is added in Model 2. The full multivariate results, including the effects of the covariates are in Appendix 1.

The descriptive results show there is selection into family types (Table 1). Respondents who grew up in intact families are more likely to be white than the total sample and those who were born to an unmarried mother are more likely to be black. Hispanics are roughly evenly distributed across the family structure types. Maternal education is also associated with family structure type: youth in intact families are more likely to have mothers who have four years of college or more whereas mothers of those in stable single mother families are more likely to have not finished high school. Also, young adults who were born to unmarried mothers are more likely to have mothers who had a first birth as a teenager. Youth growing up within a single mother family are more likely to reside in the south and in urban areas. Finally, family income differentiates family structure types: Youth in intact families are more likely to be in the top income quartile compared to the total, whereas youth in stable single mother families are more likely to be in the bottom income quartile. These relationships show that characteristics theoretically associated with the TTAP are also associated with family structure, implying that much of the observed relationship between family structure and young adult outcomes likely occurs due to the disadvantaged positions

of youth in nonintact families relative to those in intact families. The multivariate analyses control for these covariates in order to isolate the role of family structure as a precursor of the transition to adulthood.

Turning to my first hypothesis: youth who grew up in any type of nonintact family would be more likely to follow any pathway other than *Limited Family Formation-College Educated-Employed* relative to those who grew up with continuously married parents. As shown in the top panel of Table 4, with the exception of *Trying to get a Foothold*, there appears to be evidence for this hypothesis. In particular, relative to youth in intact families, all youth in any type of nonintact family are at least two times more likely to be *Single Parents* and roughly three to four times more likely to be *Cohabiting Parents* as compared to *LFF-CEE*. Similarly, youth from all types of nonintact families, relative to those in intact families are around two times more likely to be *Educated Partners* and just under two times as likely to be *Married Parents* as opposed to *LFF-CEE*. Additionally, I tested to see if the relative relationships differed by family type. That is, are the relative effects different depending on which family structure type is treated as the comparison group. Presumably, youth from families with only one marital divorce would be less disadvantaged than other youth and could potentially have lower risks of follow pathways other than *LFF-CEE* when compared to the remaining types of nonintact families. The null could not be rejected: relative to intact families, all nonintact family types have similar likelihoods of following each of the remaining pathways when compared to *LFF-CEE* (results not shown).

My second hypothesis stated: Less time in single mother families and/or less instability should be associated with fewer negative effects – thus I would expect to

Marriage-Divorce to have more similar results to Intact. To test this hypothesis, I expected to see fewer significant results for youth in this family type relative to youth in intact families across all TTAP comparisons. The results in Table 4 do not provide much support for this hypothesis. Across all panels, the relative risk ratios for youth in Marriage-Divorce families relative to Intact families are similar to those for all other family structure types (relative to Intact families). In fact, the results for Marriage-Divorce are not significantly different than any of the other family types for any of TTAP comparisons (results not shown). The confidence intervals for each nonintact family type overlap. Additionally, I treated Marriage-Divorce as the reference category – other than Intact families, no family structure type had any consistent pattern of result when compared to Marriage-Divorce. Given the large number of comparisons, and thus capitalizing on chance, I was looking for patterns of significant and substantively important results rather than individual significant results.

For the remaining hypothesis I proceeded in a similar fashion: I first examined the results shown in Table 4 (and the corresponding confidence intervals) to determine if nonintact family structures are associated with a different likelihood of following the pathway in question relative to intact families. To then determine if different types of nonintact family structure had varying relationships with the TTAPs, I reran the analyses with the family structure type in question as the comparison group. I then looked for consistent patterns in the results. As the previous two hypothesis test showed and the remaining tests confirmed, specific types of nonintact family structure do not appear to have varying relationships with the TTAPs. Rather it appears that all nonintact family structures are associated with following any type of TTAP other than *LFF-CEE* and that among the

nonintact family structures, but nonintact family structure does not necessarily differentiate the remaining TTAPs. While I do not provide all the results, this can be partially observed in Table 4.

For example, the first hypothesis in this group states: youth in M->D->R should be similar to M->D, except they should be more likely to follow a pathway with childbearing. In all comparisons of the three pathways with childbearing to the other pathways, these two types of nonintact families have very similar relative risks as compared to intact families. This does not confirm that M->D->R and M->D have similar likelihoods relative to each other, but it provides some evidence against the hypothesis that these two types of nonintact families would differ.

I expected youth from both types of nonmarital families to be more likely to be *Single Parents* or *Cohabiting Parents* as compared to all other TTAPs. There is some evidence to support this hypothesis: relative to the comparison TTAP, youth from nonmarital families have the highest relative risk ratios for *Single Parents* and *Cohabiting Parents*. And relative to youth from Intact families, youth from nonmarital families are just as likely to be *Cohabiting Parents* as compared to *Single Parents* (panel 3, Table 4). The implication is, while youth from nonmarital families are more likely than youth from Intact families to engage in nonmarital childbearing and family formation, when youth form nonmarital families, family structure does not determine if nonmarital childbearing occurs within cohabitation or not. Furthermore, while relative to Intact families, youth from nonmarital families are more associated with *Single Parents* and *Cohabiting Parents* than other TTAPs,

compared to the other types of nonintact families, nonmarital origin families are equally likely to be *Single Parents* or *Cohabiting Parents*.

The final hypothesis states that controlling for family income should attenuate much of the observed relationships. Family income is highly associated with family structure and with the ability to pursue post-secondary education. To test this hypothesis I add family income to Model 2 and reran all analyses. The results in Table 4 show that while family income does lessen the observed associations, the effect of income is rather modest. In general, youth from nonintact families are still more likely than youth from intact families to be *Single Parents* or *Cohabiting Parents* as opposed to *LFF-CEE* and they are more likely to be *Cohabiting Parents* than *Married Parents*. The results do not refute the hypothesis, but with the current measure of family income, there is only weak support that family income is a mechanism of family structure.

To further demonstrate the reported results, I calculated predicted probabilities for Models 1 and 2; results are shown in Table 5. The predicted probabilities show, by family structure type, the probability of following each TTAP while holding all other covariates at the sample mean. Turning back to the first hypothesis, it is clear that youth from Intact families have the highest probability of being on the *LFF-CEE* path (.32). All nonintact family structures have a much lower probability of being on this path and they all have roughly equal chances of being on this path. M->D has the second highest predicted probability, .21 while stable single mother and nonmarital->stepfamily has the lowest, .17. Youth from stable single mother and nonmarital->stepfamily have the highest and equal probability of being *Single Parents*, .2, though the remaining types on nonintact families are

not much lower. All family structure types have nearly equal probability of being *Married Parents*, around .18. Marriage->Divorce have the highest probability of being *Employed Partners*, .19, though again, other than stable single mother, the other nonintact family types are not much lower. Youth from stable single mother families have the highest probability of being *Cohabiting Parents*. Controlling for family income, I would expect that the within family structure type probabilities of TTAP would move close to the overall total probabilities. After controlling for income the probabilities by family structure type for *LFF-CEE* do move closer to the overall probability, however most other probabilities remain largely unchanged. This is not too surprising given the modest effect income had on the coefficients. Additionally, many of the by family structure type probabilities are small and relatively close to the overall probability leaving little room for adjustment by family income. Furthermore, family income is likely associated with some of the other covariates so by itself does not offer much power. This analysis does show however that family structure and family income operating through family structure has the largest impact on influencing the probability of following the pathway of *LFF-CEE*. Youth from intact families are more likely than the overall sample to follow a pathway with high education and much more likely to follow this pathway than youth from any of the nonintact family structures. Similarly they are much less likely than all youth or any youth from nonintact families to follow a pathway characterized by nonmarital childbearing.

Discussion and Conclusion

In this paper I aimed to show the potentially long lasting effect that family structure has by influencing the pathway youth follow through young adulthood. Additionally I examined

whether specific types of nonintact family structures increased the likelihood of following specific types of young adult pathways. I also tried to determine if family income at age 16 acted as a mechanism of family structure. Using young adult measures of educational attainment, marital status, childbearing, residential independence, and full-time employment, I identified six possible pathways to adulthood via latent class analysis. I then used multinomial logistic regression to examine the role of family structure and family income, using a transition-based measure of family structure, as a predictor of young adult pathway. This is the first study to explicitly examine the effect of family structure on the pathway to adulthood using a measure of family structure which captures family structure transitions from birth through age 16. As the results show, all types of nonintact family structures decrease the likelihood of following a pathway with high levels of educational attainment, but the point estimates are not of the same magnitude nor do they respond the same way to family income across all types of nonintact families.

I first created a typology of transition of adulthood pathways using LCA. The descriptive results are strikingly similar to previous studies (e.g. Amato et al. 2008; Macmillan and Copher 2005; Oesterle, Hawkins, Hill, and Bailey 2010; Osgood et al. 2005; Sandefur, Eggerling-Boeck, and Park 2005). Echoing Amato et al (2008), the sample, variables included and age range will impact which latent classes emerge. However, it is reassuring that across multiple studies, each with a different data set, different age ranges, and different measures, similar pathways to adulthood emerge. This study adds to existing descriptive work by providing further evidence that there are a limited number of young adult pathways and that they differentiate by combinations of higher levels of educational

attainment with delayed family formation and lower levels of educational attainment with higher rates of nonmarital family formation. The pathways, while not representing the transitions of any single individual, demonstrate typical patterns, which have implications for the remaining life course, particularly for socioeconomic trajectories (Elder 1998; Elder, Johnson, and Crosnoe 2003).

Given the importance of the young adult pathways for the emerging life course, understanding how antecedent factors, particularly the family, influence the pathway is necessary. In this study, I examined the role of family structure and family income as important predictors. The results show that nonintact family structures increase the odds of following pathways defined by early family formation and lower educational attainment as compared to a pathway with little family formation and college completion. Nonintact family structures also increase the odds of following *Cohabiting Parents* as compared to *Trying to get a foothold* and *Married Parents*. As these two pathways have higher levels of educational attainment and little to no nonmarital childbearing, this finding reinforces previous results that nonintact family structures during childhood impact family formation behaviors (Oesterle, Hawkins, Hill, and Bailey 2010; Sandefur, Eggerling-Boeck, and Park 2005). Presumably, the higher level of parental resources and stability within intact families help youth develop the skills necessary to obtain higher levels of education while delaying family formation. However, family structure as influencing family formation behavior does not appear to operate through income: adding family income to the models led to small decreases in the relative risk ratios and altered the predicted probabilities for the pathways other than *LFF-CEE* very slightly. For example, after controlling for income, the percentage point

differences between intact families and all other types decrease more for the *Limited Family Formation-College Educated-Employed* pathway than any other pathway. This shows that nonintact family structures may hinder college-going and college completion through lack of funds. Similarly, for youth born to unmarried parents, controlling for family income bring their predicted probability of becoming *Single Parents* close to the overall sample total by increasing the predicted probably of following pathways with higher educational attainment (*LFF-CEE, Trying to get a Foothold)*. On the other hand, the remaining pathways are not greatly differentiated by family structure and any role family structure plays does not fully operate through family income. These results suggest that childhood family structure has the largest impact on family formation behaviors during young adulthood, while income, rather than family structure itself, influences college going and college completion.

Furthermore, the specific type of nonintact family structure does not appear to greatly influence the specific non-*LFF-CEE* pathway youth follow. Based on literature showing type of nonintact family structure had varying impacts on young adult outcomes, I hypothesized that 1) youth born to married parents who only experienced one parental divorce would be more similar to youth in intact families and 2) youth born to unmarried parents and those who experienced multiple family structure transitions would be more likely to follow pathways with nonmarital childbearing and lower educational attainment as compared to youth born to married parents. According to the predicted probabilities there is modest support for these hypotheses, however hypothesis testing demonstrates that the observed differences between types of nonintact family structures are not any more different than expected based on chance alone. These findings map onto the previously discussed

inconsistent results across studies examining impacts of specific types of nonintact families. Capturing the heterogeneity in nonintact families is nearly impossible – children's age when parents leave and enter households, relationships with nonresident and stepparents, the influence of stepsiblings, etc, all influence the characteristics and family relationships within nonintact families which then influence outcomes (Hill, Yeung, and Duncan 2001; Wu and Martinson 1993). My measure goes beyond previous studies in that it captures some of the heterogeneity, but it certainly not all. More research is needed as the results could be interpreted two ways: 1) all types of nonintact families lead to pathways consisting of lower educational attainment and earlier family formation or 2) the current measure may not capture important heterogeneity across types of nonintact families.

The key finding in this study is that all types of nonintact family structures face lower probabilities of following a pathway in young adulthood that includes college-going and high probabilities of following a pathway with nonmarital childbearing and lower educational attainment. As there is some evidence that the lower probability of following a pathway that includes college-going is mitigated by family income, proving families with the economic tools to make college a possibility will help equalize opportunities. However, family income only led to small reductions in the risk ratios of following a non-*LFF-CEE* pathway relative to those in intact families. Family income did not have a large impact because decisions regarding college-going likely occur well before the immediate decision based on currently available funds.

Limitations

There are three limitations to this study: the sample lost due to restrictions and missing data, only having one data point for family income, and only having information on young adult outcomes through 2008, when respondents were between the ages of 23 and 28.

Due to sampling restrictions I lost nearly 50% of sample before constructing the TTAP measure. And then due to missing covariates, I was only able to keep about two-thirds of the remaining sample for the final analysis. In Appendix 2 I compare descriptive statistics of the analytic samples to the total sample. The final analytic sample is more advantaged that the overall sample: maternal education is higher, few mothers had their first birth as teenagers, more of the respondents are white, and more respondents have obtained post-secondary education. Since family structure is related to socioeconomic and demographic background – that is, more advantaged socioeconomic positions tend to be associated with marital family formation and family stability, I am likely underestimating the prevalence of nonintact family structures. The same characteristics also influence the TTAP, thus I likely overestimate the prevalence of *LFF-CEE*. This means, I may underestimate the role family structure plays: I likely have a sample of more advantaged nonintact families than the population and these families could potentially have more similar resources (parental and money) to intact families as compared to the total population of nonintact families. Therefore I expect the differences observed between family types to be smaller than they would in the overall population. While my results suggest there are rather limited differences between nonintact family structure types, it could be that the relatively advantaged sample has equalized the family structure types whereas in the population larger differences would be

observed. Therefore I stress that these results show a clear difference in which young adult pathway youth follow based on an intact versus nonintact difference, but that more research is needed with more complete data to fully elucidate the potential varying effects of different types of nonintact families.

Money is an important mechanism of family structure as it is a key parental resource. My results however suggest family income plays a fairly minor role. This relationship could have been muddled by the measure used to estimate family income. Parents are only asked their family income level in the first wave of the NLSY97, when respondents are between ages 12 and 17. For the vast majority of respondents then, the family income measure is reported by youth and then adjusted based on parental reports the following year. This method led to a lot of missing data and introduces misreporting. In order to correct for the missing data, I mean imputed family income based on the mother's education level and reran all analyses. With this method I was able to recapture over 1,000 cases (analytic n=4,311). The results, not shown, were nearly identical – magnitudes shifted slightly, but significant results and overall interpretation remained the same. This result implies that family income may in fact play a limited role or the measure I use to estimate family economic resources is flawed. Family income tends to fluctuate annually; only having one data point misses much of the actual economic status of a family. Family income also does not provide any estimation of funds set aside for college-going or more general family wealth. These likely influence the expectation of and actual college-going for many youth. Finally, family income over the entire course of childhood would provide a better estimate of family income as a mechanism as income allows parents to provide access to high quality educational and social

opportunities throughout childhood. Access to these opportunities accumulates and shapes expectations over the life course and influences the pathway a youth follows during young adulthood.

The third limitation points to the age of the young adult sample. I only have young adult measures through 2008, when respondents were between ages 23 and 28. Many researchers have noted that the transition to adulthood is lengthening and only capturing young adult experiences through the mid20s may not be long enough to sufficiently capture the entire process. And the timing of young adult transitions vary by socioeconomic status: youth from low SES backgrounds tend to transition to adulthood much faster, forming families and bearing children at younger ages than youth from high SES backgrounds. As the analytic sample is relatively more advantaged than the total sample, by only observing youth through the mid20s I may be missing a significant amount young adult transitions. However the data show that many of the young adults are well on their way to adulthood, with nearly 30% married, 40% having at least one child, 72% living independently of their parents, and nearly 60% working full-time. As a robustness check, I re-ran the TTAP latent class analysis on only those who reached at 25 by 2008. I limited the sample so only those with equal durations of being at risk for young adult transitions were included: I used the same youth adult outcomes, but measured at age 25 (rather than in 2008). The results were not as clean as when I used the entire sample, though six pathways with very similar definitions did emerge (results not shown). My results are clearer when I use the entire sample, implying additional sorting takes place after age 25. The younger respondents in the sample therefore face a higher risk of being misclassified. The robustness check suggests this happens infrequently

and provides evidence that while the main analytic sample consists of a mixture of young adult durations, I still capture the general patterns youth follow through young adulthood.

Other potential limitations include those related to attrition and missing parental cohabitation data. The young adult years are characterized by high rates of residential mobility and other life transitions which may make it difficult to locate respondents or make it challenging for respondents to continue to participate. To the extent that the respondents who could not be found or chose not to participate in 2008 have different patterns of young adult outcomes or have different family structure experiences than those interviewed in 2008, the model of the pathway to adulthood could be biased. The results can also not speak to the effect of parental cohabitation spells as no data on parental cohabiting partners is collected. Young adults may have experienced more family structure transitions or there could be less father absence than the results suggest. For example, youth identified as residing in stable single mother households may have resided with their biological father or had a father-figure(s) in the household during childhood, but without a parental marriage, these family combinations are not captured.

Conclusion

These results imply that nonintact family structure may be associated with unequal life opportunities later in life by reducing youth's ability to pursue pathways with high educational attainment and delayed or marital childbearing. As I examined the accumulation of young adult statuses, more research is needed to explore if 1) early family formation hinders college-going as opposed to youth having no intention of obtaining higher education and 2) more explicit testing of the mechanisms of family structure. According to the

predicted probabilities, by middle-young adulthood, one-third of those born to unmarried mothers will have followed pathways defined by unmarried parenthood, but after controlling for family income, nearly 20% youth raised by stable single mothers and nearly 20% of youth born to unmarried parents who later formed a stepfamily are on a pathway with high educational attainment (7 percentage points behind the overall sample). Why do some youth from nonintact families pursue additional education and delay family formation while others do not? What occurs within families to influence these outcomes? One possibility is parental involvement. The current models have no measure of contact or involvement with the nonresident parent nor do they include measures of parent-child relationship or other parenting process variables. Within family measures influence outcomes so it is likely that they would also influence the accumulation of young adult statuses (Hofferth and Goldscheider 2010; Thomson, Hanson, and Mclanahan 1994). Furthermore, research is needed to identify tools policy could leverage to help equalize opportunities across all family types by encouraging and making college-going and employment prospects a real possibility while discouraging early or nonmarital family formation. As childhood family structure becomes more polarized by parental background characteristics and more children are born to unmarried parents, it is necessary to understand how these family formations influence the trajectories and opportunities children face as they enter young adulthood. This study goes one step in that direction by showing that all types of nonintact family structure decrease the likelihood of following a pathway with high educational attainment and delayed family formation relative to all other pathways and that family income at age 16 only explains part of the influence of family structure.

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Figure 1. Conceptual Map of Potential Transition to Adulthood Pathways

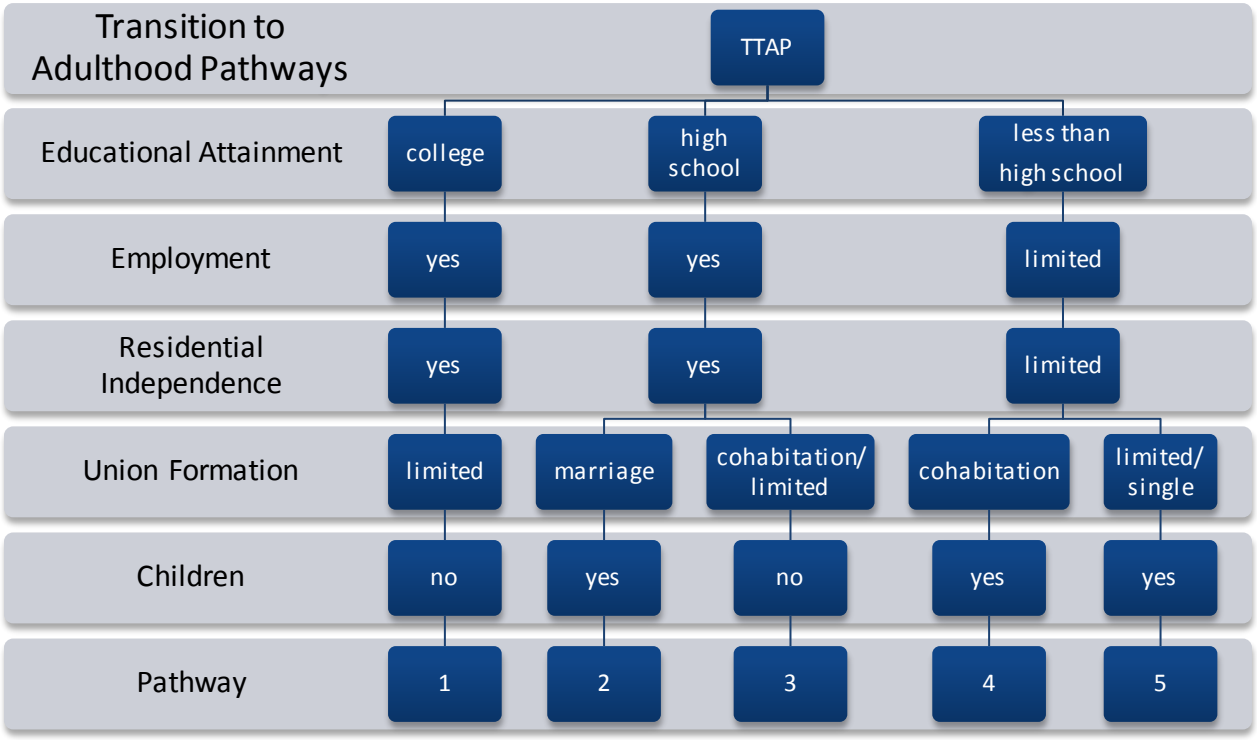

Table 1. Descriptive Statistics of All Covariates, in total and by family structure experience (unweighted)

		Family Structure				
	Total	Intact	Stable Single Mother	Marriage -> Divorce	M->D -> RM	Nonmarital -> Stepfamily
N	3222	1728	316	415	369	394
Race/Ethnicity						
Black	22%	10%	59%	20%	20%	50%
Hispanic	19%	19%	20%	19%	14%	19%
White	59%	71%	21%	60%	66%	31%
Female	52%	48%	57%	56%	55%	55%
Age in 2008	25.9	25.9	26.1	26.0	25.8	25.9
	(1.46)	(1.45)	(1.44)	(1.48)	(1.44)	(1.51)
Maternal Education						
Less than High School	18%	14%	38%	14%	15%	28%
High School	35%	34%	38%	30%	35%	45%
Some College	25%	24%	19%	32%	31%	18%
College +	22%	28%	5%	23%	19%	9%
Maternal Teen Birth	24%	16%	41%	19%	28%	48%
Eldest/only child	50%	45%	55%	50%	55%	64%
Number of Siblings						
None	22%	12%	42%	22%	34%	35%
One	41%	43%	33%	44%	40%	35%
Two	24%	29%	12%	23%	20%	20%
Three or more	14%	17%	14%	11%	6%	10%
Residing in the South in 1997	35%	32%	42%	35%	37%	44%
Foreign Born	11%	12%	12%	11%	8%	10%
Residing in an urban area in 1997	73%	68%	87%	81%	71%	75%
Household Income at Age 16 (adjusted for family size)						
Less than $10,000	26%	14%	62%	36%	25%	37%
$10,000-$19,999	23%	18%	23%	33%	27%	30%
$20,000-$33,999	26%	32%	10%	20%	24%	21%
$34,000 or more	25%	36%	5%	11%	24%	12%

Table 2. Descriptive Statistics of Outcome Measures (Unweighted)

	Total	LFF-CEE^	Trying to get a foothold	Single Parents	Married Parents	Employed Partners	Cohabiting Parents
2008 Outcomes	3222	872	580	522	543	403	302
Educational Attainment							
Less than High School	15%	0%	4%	43%	13%	11%	37%
High School	24%	0%	30%	29%	31%	44%	35%
Some College	27%	19%	27%	28%	31%	39%	25%
College or more	34%	81%	38%	0%	25%	6%	4%
Marital Status							
Single, not cohabiting	51%	60%	100%	90%	0%	14%	0%
Single, cohabiting	21%	18%	0%	2%	0%	52%	100%
Married	28%	22%	0%	8%	100%	34%	0%
Ever had Children	41%	3%	2%	83%	100%	4%	95%
Residing Independently	72%	100%	6%	46%	96%	92%	91%
Working Full-Time	59%	68%	54%	40%	59%	84%	45%
Transition to Adulthood Pathway		27%	18%	16%	17%	13%	9%

^Limited Family Formation - College Educated - Employed

Table 3. Latent Class Analysis Model Selection Results

Number of Classes	N	LL	BIC(LL)	Number of Parameters	L^2	df	p-value	-2LL Diff	p-value	s.e.
Five	4894	-20016.3	40406.51	44	81.7328	51	0.0041			
Six	4894	-20004.4	40459.03	53	57.7919	42	0.0530	23.9409	0.007	0.0026
Seven	4894	-19995.2	40517.12	62	39.4170	33	0.2000	18.3749	0.039	0.0061

Table 4. Multinomial Logistic Regression of Transition to Adulthood Latent Class Membership on Family Structure: Relative Risk Ratios (N=3,222)

	Model 1: All Covariates, not including income								Model 2: M1 + Income							
	Stable Single Mother		Marriage -> Divorce		M->D -> RM		Nonmarital -> Stepfamily		Stable Single Mother		Marriage -> Divorce		M->D -> RM		Nonmarital -> Stepfamily	
Limited Family Formation-College Educated-Employed																
vs. Trying to get a Foothold	1.69	*	0.93		1.35		1.35		1.37		0.76		1.23		1.19	
vs. Single Parents	3.23	***	2.34	***	2.24	***	3.25	***	2.17	**	1.56	*	1.85	**	2.58	***
vs. Married Parents	1.84	*	1.48	*	1.73	**	2.13	***	1.46		1.15		1.54	*	1.85	**
vs. Employed Partners	2.06	*	2.59	***	2.45	***	2.91	***	1.70		2.11	***	2.23	***	2.57	***
vs. Cohabiting Parents	4.67	***	2.71	***	3.77	***	3.74	***	3.64	***	2.07	**	3.38	***	3.21	***
Trying to get a Foothold																
vs. Single Parents	1.91	**	2.51	***	1.66	*	2.41	***	1.59	*	2.05	**	1.50		2.17	***
vs. Married Parents	1.09		1.58	*	1.28		1.58	*	1.06		1.52		1.25		1.55	
vs. Employed Partners	1.21		2.78	***	1.81	**	2.16	**	1.24		2.78	***	1.81	**	2.16	**
vs. Cohabiting Parents	2.76	***	2.90	***	2.79	***	2.78	***	2.66	***	2.72	***	2.74	***	2.70	***
Single Parents																
vs. Married Parents	0.57	*	0.63	*	0.77		0.66	*	0.67		0.74		0.84		0.71	
vs. Employed Partners	0.64		1.11		1.09		0.90		0.78		1.36		1.21		1.00	
vs. Cohabiting Parents	1.45		1.16		1.68	*	1.15		1.68	*	1.33		1.83	*	1.24	
Married Parents																
vs. Employed Partners	1.12		1.76	**	1.42		1.37		1.16		1.83	**	1.45		1.39	
vs. Cohabiting Parents	2.53	***	1.83	**	2.19	***	1.75	*	2.50	***	1.79	*	2.19	***	1.74	*
Employed Partners																
vs. Cohabiting Parents	2.27	**	1.04		1.54		1.28		2.15	*	0.98		1.51		1.25	

Note: Exponentiated coefficients

* p<0.05, ** p<0.01, *** p<0.001

^Covariates include: race/ethnicity, gender, age, maternal education, maternal age at first birth, eldest/only child, number of siblings, region, foreign born, and urban residence

Table 5. Predicted Probabilities of Transition to Adulthood Latent Class Membership in Total and by Family Structure (N=3,222)

	Model 2: All covariates, not including Income					
	Limited Family - College - Employed	Trying to get a foothold	Single Parents	Married Parents	Employed Partners	Cohabiting Parents
Total	.27	.18	.16	.17	.13	.09
Family Structure						
Intact	0.32	0.22	0.12	0.18	0.11	0.06
Single Mother	0.17	0.19	0.20	0.17	0.12	0.15
Marriage->Divorce	0.21	0.13	0.18	0.17	0.19	0.11
M->D->RM	0.19	0.17	0.16	0.18	0.16	0.14
Nonmarital->Stepfamily	0.17	0.15	0.20	0.19	0.17	0.12

	Model 3: M2 + Income					
	Limited Family - College - Employed	Trying to get a foothold	Single Parents	Married Parents	Employed Partners	Cohabiting Parents
Total	.27	.18	.16	.17	.13	.09
Family Structure						
Intact	0.30	0.22	0.12	0.18	0.11	0.06
Single Mother	0.19	0.20	0.17	0.17	0.12	0.15
Marriage->Divorce	0.24	0.14	0.15	0.17	0.19	0.11
M->D->RM	0.20	0.18	0.15	0.18	0.16	0.14
Nonmarital->Stepfamily	0.18	0.16	0.18	0.20	0.17	0.12

Note: all predicted probabilities were calculated with all remaining covariates at the overall analytic sample mean

Appendix 1. Multinomial Logistic Regression of Transition to Adulthood Latent Class Membership: Relative Risk Ratios for Each Class Compared to Limited Family Formation-College Educated-Employed (N=3,222)

	Model 1: All covariates, not including Income					Model 2: M1 + Income				
	Trying to get a Foothold	Single Parents	Married Parents	Employed Partners	Cohabiting Parents	Trying to get a Foothold	Single Parents	Married Parents	Employed Partners	Cohabiting Parents
Family Structure (ref=intact)										
Stable Single Mother	1.69*	3.23***	1.84*	2.06*	4.67***	1.37	2.17**	1.46	1.70	3.64***
Marriage->Divorce	0.93	2.34***	1.48*	2.59***	2.71***	0.76	1.56*	1.15	2.11***	2.07**
M->D->RM	1.35	2.24***	1.73**	2.45***	3.77***	1.23	1.85**	1.54*	2.23***	3.38***
Nonmarital->Stepfamily	1.35	3.25***	2.13***	2.91***	3.74***	1.19	2.58***	1.85**	2.57***	3.21***
Race/Ethnicity (ref=white)										
black	1.70**	3.67***	0.84	0.75	1.27	1.58**	3.09***	0.77	0.69	1.15
Hispanic	1.31	2.30***	1.74**	2.18***	1.73*	1.23	1.96**	1.60*	2.05***	1.59*
Female	0.49***	0.88	1.17	0.55***	0.92	0.49***	0.86	1.16	0.55***	0.90
Age in 2008	0.83***	1.05	1.32***	1.07	1.09	0.82***	1.03	1.30***	1.06	1.07
Maternal Education (ref=less than high school)										
High School	0.82	0.65*	0.72	1.22	0.58*	0.88	0.75	0.78	1.30	0.63*
Some College	0.61*	0.30***	0.46***	0.53**	0.26***	0.70	0.40***	0.54**	0.61*	0.31***
College +	0.34***	0.09***	0.18***	0.22***	0.07***	0.42***	0.15***	0.24***	0.28***	0.09***
Maternal Teen Birth	1.12	1.79***	1.74***	1.22	1.73**	1.09	1.68**	1.68**	1.18	1.66**
Eldest/only child	0.88	0.82	0.95	0.84	0.81	0.88	0.82	0.95	0.84	0.81
Number of Siblings (ref=none)										
One	0.96	0.93	1.00	0.90	1.16	0.94	0.91	0.99	0.88	1.13
Two	0.88	1.01	1.35	1.00	1.35	0.82	0.90	1.24	0.92	1.22
Three or more	1.08	1.36	1.38	0.91	1.63	0.92	1.04	1.15	0.78	1.33
South in 1997	1.07	0.98	1.16	0.93	1.12	1.06	0.94	1.16	0.93	1.11
Foreign Born	2.95***	1.25	1.53	1.30	1.55	2.81***	1.15	1.46	1.24	1.48
Urban in 1997	1.18	1.01	0.73*	0.68**	0.97	1.19	1.01	0.74*	0.69**	0.99
Household Income at Age 16 (adjusted for family size)										
$10,000-$19,999						0.90	0.77	0.93	0.96	0.91
$20,000-$33,999						0.70	0.48***	0.70	0.78	0.77
$34,000 or more						0.55**	0.21***	0.47***	0.52**	0.36***

Note: Exponentiated coefficients

* p<0.05, ** p<0.01, *** p<0.001

Appendix 2. Descriptive Statistics Comparing Analytic Sample to Total Sample

	No sample restriction		Family Structure sample restriction		Complete Dependent Var		No missing covariates		Final analytic Sample	
	N	% or mean	N	% or mean	N	% or mean	N	% or mean	N	% or mean
Race/Ethnicity										
Black	8,984	26%	5,887	24%	4,894	25%	3,730	21%	3,222	22%
Hispanic	8,984	21%	5,887	21%	4,894	21%	3,730	19%	3,222	19%
White	8,984	53%	5,887	55%	4,894	54%	3,730	60%	3,222	59%
Female	8,984	49%	5,887	50%	4,894	51%	3,730	51%	3,222	52%
Age in 2008 (mean)	7,490	25.9	4,957	25.8	4,894	25.8	3,255	25.9	3,222	25.9
(standard deviation)		1.4		1.4		1.4		1.5		1.5
Age should have been in 2008 (mean)	8,984	25.4	5,887	25.3	4,894	25.3	3,730	25.4	3,222	25.3
(standard deviation)		1.5		1.5		1.5		1.5		1.5
Maternal Education										
Less than High School	8,290	24%	5,735	21%	4,770	22%	3,730	19%	3,222	18%
High School	8,290	37%	5,735	36%	4,770	35%	3,730	36%	3,222	35%
Some College	8,290	23%	5,735	24%	4,770	24%	3,730	25%	3,222	25%
College +	8,290	17%	5,735	19%	4,770	19%	3,730	21%	3,222	22%
Maternal Teen Birth	8,267	28%	5,655	26%	4,704	27%	3,730	24%	3,222	24%
Eldest/only child	8,252	48%	5,649	47%	4,699	47%	3,730	49%	3,222	50%
Number of Siblings										
None	8,984	26%	5,887	22%	4,894	22%	3,730	21%	3,222	22%
One	8,984	38%	5,887	39%	4,894	38%	3,730	41%	3,222	41%
Two	8,984	22%	5,887	24%	4,894	25%	3,730	24%	3,222	24%
Three or more	8,984	14%	5,887	15%	4,894	15%	3,730	14%	3,222	14%
Residing in the South in 1997	8,984	37%	5,887	37%	4,894	38%	3,730	34%	3,222	35%
Foreign Born	7,942	14%	5,887	14%	4,894	13%	3,730	12%	3,222	11%
Residing in an urban area in 1997	8,604	76%	5,622	75%	4,680	75%	3,730	73%	3,222	73%
Adjusted Family Income at Age 16										
Less than $10,000	5,878	29%	4,116	26%	3,541	27%	3,730	25%	3,222	26%
$10,000-$19,999	5,878	23%	4,116	23%	3,541	23%	3,730	23%	3,222	23%
$20,000-$33,999	5,878	25%	4,116	26%	3,541	26%	3,730	26%	3,222	26%
$34,000 or more	5,878	23%	4,116	24%	3,541	24%	3,730	25%	3,222	25%

Appendix 2. Descriptive Statistics Comparing Analytic Sample to Total Sample (con't)

	No sample restriction		Family Structure sample restriction		Complete Dependent Var		No missing covariates		Final analytic Sample	
	N	% or mean	N	% or mean	N	% or mean	N	% or mean	N	% or mean
2008 Outcomes										
Educational Attainment										
Less than High School	7,412	21%	4,910	19%	4,894	19%	3,229	15%	3,222	15%
High School	7,412	26%	4,910	26%	4,894	26%	3,229	24%	3,222	24%
Some College	7,412	25%	4,910	25%	4,894	25%	3,229	27%	3,222	27%
College or more	7,412	27%	4,910	30%	4,894	30%	3,229	34%	3,222	34%
Marital Status										
Single, not cohabiting	7,470	51%	4,941	51%	4,894	51%	3,248	51%	3,222	51%
Single, cohabiting	7,470	21%	4,941	21%	4,894	21%	3,248	21%	3,222	21%
Married	7,470	27%	4,941	28%	4,894	28%	3,248	28%	3,222	28%
Ever had Children	7,490	46%	4,957	45%	4,894	44%	3,255	41%	3,222	41%
Residing Independently	7,490	71%	4,957	70%	4,894	71%	3,255	72%	3,222	72%
Working Full-Time	7,490	56%	4,957	57%	4,894	57%	3,255	59%	3,222	59%